

E C O T O X

ECOTOXicology Knowledgebase System ECOTOX Code Appendix

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Mid-Continent Ecology Division (MED)
Duluth, Minnesota

By:

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NOTE: All code additions to the ECOTOX code appendices are forwarded quarterly to EPA for approval.

Appendix A. Concentration Types.....	4
Appendix B. Chemical Grade and Standards Codes	5
Appendix C. Chemical Formulation Codes**	12
Appendix D. Radiolabel Isotope Codes.....	16
Appendix E. Organism Source Codes.....	18
Appendix F. Lifestage Codes	19
Appendix G. Soil Type Codes	27
Appendix H. Test Location Codes.....	28
Appendix I. Valid Duration Units.....	29
Appendix J. Exposure Type Codes	34
Appendix J.1 Diet (D) Exposure Codes	34
Appendix J.2 Injection (I) Codes.....	35
Appendix J.3 Multiple (M) Application Codes	35
Appendix J.4 AQUATIC ONLY Exposure Type Codes.....	36
Aquatic Lab Exposure Types (EXP TYP).....	36
Aquatic Field Exposure Types (EXP TYP).....	36
Appendix J.5 Topical (T) Application Codes	36
Appendix J.6 Environmental (V) Exposure Codes [Also used as Aquatic Field Test Application Type]	36
Appendix J.7 In Vitro Exposure Codes	38
Appendix K. Application Frequency Codes	39
Appendix L. Exposure Media Codes	45
Aquatic Media Type.....	45
Terrestrial Media Type.....	45
Appendix M. Control Type and Dose ID Codes.....	47
Appendix N. Exposure Dose and Observation/Response Value Units.....	48
Appendix O. Ionic Fraction Codes.....	89
Appendix P. Chemical Analysis Methods.....	92
Appendix Q. Sample Unit Codes.....	93
Appendix R. Effect Group Codes and Definitions.....	95
Appendix S. Group Effect, Effect and Measurement Codes and Definitions	95
ACC Accumulation Group	96
BEH Behavior Group	96
BCM Biochemical Group	105
CEL Cellular Group	319
GRO Growth Group.....	606
MOR Mortality or Survivorship Group.....	617
PHY Physiological Group	619

ECOTOX Code Appendix

POP Population Group	649
REP Reproduction Group	654
SYS Ecosystem Group	666
MLT Multiple Effect Group	668
NER No Effect Group	668
Appendix T. Endpoint Codes and Definitions	670
Appendix U. Response Site Codes	673
Appendix V. Common Keywords for Other Effects Text Field	708
Appendix W. Media Characteristic Units	709
Appendix X. Sub-Habitat Codes and Common Descriptors	714
Appendix Y. Substrate Codes	715
Appendix Z. Depth Units	716
Appendix AA. Field Location Abbreviations.....	717
Appendix AB. Geographic Codes.....	718
Appendix AC. Aquatic Field Name Codes.....	748
Appendix AD. Terretox Field Name Codes	751
I. Quality Assurance Parameters	751
II. Test Chemical Parameters	751
III. Test Information.....	751
IV. Exposure Information	752
V. Results Information	753
Appendix AE. Organic Carbon/Matter Type and Units	754
Organic Matter Types	754
Organic Carbon/Matter Units	754
Appendix AF. Cation Exchange Capacity Units	756
Appendix AG. ECOTOX Study Type Codes.....	757
Appendix AH. ECOTOX Test Method Codes	759
Appendix AI. ECOTOX Gender Codes.....	762
Appendix AJ. ECOTOX Statistical Method Codes	763
Appendix AK. ECOTOX Trend Codes.....	763
Appendix AL. ECOTOX Statistical Significance Codes	763
Appendix AM. ECOTOX Endpoint Assignment Codes.....	764
Appendix AN. ECOTOX Season Codes.....	764
Appendix AO. ECOTOX Result Dry/Wet.....	765

Appendix A. Concentration Types

Code	Description	Definition
Organic		
A	Active ingredient	Chemical substance in a product that is responsible for the pesticidal (toxic) effect (Ware, 1978). Reported as "A" when the author refers to the concentration as active ingredient, active principle, active substance (A.S.), acid equivalent or various grades of reagents (ie., Analytical, Reagent or Technical). When coding, a value in the publication may be reported as "AI kg/ha", "AE kg/ha" or "kg AI/ha"; this type of value is reported as 'A =' for <u>CONC TYPE</u> .
F	Formulation	Way in which basic pesticide (toxicant) is prepared for practical use (Ware, 1978). Generally reserved for commercial preparation prior to actual use and does not include the final dilution (Insect-Pest Management and Control, 1971) (e.g.; Baythroid, 2,4-D). Also included in this category are organic compounds with no pesticidal activity (e.g.; PCB, dioxin).
Metal/Organometallics		
D	Dissolved	Those constituents of an unacidified sample that pass through a 0.45 um membrane filter (e.g. soluble metal) (APHA et.al. 1992).
L	Labile	The labile or free ion metal concentration determined by various analytical methods. When coding, the specific labile forms or complexes are not differentiated.
T	Total	The concentration of metals determined on an unfiltered sample after vigorous digestion, or the sum of the concentrations of metals in both dissolved and suspended fractions (APHA et.al. 1992). Heavy metals and single elements (e.g. Na, Cl, Br) are coded as T.
Inorganic non-metals		
T	Total	The dissociated, charged form of nitrogen or hydrogen related chemicals. This can take on numerous forms, e.g.; ammonium (NH^+4), nitrite (NO_2^-), etc. (Rand and Petrocelli, 1985). T is the default for publications that do not state whether Total or Unionized concentrations are reported.
U	Unionized	The undisassociated, uncharged form of ammonia or hydrogen sulfide. The ammonia molecule, NH_3 , is the unionized form. (In aqueous solution, ammonia assumes an equilibrium between NH_3 and NH^+4 .) The NH_3 is the toxic entity of the ammonia compound (Rand and Petrocelli, 1985).

Appendix B. Chemical Grade and Standards Codes*

* Code all grades as "A" for concentration type for organic chemicals, refer to the ECOTOX Coding Guidelines, Test Chemical Parameters, Grade and Test Information Parameters, Concentration Type for details

Code	Description	Definition
A	Analytical Grade	
A or GU	Analytical or Guaranteed Grade	
A or HPLC	Analytical or HPLC Grade	
A or R	Analytical or Reagent Grade	
A or S	Analytical or Spectrophotometric Grade	
A or T	Analytical or Technical Grade	
AAPS	Atomic Absorption Primary Standard	
AASG	Atomic Absorption Spectrometry Grade	
AB	Absolute Grade	Chemical created using the highest-purity starting materials and suitable for ICP AES, DCP AES, ICP MS, High-Accuracy AA Flame or Graphite Furnace work. (https://www.absolutestandards.com/docs/catalog.pdf)
ACG	Agrochemical Grade	
ACS	American Chemical Society Grade	Meets or exceeds purity standards set by the American Chemical Society (ACS). This grade is acceptable for food, drug, or medicinal use and can be used for ACS applications or for general procedures that require stringent quality specifications and a purity of ≥95%. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)
AG	Agricultural Grade	
AL	Analysis Grade	
AN	Analar Grade	
AN or R	Analar or Reagent Grade	
AR	A.R. Grade (Analytical Reagent Grade)	The standard Mallinckrodt grade of analytical reagents; suitable for laboratory and general use. If the reagent also meets the requirements of the American Chemical Society Committee on Analytical Reagent, it will be denoted as an AR (ACS) reagent. (MBI trademark)

Code	Description	Definition
		(https://camblab.info/wp/index.php/a-guide-to-chemical-grades/)
ARST	Analytical Reference Standard	An analytical material or substance one or more properties of which are sufficiently well established to be used for the calibration of apparatus the assessment of a measurement method or for assigning values to materials. (https://www.reade.com/products/analytical-reference-standards)
B	Biological Grade	Biological Grade, Biology Reagent and Biological Reagent
BC	BioChemika Grade	
BP	British pharmacopoeia grade	Primary standards established using absolute methods. The declared content figures are determined without comparing to another substance. (https://www.pharmacopoeia.com/reference-standards)
C	Commercial Grade	
C or AN	Commercial or Analar Grade	
C or T	Commercial or Technical Grade	
CCG	Cell Culture Grade	Cell culture reagents include cell culture media, laboratory preparations, biological extracts, selective and sterile reagents for several applications. (http://www.advtechind.com/grade.htm)
CG	Chemical Grade	
CH	Chromatographic Grade	
CL	Clinical Grade	
CT	Certified Grade	Reagent chemicals for which the purity standard is established by Fisher Scientific. Purity is guaranteed to meet published maximum limits of impurities. (https://fscimage.fishersci.com/cmsassets/downloads/segment/Scientific/pdf/Chemicals/fisherchem_grades.pdf)
DS	Dry Standard Grade	
EL	Electrophoresis Grade	Material used specifically for electrophoresis applications. (https://beta-static.fishersci.com/content/dam/fishersci/en_US/documents/programs/scientific/brochures-and-catalogs/fliers/fisher-scientific-bioreagents-purity-grades-flyer.pdf)
EM	Eastman Grade	"Eastman" grade, the highest in purity. (https://pubs.acs.org/doi/pdf/10.1021/ac60049a725)
ER	ExcelaR Grade	Excellent Analytical Reagents. (http://www.thermofishersci.in/price_books/2016/Chemical%20&%20Glassware%202016%20-17.pdf)

Code	Description	Definition
EX	Experimental Grade	
EXT	Extra Grade	
F	Field Grade	
FCAS S	Fisher Certified Atomic Absorption Standard	
FFL	Free flowing Grade	
FG	Feed grade	Term to describe the quality of feedstuffssuitable for animal, but not human consumption. (http://www.omafra.gov.on.ca/english/livestock/dairy/facts/08-039.htm)
FOG	Formulated Grade	
FUG	Fungicide grade	
GC	Gas Chromatography Grade	
GCR	Gas Chromatograph Standard	
GR	GR Grade	General reagent (GR) – reagent that meets or exceed AR grade specifications. (http://lab-training.com/2014/09/12/classification-laboratory-reagents/)
GU	Guaranteed Grade	
GUR	Guaranteed Reagent Grade	It is the ideal quality for laboratory purposes. Batch to batch reproducibility is specially controlled to guarantee consistent analytical results. The grade is equivalent to Analytical grade (A.R.) Reagent grade (R.G.), p.a. nomenclature of other manufacturers. (http://www.advtechind.com/grade.htm)
HG	Histological Grade	
HPLC	High Performance Liquid Chromatography Grade	Product range is specially made for high performance liquid chromatography. Within this range there are different qualities depending on whether they will be used for preparative chromatography or analytical in isocratic or gradient mode. The range includes high purity solvents, tested to meet strict UV absorbance specifications as well as ion pair reagents. (http://www.advtechind.com/grade.htm)
I	Industrial Grade	
L	Laboratory Grade	The most popular grade for use in educational applications, but its exact levels of impurities are unknown. While excellent for teaching and training, it is not pure enough to be offered for food, drug, or medicinal use of any kind. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)

Code	Description	Definition
MBG	Molecular Biology Grade	Equal to ultra-pure chemicals and are ideal for molecular biology applications. (https://www.goldbio.com/blog/379/demystifying-material-grades-for-your-laboratory)
MD	Medical Grade	Designed, manufactured and purified to meet the strictest requirements of the healthcare industry.
ME	Monsanto Electrical Grade	
MK	Merck Grade	
MLT	Military Grade	
NAF	National Formulary Grade	Meets or exceeds requirements of the National Formulary (NF). The USP and the NF (USP– NF) jointly publish a book of public pharmacopeial standards for chemical and biological drug substances, dosage forms, compounded preparations, excipients, medical devices, and dietary supplements. The listings here should be reviewed to determine which would be considered equivalent grades. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)
NP	Normapur Grade	
NR	Not Reported	
OP	Optima	Meets stringent purity requirements of LC/ MS and UHPLC by addressing the need for minimal organic contamination with 0.1 micron filtration to make particle free. Evaluated for 17 metal impurities at ppb concentrations for minimal metal mass adduct formation. High ionization efficiency to detect organic contaminants at 50 ppb max (positive) and 300 ppb max (negative) in full scan MS. Screened for UV-absorbing contaminants at every wavelength in the 200 to 400 nm range to afford smooth baselines and to reduce interferences. (https://fscimage.fishersci.com/cmsassets/downloads/segment/Scientific/pdf/Chemicals/fisherchem_grades.pdf)
PA	Proanalysis Grade, Pro Analysi Quality, analysenrein or p.a.	
PAN	Pestanal Grade	
PFG	Purified Grade	Also called pure or practical grade, meets no official standard; it is not pure enough to be offered for food, drug, or medicinal use of any kind. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)
PG	Pure Grade	
PH	Pharmaceutical Grade	A pharmaceutical-grade compound (PGC) is defined as any active or inactive drug, biologic or reagent, for which a chemical purity standard has been established by a recognized national or regional pharmacopeia (e.g., the U.S. Pharmacopeia (USP), British Pharmacopeia (BP), National Formulary (NF), European

Code	Description	Definition
		Pharmacopoeia (EP), Japanese Pharmacopeia (JP), etc.). (https://oacu.oir.nih.gov/sites/default/files/uploads/arac-guidelines/pharmaceutical_compounds.pdf)
PR	Production Grade	
PRA	Practical Grade	Defines chemicals of good quality where there are no official standards. Suitable for use in general applications. Practical grade organic chemicals may contain small amounts of isomers of intermediates. (https://camblab.info/wp/index.php/a-guide-to-chemical-grades/)
PRG	Pesticide Residue Grade	Solvents tested for suitability in Pesticide Residue Analysis. (http://www.emdmillipore.com/US/en/lab-technical-resources /grade-definitions/c9Ob.qB.r7MAAAFEgSYWq.DI,nav)
PRM	Premium Grade	
PS	Primary Standard	Analytical reagent of exceptional purity that is specially manufactured for standardizing volumetric solutions and preparing reference standards. (https://camblab.info/wp/index.php/a-guide-to-chemical-grades/)
PST	Pesticide Grade	Solvents for use in analysis of pesticide residue. Meet or exceed ACS standards of purity for pesticide residue analysis. (https://fscimage.fishersci.com/cmsassets/downloads/segment/Scientific/pdf/Chemicals/fisherchem_grades.pdf)
PT	Photographic Grade	
R	Reagent Grade, Purissimum, Purum, Puriss or Puris	Generally equal to ACS grade ($\geq 95\%$) and is acceptable for food, drug, or medicinal use and is suitable for use in many laboratory and analytical applications. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)
R OR PRA	Reagent or Practical Grade	
RE	Research Grade	
RE or A	Research or Analytical Grade	
RE or CP	Research or chemically pure grade	
RFG	Reference Grade	
RS	Residue Grade	Suitable for pesticide residue analysis. (http://www.info.dent.nu.ac.th/chemistry/Files/chemical%20grade%20diagnosis.pdf)
RST	Reference Standard	
S	Spectrophotometric Grade	
SC	Scintillation Grade	High purity, suitable for liquid scintillation counting. (https://www.coleparmer.com/i/acros-organics-ac403731500-cab-o-sil)

Code	Description	Definition
		m-5-scintillation-grade-150g/8834132)
SO	Solvent Grade	
SPC	Spectrochemical Grade	Spectrophotometric grade solvents are high purity solvents made specifically for applications using spectrophotometers. (https://www.alfa.com/en/spectrophotometric-grade/)
SPG	Special Grade	
SSG	Super special grade (highest quality standard guaranteed for which specification parameters and specification values of JIS special grade or higher are specified)	Reagents with the highest quality standard guaranteed for which specification parameters and specification values of JIS special grade or higher are specified. (http://www.wako-chem.co.jp/english/labchem/journals/analytical2012/index.htm)
ST	Standard	
STD	Standard Solution for AA	
SYG	Synthesis Grade	For organic synthesis and preparative tasks. Also: synthetic grade. (http://lab-training.com/2014/09/12/classification-laboratory-reagents/)
T	Technical Grade, Technical product, Technical formulation	Used for commercial and industrial purposes; however, like many others, it is not pure enough to be offered for food, drug, or medicinal use of any kind. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI). Note that technical products can include Technical Materials or Technical Concentrates abbreviated by TC and TK respectively (https://apvma.gov.au/node/10901).
T or P	Technical or Purified Grade	
T or PU	Technical or Pure Grade	
TA	Technical Acid Grade	
TAR	Technical or Analytical or Reagent Grade	
ULV	ULV Grade	
UP	Ultrapure Grade	High-purity materials where impurities must be very low – in the parts per trillion or parts per billion level. These materials are considered to have a purity level exceeding USP monographs. (https://www.goldbio.com/blog/379/demystifying-material-grades-for-your-laboratory)

ECOTOX Code Appendix

Code	Description	Definition
USP	United States Pharmacopeia Grade	Meets or exceeds requirements of the United States Pharmacopeia (USP). This grade is acceptable for food, drug, or medicinal use. It is also used for most laboratory purposes, but the USP being followed should always be reviewed prior to beginning to ensure the grade is appropriate for that methodology. (https://www.labmanager.com/business-management/2017/11/the-seven-most-common-grades-for-chemicals-and-reagents#.W6AR9eZIJXI)
UV	Ultraviolet Grade	

Appendix C. Chemical Formulation Codes**

** Code as "A" for concentration type for organic chemicals, refer to the ECOTOX Coding Guidelines, Test Chemical Parameters, Formulation and Test Information Parameters, Concentration Type for details

Code	Description	Definition
AE	Acid Equivalent	The acid portion of the active ingredient. (https://pnwhandbooks.org/acid-equivalent)
AI	Active Ingredient	
AQ	Aqueous Solution	
AS	Aqueous Suspension	One in which water is used as the solvent. (https://medical-dictionary.thefreedictionary.com/aqueous+solution)
ASL	Aerosol	
BT	Bait	A formulation that contains an active ingredient mixed with food or another attractive substance.
C	Commercial	
CES	Capsule suspension	
CG	Concentrate Granules	
CL	Clinical	
CO	Concentrate	
CP	Chemically Pure**	Chemicals that are chemically pure (CP) cannot be used as standards in either the clinical laboratory or in research without first being analyzed. There are no set specifications and the quality varies from manufacturer to manufacturer. (http://armymedical.tpub.com/md0837/Chemically-pure-grade-Laboratory-Mathematics-57.htm)
CR	Controlled Release	
CRP	Chromatographically Pure**	
CRY	Crystal	
D	Dust	
DC	Detached Crystals	
DG	Dispersible Granule (also known as "dry flowable")	Most often used for soil applications. The active ingredient is coated or sorbed onto coarse particles like clay, walnut shells or ground corn cobs. (Farm Chemicals Handbook)
DP	Dispersible Powder	
DSC	Dispersible concentrate	
E	Emulsion, Oil in water emulsions (EW)	
EC	Emulsifiable Concentrate	A solution of a pesticide with emulsifying agents in a water

Code	Description	Definition
		insoluble organic solvent which will form an emulsion when added to water. (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf)
EF	Emulsifiable Formulation	
EG	Emulsified Granular	Most often used for soil applications. The active ingredient is coated or sorbed onto coarse particles like clay, walnut shells or ground corn cobs. (Farm Chemicals Handbook)
EN	Encapsulated	
ES	Emulsifiable Solution, Agent	
FF	Flowable Formulation	A liquid formulation consisting of a finely ground active ingredient suspended in a liquid. Mixed with water for application. (Farm Chemicals Handbook)
FFO	Field Formulated	
FG	Finely Ground	
FO	Formulated	
FS	Flowable concentrate for seed treatment	
G	Granule, Granular	Most often used for soil applications. The active ingredient is coated or sorbed onto coarse particles like clay, walnut shells or ground corn cobs. (Farm Chemicals Handbook)
GL	Gel	
GS	Gaseous	
GU	Guaranteed	
HG	Heavy Granular	
LD	Liquid	
LDCO	Liquid concentrate	
LIB*	Unknown form	
ME	Microemulsion	A solution of a pesticide with emulsifying agents in a water insoluble organic solvent which will form a solution/emulsion when added to water. Complete HLB must be reached to achieve a long term stable formulation. (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf)
MO	Miscible Oil (also OF - Oil miscible flowable concentrate or oil miscible suspension)	When oils are applied to plants as a spray that include an emulsifier. (http://ccenassau.org/resources/-horticultural-oils-as-insecticides)
N	Nanograde	Solvents designed for organic residue extraction/concentration procedures that utilize GC/ECD and GC/FID methods.

Code	Description	Definition
		(https://www.avantorinc.com/Technical/Grade-Definitions.aspx)
NF	Nonionized Form	
NR	Not Reported	
NSD*	Unknown form	
OCO	Oil Concentrate	
OD	Oil Dispersion	
OS	Oil Soluble	
PEL	Pellet	
PF	Purified**	
PO	Powder	
PRE	Prepared in Lab	
PU	Pure	
RC	Recrystallized	
RF	Registered Formulation	
RST	Reference standard	
S	Solution	
SC	Suspension concentrate (also known as Flowable concentrate)	A stable suspension of solid pesticide(s) in a fluid usually intended for dilution with water before use. Ideally, the suspension should be stable (i.e. not settle out). (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf)
SD	Solid	
SF	Sand Formulated	
SG	Soluble Granule	Most often used for soil applications. The active ingredient is coated or sorbed onto coarse particles like clay, walnut shells or ground corn cobs. (Farm Chemicals Handbook)
SO	Soluble Concentrate	A liquid sprayable formulation that can be represented by the formulation code SL (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf).
SP	Soluble Powder	A dry formulation which when mixed with water, dissolved readily and forms a true solution. When thoroughly mixed, no agitation necessary. (Farm Chemicals Handbook)
SPCO	Spray Concentrate	
SPL	Spray Liquid	
SPO	Spray Powder	
SRF	Slow Release Formulation	
ST	Standard	

Code	Description	Definition
SUR*	Unknown form	
TB	Tablet	
ULV	Ultra-Low Volume, also Ultra-Low Volume Concentrate or Liquid	A liquid formulation which may be applied with specialized equipment as is or diluted with a specified carrier.
V/V	Volume per Volume	
W/V	Weight per volume	
W/W	Weight per weight	
WG	Water Dispersible Granule (also known as wettable granule)	A pesticide formulation consisting of granules to be applied after disintegration and dispersion in water. The granular product has distinct particles within the range 0.2 to 4 mm. Water dispersible granules can be formed by a) agglomeration, b) spray drying, or c) extrusion techniques. (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf)
WMC	Water Miscible Concentrate	
WP	Wettable Powder or Water Dispersible Powder	A solid pesticide formulation – micronized to powder form and typically applied as suspended particles after dispersion in water. Formulations may be reported as W or WP. (https://www.cdpr.ca.gov/docs/emon/surfwtr/presentations/gouge_formulation_050510.pdf and https://crec.ifas.ufl.edu/extension/trade_journals/2011/2011_June_pesticide_formulations.pdf)
WS	Water Soluble	
WSC	Water Soluble Concentrate	
WSP	Water Soluble Powder, (Water Soluble Packet, WSB – Water Soluble Bag)	
WSS	Wettable Solid	

Appendix D. Radiolabel Isotope Codes

Code	Description	Code	Description
Ag-110	Silver	F-18	Fluorine
Am-241	Americium	Fe-59	Iron
As-73	Arsenic	H-2	Hydrogen (Deuterium)
As-74	Arsenic	H-3	Hydrogen (Tritium)
As-76	Arsenic	Hg-197	Mercury
B-10	Boron	Hg-203	Mercury
Be-7	Beryllium	I-125	Iodine
C-12	Carbon	I-131	Iodine
C-13	Carbon	I-131	Iodine
C-14	Carbon	Mn-54	Manganese
Ca-45	Calcium	N-15	Nitrogen
Cd-109	Cadmium	Na-22	Sodium
Cd-110	Cadmium	Ni-59	Nickel
Cd-111	Cadmium	Ni-62	Nickel
Cd-113	Cadmium	Ni-63	Nickel
Cd-115	Cadmium	Np-235	Neptunium
Ce-144	Cerium	NR	Not Reported
Cf-252	Californium	P-32	Phosphorus
Cl-36	Chlorine	Pb-210	Lead
Cm-244	Curium	Po-208	Polonium
Co-57	Cobalt	Po-210	Polonium
Co-60	Cobalt	Pu-238	Plutonium
Co-64	Cobalt	Pu-240	Plutonium
Cr-51	Chromium	Pu-241	Plutonium
Cs-134	Cesium	Pu-242	Plutonium
Cs-137	Cesium	Pu-244	Plutonium
Cu-63	Copper	Ra-226	Radium
Cu-64	Copper	Ru-106	Ruthenium
Cu-65	Copper	S-35	Sulfur
Eu-152	Europium	Sb-125	Antimony

Code	Description
Se-75	Selenium
Sn-113	Tin
Sr-85	Strontium
Sr-90	Strontium
Tc-95	Techninium
Tc-99	Technicium
Th 238	Thorium
Th-232	Thorium
TI-115	Thallium

Code	Description
U-235	Uranium
U-233	Uranium
U-238	Uranium
V-48	Vanadium
V-49	Vanadium
Yes	Unknown radiolabel
Zn-64	Zinc
Zn-65	Zinc

Appendix E. Organism Source Codes

Code	Definition
LAB	Laboratory: An organism cultured or bred for use in any experimental or scientific procedure. This includes organisms from breeding establishments, supplying establishments and user establishments.
MLT	Multiple Sources: Organisms obtained from a combination of laboratory and wild sources.
NR	Not reported
WLD	Wild: An organism collected from the natural environment; not cultivated or specifically bred for the use in any experimental or scientific procedure.

Historical codes used prior to January 15, 2015:

CBC – Captive breeding colony – code as LAB
 COM – Commercial – code as LAB
 DOM – Domestic strain – code as LAB
 GAM – Game farm strain – code as LAB
 GOV – Government agency source – code as LAB

Appendix F. Lifestage Codes (at beginning of exposure)

Code	Description	Definition
AD	Adult	Fully grown or developed. (https://www.merriam-webster.com/dictionary/adult)
AL	Alevin	
BD	Bud or Budding	Characterized by small axillary or terminal protuberances on a plant, containing rudimentary foliage (leaf bud) the rudimentary inflorescence (flower bud) or both (mixed bud). (http://www.dictionary.com/browse/budding)
BL	Blastula	
BS	Bud blast stage	Flowers that have prematurely aborted before or soon after opening. (https://www.gardeningknowhow.com/plant-problems/environmental/bud-blast-in-flowers.htm)
BT	Boot	The time when the seedhead is enclosed within the sheath of the flag leaf. It is one part of the reproductive phase. (https://forages.oregonstate.edu/regrowth/how-does-grass-grow/developmental-phases)
CC	Cocoon	An envelope often largely of silk which an insect larva forms about itself and in which it passes the pupa stage. (https://www.merriam-webster.com/dictionary/cocoon)
CO	Copepodid	A free-swimming larval stage of certain parasitic copepods. (https://www.merriam-webster.com/dictionary/copepodid)
CP	Copepodite	
CS	Cleavage stage	
CY	Cyst	
EG	Egg	An animal reproductive body consisting of an ovum together with its nutritive and protective envelopes and having the capacity to develop into a new individual capable of independent existence. (https://www.merriam-webster.com/dictionary/egg)
EL	Elver	A young eel, especially when undergoing mass migration upriver from the sea. (https://en.oxforddictionaries.com/definition/elver)
EM	Embryo	A vertebrate at any stage of development prior to birth or hatching. (https://www.merriam-webster.com/dictionary/embryo)
EX	Exponential Growth Phase (log)	A pattern of balanced growth wherein all the cells are dividing regularly by binary fission, and are growing by geometric progression. The cells divide at a constant rate depending upon the composition of the growth medium and the conditions of incubation. The rate of exponential growth of a bacterial culture is expressed as generation time, also

Code	Description	Definition
		the doubling time of the bacterial population. (http://textbookofbacteriology.net/growth_3.html)
EY	Eyed egg or stage, eyed embryo	A fish egg containing an embryo that has developed enough so that the black spot of the eyes are visible through the egg membrane. Indicates that the egg is less sensitive to movement and can be handled safely, e.g. for transportation. (https://www.fishbase.de/glossary/Glossary.php?q=eyed+egg&language=english&sc=is)
F0	F0 generation	Parent generation. (ECOTOX)
F1	F1 generation	
F11	F11 generation	Generation of offspring from eleventh generation parents. (ECOTOX)
F2	F2 generation	
F3	F3 generation	Generation of offspring from third generation parents. (ECOTOX)
F6	F6 generation	Generation of offspring from sixth generation parents. (ECOTOX)
F7	F7 generation	Generation of offspring from seventh generation parents. (ECOTOX)
FB	Mature, full-bloom stage (fruit trees)	Full bloom indicates the time when most of the flowers are open. (https://www.gardenguides.com/list_6733870_stages-peach-trees.html)
FG	Female gametophyte	The embryo sac or megagametophyte. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3268550/)
FI	Fingerling	A small fish especially up to one year of age. (https://www.merriam-webster.com/dictionary/fingerling)
FO	Flower opening	Period when flowers are opening. (ECOTOX)
FT	Froglet	By 12 weeks, the tadpole has only a teeny tail stub and looks like a miniature version of the adult frog. (http://www.wou.edu/~jguth/ED421%20Website/froglet.htm)
FY	Fry	
GA	Gastrula	
GE	Gestation	
GL	Glochidia	
GM	Gamete	
GP	Lag growth phase	After inoculation of the cells into fresh medium, the population remains temporarily unchanged. (http://textbookofbacteriology.net/growth_3.html)

Code	Description	Definition
GPS	Grain or seed formation stage	Stage of development where seeds or grains are formed.
GS	Germinated seed	The stage after a seed or spore has begun to grow and put out shoots after a period of dormancy. (ECOTOX)
HD	Heading	The extension of the panicle through the sheath of the flag leaf on the main stem. (http://www.lsuagcenter.com)
IB	Incipient bud	
IE	Internode elongation	As the internode elongation stage begins, a build-up of chlorophyll occurs between the nodes that are to separate in the process of forming the first stem internode between them. (https://bit.ly/32rX1pn)
IG	Imago	
IM	Immature	Lacking complete growth, differentiation, or development. (https://www.merriam-webster.com/dictionary/immature)
IN	Instar	A stage in the life of an arthropod (such as an insect) between two successive molts. (https://www.merriam-webster.com/dictionary/instar)
IT	Intermolt	Lifestage between the shedding of hair, feathers, shell, horns, or an outer layer. (derived from https://www.merriam-webster.com/dictionary/molt)
JV	Juvenile	Physiologically immature or undeveloped. Also: fledgling, hatchling, weanling. (https://www.merriam-webster.com/dictionary/juvenile)
LC	Lactational	Organisms that are producing milk. (ECOTOX)
LE	Egg laying	Egg laying stage of oviparous animals. (http://en.wikipedia.org/wiki/)
LP	Larva-pupa	Early lifestage of organisms between the larvae and pupae stages. (ECOTOX)
LR	Prolarva	
LV	Larva	The early form of an animal (such as a frog, sea urchin or insects) that at birth or hatching is fundamentally unlike its parent and must metamorphose before assuming the adult characters. (https://www.merriam-webster.com/dictionary/larvae)
MA	Mature	Fully developed organisms. (https://www.merriam-webster.com/dictionary/mature)
MD	Mature dormant	In the dormant stage, two types of buds are visible on peach trees. Single vegetative buds are small, while the flower buds are larger, rounder and hairy. In this stage the buds are not visibly swollen. The first period of dormancy is a chilling period in which chemical reactions occur that allow the tree to grow. A second dormancy period is the

Code	Description	Definition
		time the tree remains in dormancy after meeting chilling requirements. (https://www.gardenguides.com/list_6733870_stages-peach-trees.html)
ME	Megalopa	
MG	Male gametophyte	The pollen grain or macrogametophyte. (https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3268550/)
ML	Morula	
MN	Mid-neurula	Partially through the stage in embryonic development in which the prominent processes are the formation of the neural plate and the plate's closure to form the neural tube. (Derived from Farlex Partner Medical Dictionary © Farlex 2012)
MO	Molt	
MX	Multiple	
MY	Mysis	
NB	Newborn	
ND	Naiad	
NE	Neonate	
NH	New, newly, or recent hatch	
NL	Neurala	Stage in embryonic development in which the prominent processes are the formation of the neural plate and the plate's closure to form the neural tube. (Farlex Partner Medical Dictionary © Farlex 2012)
NOINT	Not intact	
NR	Not reported	
NU	Nauplii	A crustacean larva in usually the first stage after leaving the egg and with three pairs of appendages, a median eye, and little or no segmentation. (https://www.merriam-webster.com/dictionary/nauplii)
NY	Nymph	An immature insect that differs from the adult chiefly in being of smaller size and having undeveloped wings. (https://www.merriam-webster.com/dictionary/nymph)
OO	Oocyte, ova	
PA	Parr	
PB	Mature, post-bloom stage (fruit trees)	Final stage of bud development when blooming has completed. (https://www.canr.msu.edu/profiles/dr_gregory_lang/sweet_cherry_research/fruit_bud_hardiness)
PC	Pre-hatch	Period of time prior to the emergence from an egg,

Code	Description	Definition
		chrysalis, or pupa. (https://www.merriam-webster.com/dictionary/hatch)
PD	Pre-molt	The period before an animal molts its skin, exoskeleton, shell, etc. (https://www.merriam-webster.com/dictionary/premolt)
PE	Post-emergence	After the penetration of the soil surface by a newly germinated plant. (https://www.merriam-webster.com/dictionary/emergence)
PG	Post-spawning	Period of time after the production or deposition of eggs usually in aquatic animals. (https://www.merriam-webster.com/dictionary/spawning)
PH	Mature, pit-hardening stage (fruit trees)	Fruit development that is mostly internal, the pit hardens and the embryo within develops a shoot, a primary root and two leaves. (https://www.gardenguides.com/list_6733870_stages-peach-trees.html)
PHT	Post-hatch	Period of time after the emergence from an egg, chrysalis, or pupa. (https://www.merriam-webster.com/dictionary/hatch)
PI	Post-molt	The period after an animal molts its skin, exoskeleton, shell, etc. (derived from https://www.merriam-webster.com/dictionary/premolt)
PJ	Pre-, sub-, semi-, near adult, or peripubertal	
PK	Post-smolt	The first period after the salmon has passed through smoltification, meaning transfer from a freshwater adapted fish to a salmon that has acquired seawater tolerance. (http://ctrlaqua.no/salmon/)
PN	Post-nauplius	Lifestage after the first stage after leaving the egg and with three pairs of appendages, a median eye, and little or no segmentation. (derived from https://www.merriam-webster.com/dictionary/nauplii)
PO	Pollen, pollen grain	
PP	Postpartum	In females, the period that is shortly after giving birth Also parturition. (http://www.ncbi.nlm.nih.gov)
PPU	Prepupal	Inactive stage in the development of some insects, between the larval and the pupal stages (http://wordnetweb.princeton.edu)
PQ	Pre-larva	A newly-hatched and very immature larva usually differing markedly from the typical larva of its kind. (https://www.merriam-webster.com/dictionary/prelarva)
PS	Pre-smolt	A young salmon (or trout) after the parr stage, when it becomes silvery and migrates to the sea for the first time.

Code	Description	Definition
		(http://oceantrackingnetwork.org/wp-content/uploads/2014/11/Aarestrup-What-is-a-smolt-OTN-2014-3-slides.pdf)
PT	Protolarvae	
PU	Pupa	An intermediate usually quiescent stage of a metamorphic insect (such as a bee, moth, or beetle) that occurs between the larva and the imago, is usually enclosed in a cocoon or protective covering, and undergoes internal changes by which larval structures are replaced by those typical of the imago. (https://www.merriam-webster.com/dictionary/pupa)
PV	Post-larva	
PW	Pre-spawning	Period of time prior to the production or deposition of eggs usually in aquatic animals. (https://www.merriam-webster.com/dictionary/spawning)
PY	Post-embryo	After the embryo stage. (ECOTOX)
PZ	Protozoa	A larval stage preceding the zoea in some decapod Crustacea. (https://www.merriam-webster.com/dictionary/protozoea)
RC	Rooted cuttings	Cuttings that have formed roots. (ECOTOX)
RH	Rhizome	
RP	Mature reproductive	
RST	Rootstock	
SA	Subadult	An individual that has passed through the juvenile period but not yet attained typical adult characteristics. (https://www.merriam-webster.com/dictionary/subadult)
SB	Shoot	
SC	Yolk-sac larvae, sac larvae	
SD	Seed	The grains or ripened ovules of plants used for sowing. (https://www.merriam-webster.com/dictionary/seed)
SE	Scape elongation	The elongation of a long internode forming the basal part or the whole of a peduncle. Typically it takes the form of a long, leafless flowering stem rising directly from a bulb, rhizome, or similar subterranean or underwater structure. (Etoh, T.; Simon, P.W. (2002). "Diversity, fertility, and seed production of garlic". In H.D. Rabinowitch; L. Currah. Allium crop science: recent advances. CABI Pub.)
SF	Sac fry, yolk sac fry	A newly hatched fry using the yolk sac as a food source. (http://www.fishbase.org/glossary/Glossary.php?q=sac+fry)
SG	Mature, side-green stage (fruit trees)	The second stage in bud development for fruit trees. (https://www.canr.msu.edu/profiles/dr_gregory)

Code	Description	Definition
		_lang/sweet_cherry_research/fruit_bud_hardiness)
SI	Sexually immature	Organisms that have not reached sexual maturity. (ECOTOX)
SL	Seedling	A young plant grown from seed. (https://www.merriam-webster.com/dictionary/seedling)
SM	Sexually mature	Organisms that have developed and are able to reproduce. (ECOTOX)
SMT	Smolt	
SN	Sapling	A young tree. (https://www.merriam-webster.com/dictionary/sapling)
SO	Sporeling	A young new individual developed from a spore. Usually a young sporophyte. (https://www.merriam-webster.com/dictionary/sporeling)
SP	Sperm	
SR	Spore	
ST	Spat	
SU	Swim-up	Fry that have absorbed their yolk sac, are ready to start feeding and rise to the surface to gulp air into the swim bladder. (https://www.fishbase.de/glossary/Glossary.php?q=swim-up+fry)
SW	Spawning	
SY	Stationary growth phase	Some cells may be dying and an equal number of cells are dividing, or the population of cells has simply stopped growing and dividing. (http://textbookofbacteriology.net/growth_3.html)
TA	Tadpole	
TC	Tissue culture callus	An unorganized proliferative mass of cells produced from isolated plant celles, tissues or organs when grown ascetically on artificial nutrient medium in glass vials under controlled experimental conditions. (https://www.majordifferences.com/2013/06/difference-between-callus-culture-and.html)
TLS	Tiller stage	Growth stage where shoots that grow after the initial parent shoot grows from a seed. They are involved in vegetative propagation and, in some cases, also seed production. (Bell, Adrian (1991). Plant Form. Oxford, UK: Oxford University Press. p. 182. ISBN 0-19-854219-4.)
TU	Tuber	
TZ	Trophozoite	The feeding stage, also known as vegetative stage, of a protozoan (as distinct from reproductive or encysted

Code	Description	Definition
		stages).(http://cancerweb.ncl.ac.uk/omd/)
UY	Underyearling	
VE	Veliger	
VG	Mature vegetative	
VI	Virgin	An organism that has not been mated. (ECOTOX)
YA	Young adult	
YE	Yearling	
YO	Young	
YY	Young of the year	Age 0 fish, or those animals born within the past year, from transformation to juvenile until January 1 in the Northern Hemisphere or July 1 in the Southern Hemisphere, which have not yet reached one year of age. Abbreviated as YOY. (http://www.fishbase.org/glossary/Glossary.php?q=young-of-the-year)
ZO	Zoea	
ZS	Zygosporangium	A thick-walled spore of some algae and fungi that is formed by the union of two similar sexual cells, usually serves as a resting spore, and produces the sporophytic phase (http://www.merriam-webster.com/dictionary/zygosporangium)
ZY	Zygote	

Appendix G. Soil Type Codes

Standard Artificial Soils:

OECD 1984	Organization for Economic Cooperation and Development 1984
OECD 1993	Organization for Economic Cooperation and Development 1993
EEC	Council of European Communities
ISO 1994	International Standard Organization 1994

Standard Artificial Soil Characteristics		
Soil Type	Organic Matter	pH
OECD 1984	10 % peat	6.0
OECD 1993	10 % peat	6.0
EEC	10 % peat	6.0
ISO 1994	10 % peat	6.0

Appendix H. Test Location Codes

Code	Definition
FieldA	Field, Artificial - a simulated or artificial field study is conducted in “an artificially bounded system that is a simplification of a specific ecosystem” (Rand, 1995), e.g. aviaries, pens, outdoor pots, concrete ponds, polyethylene lined ponds, raceways.
FieldN	Field, Natural - a natural field study is one “in which both the test system [...] and exposure to the stressor are ‘naturally’ derived” (Rand, 1995); e.g. sprayed agricultural field or orchard plots, field surveys.
FieldU	Field, Undetermined.
Lab	Laboratory indoor setting, including environmental chamber, greenhouse, lath house, garden frame or indoor pots
NR	Not Reported ; unable to determine whether laboratory or field

Appendix I. Valid Duration Units

Code	Definition
abs	until abscission
ac	age class
alv	alevin
ant	until anthesis
b0.25	0.25 bloom stage
BBCH	BBCH Scale
bim	bloom stage
brd	Brood or litter
trs	breeding season
bt	to boot stage
cd	colony diameter
cfs	to commercial flower stage
clv	cleavage
crs	crab stage
cs	cell stage
d	day
dapu	days after pupation
dbh	days pre-hatch/before hatch
dd	degree days
dge	days gestation
dh	degree hours
dla	days lactation
dpe	days post-emergence
dpel	days post egg laying
dpf	days post fertilization
dpfg	days post fledging
dpfl	days post flowering
dpgm	days post germination
dph	days post hatch
dphv	days post harvest
dpm	days post-moult
dpmm	days post metamorphosis

Code	Definition
dpn	days post-natal
dpo	days post oviposition
dpp	days post planting/sowing
dpr	days post-release
dps	days post spawn
dpu	days post-swim up
dpw	days post swimming
dpys	days post yolk sac absorption
ea	to earing or heading
eb	early bloom stage
ej	egg to juvenile
el	nth egg laid
em	to emergence
ep	egg to pupation
epa	egg to pre-adult
eslk	to early silk stage
eso	end of shooting stage
ey	eyed stage (time to eyed stage of fish eggs)
f5	50% flowering
fb	full bloom stage
fd	frond
fi	Floral initiation (flower initiation)
fl	flower stage
flg	fledging
fr	to fruit stage
frt	to fertilization
fry	fry
fs	flowering stage
gds	Gallien and Durocher stage
ge	generation
ges	gestation
gm	to germination
go	gosner stage
gs	growing season
gts	gastrula stage

Code	Definition
h	hour
hbf	hours pre-fertilization/ before fertilization
hbh	hours pre-hatch/ before hatch
hns	Haun stage
hpe	hours post emergence
hpel	hours post egg laying
hpf	hours post fertilization
hph	hours post hatch
hpp	hours post planting/sowing
hpr	hours post -release
ht	until hatch
hv	harvest
i2	intermolt to 2nd molt
ins	instar
inst	Instantaneous
it	intermolt to molt
kh	knee-high stage
lf	lifetime; no associated numeric value
lfd	leaf drop
lgp	to lag phase
lhv15-20	leaf harvest, 15-20 cm
log	to log phase
ls	leaf stage
ls4-6	4-6 leaf stage
ls6	6 leaf stage
ls9-10	9-10 leaf stage
LSI	Larval Stage Index
lva	larva to adult
lvp	larva to pupa
ma	to maturity
mi	minute
mmpf	until metamorphosis
mo	month
mope	months post-emergence
mopf	months post-fertilization

Code	Definition
moph	months post-hatch
mopm	months post-metamorphosis
mopres	months pre-smolt
mopswm	months post swim-up
mpf	minutes post fertilization
mpgm	months post-germination
mph	minutes post hatch
mpp	months post planting/sowing
mult	multiple durations
myp	Mysis to post-larvae
nf	Nieuwkoop-Faber-stage
NR	Not reported
pa	pupa to adult
pan	panicling stage
pci	Phytochron index
pd	1st pod set
pgm	post germination
pm	post molt
pr	priming (The harvesting of ripened tobacco leaves)
pro	propagation stage
rvh3	root harvest, 3 grams
s	second
sms	somite stage
so	shooting stage
spf	seconds post fertilization
spref	seconds before fertilization/pre-fertilization
ss	squaring stage
sst	substage
stg	stage
su	summer
swm	swim-up
tls	tiller stage
tr	1st trifoliate leaf
ts	time to tassle
ubi	until birth

Code	Definition
vg	vegetative stage
wbh	weeks pre-hatch/before hatch
wk	week
wkpm	weeks post metamorphosis
wpe	weeks post emergence
wph	weeks post hatch
wphv	Weeks pre harvest
wpp	weeks post planting/sowing
wps	weeks post swim-up
-x	pretreatment time unknown
yc	year class
yph	years post-hatch
yr	year
ZGS	Zadoks Growth Stage
zm	zoeae-megalop
zmy	zoeae to mysis

Appendix J. Exposure Type Codes

Code	Definition
D see Appendix J.1	Diet - exposure through consumption; includes diet and/or water intake; this code will be automatically assigned if one of the diet categories from Appendix J.1 is used
I see Appendix J.2	Injection -insertion of the toxicant into the skin, vessels, muscle, subcutaneous tissue, or any body cavity; this code will be automatically assigned if one of the injection categories from Appendix J.2 is used
M see Appendix J.3	Multiple-exposure to the toxicant through two or more different routes.
see Appendix J.4	Aquatic ONLY Exposure Type Codes
NR	Not Reported
T see Appendix J.5	Topical - exposure includes dermal, eggshell, immersion or soaking; this code will be automatically assigned if one of the topical categories from Appendix J.5 is used
V see Appendix J.6	Environmental - exposure includes field in situ and specific application types as well as incidental exposures; this code will be automatically assigned if one of the environmental categories from Appendix J.6 is used

Appendix J.1 Diet (D) Exposure Codes

Code	Definition
CH	choice of treated or untreated food or water
DR	chemical incorporated into drinking water
DT	diet, unspecified
FD	chemical incorporated into the food
GE	Gestational (Exposed during gestation)
GV	Gavage (oral intubation)
IG	intragastrical (injected directly into the digestive system including directly into the stomach, intestines or rectum, this includes enteral, intraileal, rumen fistula, and enema exposures)
LC	Lactation (Exposed via mother's milk)
OR	oral via capsule

Appendix J.2 Injection (I) Codes

Code	Definition
IA	Intra-arterial (injected via the artery)
IAC	Intra-abdominal cavity
IB	Albumin injection
IC	Air sac (air cell) injection
ICL	Intra-coelom
ID	Intradermal (An intradermal injection is given into the skin)
IE	intratesticular
IF	intramedial forebrain bundle
IH	intrahemocoel
II	intrastratial
IJ	injection, unspecified
IK	Intracranial
ILP	Intralymphatic
IM	intramuscular
IO	intra-amniotic
IP	intraperitoneal
IQ	Intraduodenal
IS	intrasegmentally (insects)
IU	intraaccumbens
IV	intravenous
IY	Intracardiac
IZ	Intra-spinal cord
OP	Osmotic pump, subcutaneous pump, peristaltic pump, mini pump
SC	subcutaneous
SD	subdermal
YK	yolk

Appendix J.3 Multiple (M) Application Codes

Code	Definition
MU	multiple routes between application groups (e.g. dermal and injection)

Appendix J.4 AQUATIC ONLY Exposure Type Codes

Aquatic Lab Exposure Types (EXP TYP)

Code	Definition
AQUA – NR	Aquatic – not reported
F	Flow-through
L	Leaching (used for leachate and sediment exposures, if water conc reported)
P	Pulse (intermittent or fluctuating dosing)
R	Renewal
S	Static (recirculating exposures are noted in <u>Exp Design</u>); algae tests where the time is <= 24 hr, static may be assumed, and coded as such by the reviewer

Aquatic Field Exposure Types (EXP TYP)

Code	Definition
B	Tidal
E	Lentic (static water system without measurable flow rate, e.g. ponds, lakes, troughs, irrigation ditches)
O	Lotic (flowing water system, e.g. streams)

[] = Old code. The codes will require maintenance to update records with new codes.

Appendix J.5 Topical (T) Application Codes

Code	Definition
DM	dermal
FC	Filmcoating (dust free colored coating of seeds)
MM	immersion
OC	ocular
PC	percutaneous
SA	surface area dose
SH	eggshell
TP	topical, general

Appendix J.6 Environmental (V) Exposure Codes [Also used as Aquatic Field Test

Application Type]

Code	Description	Definition
AE	aerial (unknown type)	Chemical applied by air, formulation of application (e.g. liquid or granular) not defined.
AG	aerial-granular	Chemical applied by aerial spreader, e.g. via tractor.
AS	aerial spray application	Chemical applied by aerial sprayer, e.g. via airplane.
CM	culture medium application	
DA	direct application	Includes the incorporation of the chemical directly into the exposure media, mixing into the soil or via chisel. It also includes chemicals applied directly to organism in the field by tractor or backpack mount, e.g. via wick, roller, or brush.
DU	dusted	
DW	dropwise application	Chemical solution applied by drops directly to species.
EN	environmental, unspecified	
FS	foliar spray	
FU	fumigation	
GG	ground granular	Chemical applied by ground spreader, e.g. via tractor.
GM	growth medium application	
GS	ground spray	Chemical applied by ground sprayer, e.g. via tractor.
HP	hydroponic solution application	
HS	hand spray	Chemical applied by hand sprayer, e.g. backpack sprayer.
IN	in situ	
MI	misted	
MT	multiple routes within environmental exposures, e.g. Aerial spray and soil slurry to the same plots.	
PR	present in soil (polluted soils are brought into the lab and tested)	
PT	painted	Chemical painted directly on the organism.
PU	pump	
SO	dipped or soaked	
SP	spray	Chemical applied by spray, spray method not defined.
SS	soil slurry	Chemical applied in a soil slurry (mixture of soil water and chemical)

Code	Description	Definition
TER-NR	Terrestrial Not Reported	
WA	watered	

Appendix J.7 In Vitro Exposure Codes

Code	Definition
IVT	In Vitro

Appendix K. Application Frequency Codes

Code	Definition
2 DLY for X D	2 times daily for X days
ADL	Ad libitum; without limit or restraint
CON	Continual; non-pulsed
D/WK, 10-13WK	X times per week for 10 to 13 weeks
DLY	Daily; dosing regime not specified
DLY for 2 H	Daily for 2 hours
DLY for 5 D	Daily for 5 days
DLY for X D	Daily for X days
E X D	Every X days
E X D for 6 D	Every x days for 6 days
E X D for 60 D	Every X days for 60 days
E X H	Every X hours
E x H for 20 D	Every X hours for 20 days
E x MI	Every x minutes
E X MO	Every X months
E X WK	Every X weeks
EOD	Every other day
EXD for 10 D	Every X days for 10 days
G per D	Grams per day
H	Hour
H/D for 8 D	X hours per day for 8 days
HED	X hours every day
NR	Not Reported
RES	Restricted
STG	Stage
WK, 1X/wk	Weeks, 1 time per week
WKY	Weekly
X	Dosed x time(s) per study period; e.g. 1 time = 1X
X D per WK	X days per week
X E 3.3-5 D	X times every 3.3 to 5 days
X E 7-15 D	X times every 7 to 15 days
X E10D	X times every 10 days
X E2D	X times every 2 days

Code	Definition
X E7D	X times every 7 days
X for 1 H	X times for 1 hour
X for 1 MI	X times for 1 minute
X for 10 MI	X times for 10 minutes
X for 12 D	X times for 12 days
X for 12 H	X times for 12 hours
X for 14 H	X times for 14 hours
X for 15 H	X times for 15 hours
X for 15 MI	X times for 15 minutes
X for 18 H	X times for 18 hours
X for 2 D	X times for 2 days
X for 2 H	X times for 2 hours
X for 20 MI	X times for 20 minutes
X for 24 H	X times for 24 hours
X for 3 D	X times for 3 days
X for 3 H	X times for 3 hours
X for 3.5 H	X times for 3.5 hours
X for 30 MI	X times for 30 minutes
X for 4 H	X times for 4 hours
X for 48 H	X times for 48 hours
X for 5 D	X times for 5 days
X for 5 D, 5 D apt	X times for 5 days, 5 days apart
X for 5 H	X times for 5 hours
X for 5 MI	X times for 5 minutes
X for 6 H	X times for 6 hours
X for 60 MI	X times for 60 minutes
X for 7 D	X times for 7 days
X for 7 H	X times for 7 hours
X for 84 H	X times for 84 hours
X for 90 MI	X times for 90 minutes
X for 96 H	X times for 96 hours
X H E10D	X hours every 10 days
X H E12H	X hours every 12 hours
X H E3D	X hours every 3 days
X H E5D	X hours every 5 days

Code	Definition
X H E7D	X hours every 7 days
X H EOD	X hours every other day
X H per D	X hours per day
X H WKY	X hours weekly
X H, 2X/WK	X hours, 2 times per week
X H, 4X/WK	X hours, 4 times per week
X H, 5/WK	X hours, 5 times per week
X in 12 H	X times in 12 hours
X in 14 D	X times in 14 days
X in 24-72 H	X times in 24 to 72 hours
X in 48 H	X times in 48 hours
X MI	X minutes
X MI E8H	X minutes every 8 hours
X MI EOD	X minutes every other day
X MI per D	X minutes per day
X MI, 1X/WK	X minutes, 1 time per week
X MI, 2X/WK	X minutes, 2 times per week
X MI, 3D	X minutes per day, for 3 Days
X MI, 3X/WK	X minutes, 3 times per week
X MI, 4D	X minutes per day for 4 days
X MI, 5X/WK	X minutes, 5 times per week
X per 12 D	X times per 12 days
X per 14 D	X times per 14 days
X per 2 wk	X times per 2 weeks
X per 24 H	X times per 24 hours
X per 2d	X times per 2 days
X per 3 D	X times per 3 days
X per 4d	X times per 4 days
X per 5 D	X times per 5 days
X per 6 H	X times per 6 hours
X per 6 WK	X times per 6 weeks
X per d	X times per day
X per D for12WK	X times per day for 12 weeks
X per D, 1 WK	X times per day for 1 week
X per D, 10 X	X times per day, 10 times

Code	Definition
X per D, 5 D/WK	X times per day, 5 days per week
X per D, 6 D/WK	X times per day, 6 days per week
X per FI	X times per flower initiation
X per h	X times per hour
X per mo	X times per month
X per wk	X times per week
X per WK, EOW	X times per week, every other week
X per wk/10 wk	X times per week per 10 weeks
X per Y	X times per year
X S, 1	X seconds, 1 time
X, 1/11D	X times, 1 time per 11 days
X, 1/3or4 D	X times, 1 time per 3 or 4 days
X, 1X per 3 WK	X times, 1 time per 3 week
X, 1X per 7-10 D	X times, 1 time per 7 to 10 days
X, 1X/20 D	X times, 1 time per 20 days
X, 1X/2D	X times, 1 time per 2 days
X, 1X/2WK	X times, 1 time per 2 weeks
X, 1X/4 WK	X times, 1 time per 4 weeks
X, 1X/D	X times, 1 time per day
X, 1X/wk	X times, 1 time per week
X, 1X/Y	X times, 1 time per year
X, 2 H apt	X times, 2 hours apart
X, 24 H per 14 D	X times, 24 hours per 14 days
X, 2X in 14 H	X times, 2 times in 14 hours
X, 2X per D	X times, 2 times per day
X, 2X per WK	X times, 2 times per week
X, 48 H apt E14D	X times, 48 hours apart every 14 days
X, 4X per D	X times, 4 times per day
X, 5X per WK	X times, 5 times per week
X, 7 D apt	X times, 7 days apart
X, 96 H apart	X times, 96 hours apart
X, 1 X E 15 D	X times, 1 time every 15 days
X, 1 X E 15 D	X times, 1 time every 15 days
X, 1 X per 15 D	X times, 1 time per 15 days
X, 10 D apt	X times 10 days apart

Code	Definition
X,1X per 2to3D	X times, 1 time per 2 to 3 days
X,1X per 3 D	X times, 1 time per 3 days
X,1X per 4 D	X times, 1 time per 4 days
X,20 D apt	x times 20 days apart
X/D for 6 D	X times per day for 6 days
X/WK for 3 WK	X times per week for 3 weeks
X/WK for 4 WK	x times per week for 4 weeks
X/WK for 5 WK	x times per week for 5 weeks
X/WK for 90 d	X times per week for 90 days
X/Y for 3 Y	X times per year for 3 years
Xfor0.5H,48H apt	X times for 0.5 hours, 48 hours apart
Xfor1.5H,24Hapt	X times for 1.5 hours, 24 hours apart
Xfor10H,5D apt	X times for 10 hours, 5 days apart
Xfor12H,12H apt	X times for 12 hours, 12 hours apart
Xfor12H,14D apt	X times for 12 hours, 14 days apart
Xfor12H,24H apt	X times for 12 hours, 24 hours apart
Xfor12H,3D apt	X times for 12 hours, 3 days apart
Xfor12H,48H apt	X times for 12 hours, 48 hours apart
Xfor12H,4D apt	X times for 12 hours, 4 days apart
Xfor12H,6D apt	X times for 12 hours, 6 days apart
Xfor12H,7D apt	X times for 12 hours, 7 days apart
Xfor14D,14D apt	X times for 14 days, 14 days apart
Xfor1H,24H apt	X times for 1 hour, 24 hours apart
Xfor1H,48H apt	X times for 1 hour, 48 hours apart
Xfor2.5H,8H apt	X times for 2.5 hours, 8 hours apart
Xfor24H,11D apt	X times for 24 hours, 11 days apart
Xfor24H,12H apt	X times for 24 hours, 12 hours apart
Xfor24H,24H apt	X times for 24 hours, 24 hours apart
Xfor24H,48H apt	X times for 24 hours, 48 hours apart
Xfor24H,4D apt	X times for 24 hours, 4 days apart
Xfor24H,5D apt	X times for 24 hours, 5 days apart
Xfor24H,6D apt	X times for 24 hours, 6 days apart
Xfor24H,72H apt	X times for 24 hours, 72 hours apart
Xfor2H,24H apt	X times for 2 hours, 24 hours apart
Xfor2H,48H apt	X times for 2 hours, 48 hours apart

Code	Definition
Xfor3H, 6D apt	X times for 3 hours, 6 days apart
Xfor3H,15D apt	X times for 3 hours, 15 days apart
Xfor3H,24H apt	X times for 3 hours, 24 hours apart
Xfor3H,48H apt	X times for 3 hours, 48 hours apart
Xfor3H,6H apt	X times for 3 hours, 6 hours apart
Xfor3H,96H apt	X times for 3 hours, 96 hours apart
Xfor4H,12H apt	X times for 4 hours, 12 hours apart
Xfor4H,24H apt	X times for 4 hours, 24 hours apart
Xfor4H,2D apt	X times for 4 hours, 2 days apart
Xfor4H,48H apt	X times for 4 hours, 48 hours apart
Xfor4H,4D apt	X times for 4 hours, 4 days apart
Xfor4H,7D apt	X times for 4 hours, 7 days apart
Xfor4H,8H apt	X times for 4 hours, 8 hours apart
Xfor5D,42D apt	X times for 5 days, 42 days apart
Xfor5H,3or5Dapt	X times for 5 hours, 3 or 5 days apart
Xfor6H,12H apt	X times for 6 hours, 12 hours apart
Xfor6H,14D apt	X times for 6 hours, 14 days apart
Xfor6H,24H apt	X times for 6 hours, 24 hours apart
Xfor6H,3D apt	X times for 6 hours, 3 days apart
Xfor6H,48H apt	X times for 6 hours, 48 hours apart
Xfor6H,6D apt	X times for 6 hours, 6 days apart
Xfor6H,72H apt	X times for 6 hours, 72 hours apart
Xfor6H,7D apt	X times for 6 hours, 7 days apart
Xfor6H,96H apt	X times for 6 hours, 96 hours apart
Xfor90MI,2H apt	X times for 90 minutes, 2 hours apart
XH/D,5D/WKfor3W	X hours per day, 5 days a week for 3 weeks
XperD for 3 D	X times per day for 3 days
XperD for 30 D	X times per day for 30 days
XperD for 7 D	X times per day for 7 days
XperD for 90 D	X times per day for 90 days
XperWK for 6 WK	X times per week for 6 weeks

Appendix L. Exposure Media Codes

Aquatic Media Type

Code	Definition
FW	Fresh Water
NR	Not Reported; unable to determine whether laboratory or field
SW	Salt Water

Terrestrial Media Type

Code	Description	Definition
AGR	Agar	
AQU	Aqueous	Nutrient solutions used to grow plant.
ART	Artificial soil	A soil created by mixing soil constituents, e.g. sand, clay, organic matter, etc and/or natural soils. Some artificial soils include OECD or LUFA described soils.
CUL	Culture Medium	
FAB	Fabric or similar material (includes cotton balls, gauze, etc)	Cloth or textile.
FLT	Filter paper	
HUM	Humus	
HYP	Hydroponic	Nutrient solutions used to grow plant.
LIT	Litter	
MAN	Manure	
MIN	Mineral soil	
MIX	Media Mixture (with comment)	A mixture of media, e.g. natural soil and pine needles.
NAT	Natural soil (This includes natural soils that are amended with nutrients.)	A soil that is obtained directly.
NONE	No substrate	No substrate in the experimental vessel.
NR	Not reported	
POP	Plaster of Paris	
SED	Sediment	
SLG	Sludge	

Code	Description	Definition
UKN	Unknown media	A media is noted but the specific type is not specified.
UKS	Unknown soil	A soil that is not specified.

Appendix M. Control Type and Dose ID Codes

Code	Definition
B	Baseline or background control: parameters of actual or representative test species measured before and after administration of test chemical, though not as part of the same test scenario. Note TERRESTRIAL FULL DOSE RESPONSE DATA ONLY: pretreatment values, collected during the same test scenario as the observed responses, are recorded as exposure concentrations with a negative exposure duration; <u>not as baseline control parameters</u> .
C	Concurrent control: controls are run simultaneously with the exposure, e.g. in the laboratory where a chemical free test chamber is used or in field studies where the control data are obtained upstream from the exposure data; also includes field tests where the controls are run in a separate system, i.e. pond A and pond B or field A and field B but the ponds are in the same geographic area and have similar media.
D	Exposure Dose level identifier
E	Endpoint link identifier
H	Historical control: applicable to natural field system testing, data collected prior to exposure often during an independent long-term survey of the area; see also B - Baseline
I	Insufficient
K	Data for control is presented but without accompanying methodology to identify procedures used
M	Multiple controls were reported, e.g. historic and concurrent
NR	Not reported; there is no information about presence or absence of controls in the publication
O	The ' O ' code should be used when a control is run in a different system (e.g. defined by different dilution water or soil properties) than the exposure treatments. This also includes laboratory studies where different solvents are used for control versus treatment (e.g. Water was used as a solvent for test compound, controls were injected with saline, or a blood sample from an unexposed female used for a control for an exposed male).
P	Positive controls, an exposure that causes a desired effect in the experiment, and document that the test and equipment are working, were used.
S	Satisfactory
U	Unsatisfactory
V	Carrier or solvent; organisms exposed to carrier or solvent as the only control
Z	Author states that no controls were used in the study

Appendix N. Exposure Dose and Observation/Response Value Units

Code	Description	Code	Description
%	percent	% lit	percent of litter
% * g	percent multiplied by weight in grams	% mg	percent milligrams
% act	percent activity	% mg/g bdwt	percent milligrams per gram body weight
% AE	percent acid equivalent	% of bdwt	percent of body weight
% arb	percent arbuscularity	% of CNTL	percent of control
% ash	percent ash	% of diet	percent of diet
% bt	percent bait	% of initial	percent of initial quantity
% CEC	% of soil cation exchange capacity	% of max yld	percent of maximum yield
% cell volume	percent cell volume	% of total	percent of total
% change	percent change	% org	percent of organisms
% clitellate	percent clitellate	% PC	Percent of positive control
% CNTL RI	percent of control Ratcliff Index	% PLIPD	percent of total phospholipid
% corn	percent corn pollen	% prod	percent production [(# eggs/# hen days)*100]
% cortex	percent of cortex	% PRTL	percent of total protein
% dev CNTL	percent deviation from control	% RI	percent Ratcliff Index
% dose ret	percent dose retained	% S/ppm Zn	percent sulfur per parts per million zinc
% dose/g TI	percent of dose per gram of tissue	% sat	percent saturation
% dose/h	percent dose per hour	% soln	percent solution
% dry wght	percent dry weight	% sperm	percent sperm
% DT	percent of digestive tract	% TIME	percent of time
% earliness	percent earliness (percent of total cotton yield obtained during the first picking)	% tolerance	percent tolerance
% FATL	percent of total fatty acids	% total dose	percent total dose
% fertile	percent fertile	% total oil	percent of total oil content
% g	percent grams	% v/v	percent volume per volume
% g/g	percent gram per gram	% v/w	percent volume per weight
% g/g bdwt	percent gram per gram body weight	% vol	percent volume
% ingested	percent of ingested	% w/v	percent weight per volume
% inhib	percent inhibition	% w/w	percent weight per weight
% intake	percent of intake	% w/w diet	percent weight per weight diet
		% wght	percent of weight

ECOTOX Code Appendix

Code	Description	Code	Description
% wght/org	percent weight per organism	1e+3 dpm/TI	1 X 10 +3 disintegrations per minute per tissue
% WSF	percent water soluble fraction	1e+3 ng	1 X 10 +3 nanograms
%/d	percent per day	1e+3 ng/g	1 X 10 +3 nanograms per gram
%/g	percent per gram	1e+3 no	1 X 10 +3 number
%/g TI	percent per gram tissue	1e+3 no	1 x 10+3 number
%/min	percent per minute	1e+3 no/cm	1 X 10 +3 number per centimeter
%/org/d	percent per organism per day	1e+3 no/cm3	1 X 10 +3 number per cubic centimeter
%/wk	percent per week	1e+3 no/g TI	1 X 10 +3 number per gram tissue
%FM	percent female		
%NaCl	percent sodium chloride	1e+3 no/mg SP	1 X 10 +3 number per milligram spleen
%RBC	percent red blood cells		
%succ br/fm	percent successful broods per female	1e+3 no/ul	1 x 10+3 number per microliter
0/00	parts per thousand	1e+3 org/acre	1 X 10+3 organisms per acre
1e+1 kg	1 x 10+1kilograms	1e+3 RA	1 X 10 +3 ratio
1e+1 ug/g	1 X 10 +1 micrograms per gram	1e+3 sigma u/g	1 X 10+3 sigma units per gram
1e+12/L	1 X 10+12 /liter	1e+3 um2	1 X 10 +3 square micrometers
1e+2 cal/g	1 X 10 +2 calories per gram	1e+3/mm3	1 X 10+3/cubic millimeter
1e+2 mm	1 X 10 +2 millimeters	1e+3/ul	1 X 10+3/microliter
1e+2 no/mm3	1 X 10 +2 per cubic millimeter	1e+3dpm/mg DNA	1 x 10+3 disintegrations per minute per milligram DNA
1e+2 ug/g	1 X 10 +2 micrograms per gram	1e+3dpm/mg RNA	1 x 10+3 disintegrations per minute per milligram RNA
1e+3 cell/mg TI	1 X 10 +3 cells per milligram tissue	1e+3RNA/TCA/DNA	1 X 10 +3 (counts per minute TCA per milligram RNA) per milligram DNA
1e+3 cells	1 X 10 +3 cells	1e+4 IU/g	1 X 10 +4 International units per gram
1e+3 cells/mm3	1 X 10 +3 cells per cubic millimeter	1e+4 IU/TI	1 X 10 +4 International units per tissue
1e+3 counts	1 X 10 +3 counts	1e+4 no/mg TI	1 x 10+4 number per milligram tissue
1e+3 cpm	1 X 10 +3 counts per minute	1e+4 no/ml	1 X 10 +4 number per milliliter
1e+3 dpm/g org	1 x 10+3 disintegrations per minute per gram organism	1e+4 no/mm3	1 X 10 +4 number per cubic milliliter
1e+3 dpm/ml	1 x 10+3 disintegrations per minute per milliliter		
1e+3 dpm/org	1 x 10+3 disintegrations per minute per organism		

ECOTOX Code Appendix

Code	Description	Code	Description
1e+4 ug/g	1 x 10+4 micrograms per gram	1e+8 no	1 x 10+8 number
1e+4 ug/TI	1 X 10+4 micrograms per tissue	1e+8/mm3	1 x 10+8/cubic millimeters
1e+4/mm	1 x 10+4/millimeter	1e+9 no	1 X 10 +9 number
1e+4/mm3	1 x 10+4 per cubic millimeter	1e+9 no/l	1 X 10 +9 number per liter
1e+5 no	1 X 10 +5 number	1e+9 no/ml	1 X 10 +9 number per milliliter
1e+5 no/g TI	1 X 10 +5 number per gram tissue	1e-1 mg/mg/d	1 X 10 -1 milligrams per milligrams per day
1e+6 cells	1 X 10 +6 cells	1e-2 mm	1 x 10-2 millimeters
1e+6 cells/mm3	1 X 10 +6 cells per cubic millimeter	1e-2 Nm	1 x 10-2 nanometers
1e+6 cm	1 X 10 + 6 centimeters	1e-2 no/ul	1 X 10 -2 number per microliter
1e+6 cpm	1 X 10 +6 counts per minute	1e-2 ug/g	1 X 10 -2 micrograms per gram
1e+6 cpm/g TI	1 X 10 +6 counts per minute per gram tissue	1e-2 umol Hg/g	1 X 10 -2 micromoles hemoglobin bound per g tissue
1e+6 mm3	1 X 10+6 per cubic millimeter	1e-2 umol/g TI	1 X 10 -2 micromoles per gram tissue
1e+6 no	1 x 10+6 number	1e-3 cm/d	1 X 10 -3 centimeters per day
1e+6 no/cm3	1 X 10 +6 number per cubic centimeter	1e-3 cpm	1 x10-3 counts per minute
1e+6 no/g	1 x 10+6 number per gram	1e-3 mg/mg/d	1 X 10 -3 milligrams per milligrams per day
1e+6 no/g TI	1 x 10+6 number per gram tissue	1e-3 RA	1 X 10 -3 molar
1e+6 no/mg TI	1 X 10 +6 number per milligram tissue	1e-3*dyn*s*cm-5	1 X 10 -3 X dynes X seconds X centimeters -5
1e+6 no/ml	1 X 10 +6 number per milliliter	1e-4 in	1 X 10 -4 inches
1e+6 no/mm3	1 X 10 +6 number per cubic millimeter	1e-4 no	1 X 10 -4 number
1e+6 no/org	1 x 10+6 number per organism	1e-4dpm/g	1 x 10-4 disintegrations per minute per gram
1e+6 no/ul	1 x 10+6 number per microliter	1e-4dpm/mg Pi	1 x 10-4 disintegrations per minute per milligram Pi
1e+6/ml	1 X 10+6/milliliter	1e-5/mm3	1 X 10 -5/cubic millimeter
1e+6/mm3	1 X 10+6/cubic millimeter	1e-6 mol/mi/gTI	1 X 10 -6 moles per minute per gram tissue
1e+6/ul	1 X 10+6/microliter	1e-9/l	1 X 10 -9/liter
1e+7 cells	1 X 10+7 cells	a-amino N/24h	alpha aminonitrogen per 24 hours
1e+7/ml sperm	1 X 10+7 cells per milliliter sperm	absrb	absorbance

ECOTOX Code Appendix

Code	Description	Code	Description
act	activity	ae ppm	acid equivalents parts per million
act/g pro	activity per gram protein	ae ug/cm²	acid equivalents micrograms per square centimeter
act/g TI	activity per gram tissue		
activ/nonactiv	activated to non-activated ratio	ae ug/L	acid equivalents micrograms per liter
acts/3 mi	acts per 3 minutes	ae ug/ml	acid equivalents micrograms per milliliter
ad	adults	AI	active ingredient; followed by the unit, e.g. AI kg/ha
ad/jv	adults per juvenile	AI %	Active Ingredient percent
ae g/100 m²	acid equivalents grams per 100 square meters	AI % bt	active ingredient percent bait
ae g/200 L	acid equivalents grams per 200 liters	AI % fd	Active ingredient percent food
ae g/ha	grams acid equivalents per hectare	AI % v/v	active ingredient percent volume per volume
ae g/L	acid equivalents grams per liter	AI % w/v	active ingredient percent weight per volume
ae kg/ha	acid equivalents kilograms per hectare	AI % w/w	active ingredient percent weight per weight
ae lb/100 gal	acid equivalent pounds per 100 gallons	AI % w/w bt	active ingredient percent weight per weight bait
ae lb/acre	acid equivalents pounds per acre	AI %/100 kg sd	active ingredient percent per 100 kilograms seed
ae lb/gal	acid equivalent pounds per gallons	AI %/ha	active ingredient percent per hectare
ae M	acid equivalents molar	AI %/L	active ingredient percent per L
ae mg/kg	acid equivalents milligrams per kilograms	AI %/wt sd	Active ingredient percent per weight seed
ae mg/kg dry soil	acid equivalents milligrams per kilogram dry soil	AI 0/00	active ingredient parts per thousand
ae mg/kg/d	acid equivalents milligrams per kilogram per day	AI cm³/eu	active ingredient cubic centimeters per *experimental unit
ae mg/L	acid equivalents milligrams per liter	AI cm³/kg	active ingredient cubic centimeters per kilogram
ae mg/m²	acid equivalents milligrams per square meter	AI fl oz/acre	active ingredient fluid ounces per acre
ae mg/org	acid equivalents milligrams per organism	AI g	Active ingredient grams
ae mmol/kg soil	acid equivalents millimoles per kilogram soil	AI g bt	active ingredient grams bait
ae oz/100gal/acre	acid equivalents ounces per 100 gallons per acre	AI g/0.4 ha	active ingredient grams per 0.4 hectare
ae ppb	acid equivalents parts per billion		

ECOTOX Code Appendix

Code	Description	Code	Description
AI g/0.405 ha	active ingredient grams per 0.405 hectare	AI g/25 ml/m	active ingredient grams per 25 milliliters per meter
AI g/10 acres	active ingredient grams per 10 acres	AI g/3 ml/m	active ingredient grams per 3 milliliters per meter
AI g/10 L	active ingredient grams per 10 liters	AI g/30.5 cm ht	active ingredient grams per 30.5 centimeters plant height
AI g/10 m	active ingredient grams per 10 meter	AI g/300 L	active ingredient grams per 300 liters
AI g/100 g bt	active ingredient grams per 100 grams bait	AI g/304.8 m	active ingredient grams per 304.8 meters
AI g/100 g sd	active ingredient grams per 100 grams of seed	AI g/305 m	active ingredient grams per 305 meters
AI g/100 gal	active ingredient grams per 100 gallons	AI g/378 L	active ingredient grams per 378 liters
AI g/100 kg	active ingredient grams per 100 kilograms	AI g/378.5 L	Active ingredient grams per 378.5 liters
AI g/100 kg sd	Active ingredient gram per 100 kilograms seed	AI g/379 L	active ingredient grams per 379 liters
AI g/100 L	active ingredient grams per 100 liters	AI g/400 m2	active ingredient grams per 400 square meters
AI g/100 m	active ingredient grams per 100 meters	AI g/454.6 L/0.4 ha	active ingredient grams per 454.6 liters per 0.4 hectares
AI g/1000 L	active ingredient grams per 1000 liters	AI g/500 g	active ingredient grams per 500 grams
AI g/100000 sd	active ingredient grams per 100000 seed	AI g/500g soil	active ingredient grams per 500 grams soil
ai g/100m2	active ingredient grams per 100 square meters	AI g/6 L	active ingredient grams per 6 liters
AI g/10kg sd	Active ingredient gram per 10 kilograms seed	AI g/60000 sd	active ingredient grams per 60000 seeds
AI g/1100 L	active ingredient grams per 1100 liters	AI g/93 m2	active ingredient grams per 93 square meters
AI g/2.5 cm dbh	Active ingredient grams per 2.5 centimeter of diameter breast height	AI g/acre	active ingredient grams per acre
AI g/2.54 cm dbh	active ingredient grams per 2.54 centimeter of diameter at breast height	AI g/bushel	active ingredient grams per bushel
AI g/2.54 cm tkdi	active ingredient grams per 2.54 centimeters trunk diameter	AI g/cm caliper	active ingredient grams per centimeter caliper
AI g/200 L	active ingredient grams per 200 liters	AI g/cm of dbh	active ingredient grams per centimeter of diameter breast height
AI g/2000 cm3 soil	active ingredient grams per 2000 cubic centimeters soil	AI g/cm2	active ingredient grams per square centimeter

ECOTOX Code Appendix

Code	Description	Code	Description
AI g/dm3	active ingredient grams per cubic decimeter	AI g/org	active ingredient grams per organism
AI g/dn(Cyprus)	Active Ingredient grams per dunam, dunum or donum (Cyprus 1338m ²)	AI g/t	active ingredient grams per ton
AI g/eu	active ingredient grams per *experimental unit	AI g/unit	active ingredient grams per unit
AI g/feddan	active ingredient grams per feddan	AI gal/100gal/acre	active ingredient gallons per 100 gallons per acre
AI g/ft org	active ingredient grams per foot of organism	AI gal/acre	active ingredient gallons per acre
AI g/ha	active ingredient grams per hectare	AI kg	active ingredient kilograms
		AI kg/0.4 ha	active ingredient kilograms per 0.4 hectares
AI g/hl	active ingredient grams per hectoliter	AI kg/100 kg sd	active ingredient kilograms per 100 kilograms seed
AI g/in dia	active ingredient grams per inch diameter	AI kg/100 L	active ingredient kilograms per 100 liters
AI g/kg	active ingredient grams per kilogram	AI kg/1000 m	active ingredient kilograms per 1000 meters
AI g/kg bdwt	active ingredient grams per kilogram body weight	AI kg/1122 L/ha	active ingredient kilograms per 1122 liters per hectare
AI g/kg food	active ingredient grams per kilogram food	AI kg/227.3 l/0.4 ha	active ingredient kilograms per 227.3 liters per 0.4 hectares
AI g/kg plt	active ingredient grams per kilogram pellet	AI kg/2338 L/ha	active ingredient kilograms per 2338 liters per hectare
ai g/kg sd	active ingredient grams per kilogram seed	AI kg/3741 L/ha	active ingredient kilograms per 3741 liters per hectare
AI g/kg soil	active ingredient grams per kilogram soil	AI kg/378 L	active ingredient kilograms per 378 liters
ai g/L	active ingredient grams per liter	AI kg/378.5 L	active ingredient kilograms per 378.5 liters
AI g/L fd	active ingredient grams per liter food	ai kg/379 l	active ingredient kilograms per 379 liters
AI g/L soil	active ingredient grams per liter soil	AI kg/acre	active ingredient kilograms per acre
AI g/m	active ingredient grams per meter	AI kg/eu	active ingredient kilograms per *experimental unit
ai g/m²	active ingredient grams per square meter	AI kg/feddan	AI kilograms per feddan, or faddan (1 feddan = 1.038 acres)
AI g/m² canopy	active ingredient grams per square meter canopy	AI kg/ha	active ingredient kilograms per hectare
AI g/m³	active ingredient grams per cubic meter	AI kg/ha soil	active ingredient kilograms per hectare soil
AI g/ml	active ingredient grams per milliliter		

ECOTOX Code Appendix

Code	Description	Code	Description
AI kg/L	active ingredient kilograms per liter	AI mg/300 ml	active ingredient milligrams per 300 milliliters
AI L/42.1 L/ha	active ingredient liters per 42.1 liters per hectare	AI mg/50 ml H₂O	active ingredient milligrams per 50 milliliters water
AI L/eu	active ingredient liters per *experimental unit	AI mg/cm²	active ingredient milligrams per square centimeter
AI L/feddan	active ingredient liters per feddan	AI mg/d	active ingredient milligrams per day
AI L/ha	active ingredient liters per hectare	AI mg/eu	active ingredient milligrams per *experimental unit
AI L/ha/m	active ingredient liters per hectare per meter	AI mg/g	active ingredient milligrams per gram
AI lb/10 gal	active ingredient pounds per 10 gallons	AI mg/g fd	Active ingredient milligrams per gram food
AI lb/100 ft²	active ingredient pounds per 100 square feet	AI mg/g sd	Active ingredient milligrams per gram seed
AI lb/100 gal	active ingredient pounds per 100 gallons	AI mg/g wet wt fd	active ingredient milligrams per gram wet weight food
AI lb/100gal/acre	active ingredient pounds per 100 gallons per acre	AI mg/ha	active ingredient milligrams per hectare
AI lb/11 gal/acre	Active Ingredient pounds per 11 gallons per acre	AI mg/kg	active ingredient milligrams per kilogram
AI lb/acre	active ingredient pounds per acre	AI mg/kg bdwt	active ingredient milligrams per kilogram body weight
AI lb/cwt sd	active ingredient pounds per hundred weight seed	AI mg/kg bdwt EU	active ingredient milligrams per kilogram body weight of *experimental unit
AI lb/eu	active ingredient pounds per *experimental unit	AI mg/kg bdwt/d	active ingredient milligrams per kilograms body weight per day
AI lb/ga	active ingredient pounds per gallon	AI mg/kg dry soil	active ingredient milligrams per kilogram dry soil
AI lb/gal/acre	active ingredient pounds per gallon per acre	AI mg/kg egg wt	active ingredient milligrams per kilogram egg weight
AI lb/ha	active ingredient pounds per hectare	AI mg/kg food	active ingredient milligrams per kilogram food
AI M	active ingredient molar	AI mg/kg org	active ingredient milligrams per kilogram organism
AI mg	active ingredient milligrams	AI mg/kg soil	active ingredient milligrams per kilogram soil
AI mg/0.1 m²	active ingredient milligrams per 0.1 square meters	AI mg/kg/d	active ingredient milligrams per kilogram per day
AI mg/100 cm³	active ingredient milligrams per 100 cubic centimeters	AI mg/L	active ingredient milligrams per liter
AI mg/100 kg	active ingredient milligrams per 100 kilograms		
AI mg/2 L fd	active ingredient milligrams per 2 liters food		

ECOTOX Code Appendix

Code	Description	Code	Description
AI mg/L fd	active ingredient milligrams per liter food	AI ml/org	active ingredient milliliter per organism
AI mg/m	active ingredient milligrams per meter	AI ml/t	active ingredient milliliters per ton
AI mg/m²	active ingredient milligrams per square meter	AI mM	active ingredient milliMolar
AI mg/ml	active ingredient milligrams per milliliter	AI mmol/dm³	active ingredient millimoles per cubic decimeter
AI mg/org	active ingredient milligrams per organism	AI mol/eu	active ingredient moles per *experimental unit
AI mg/sd	active ingredient milligrams per seed	AI mol/kg	active ingredient moles per kilogram
AI ml/100 gal	active ingredient milliliters per 100 gallons	AI ng	active ingredient nanograms
AI ml/100 kg	active ingredient milliliters per 100 kilograms	AI ng/cm²	active ingredient nanograms per square centimeter
AI mL/100 L	active ingredient milliliters per 100 liters	AI ng/cm² lf	active ingredient nanograms per square centimeter leaf
AI ml/1000 L	active ingredient milliliters per 1000 liters	AI ng/eu	active ingredient nanograms per *experimental unit
AI ml/100m²	active ingredient milliliters per 100 square meters	AI ng/g	active ingredient nanograms per gram
AI ml/378 L	active ingredient milliliters per 378 liters	AI ng/g org	active ingredient nanograms per gram organism
AI mL/eu	active ingredient milliliter per *experimental unit	AI ng/L	active ingredient nanograms per liter
AI ml/ha	active ingredient milliliters per hectare	AI ng/kg fd	active ingredient nanograms per kilogram food
AI ml/kg	Active Ingredient milliliters per kilogram	AI ng/mg bdwt	active ingredient nanograms per milligrams body weight
AI ml/kg diet	Active Ingredient milliliters per kilogram diet	AI ng/mL	active ingredient nanograms per milliliter
AI ml/kg sd	active ingredient milliliters per kilograms seed	AI ng/org	active ingredient nanograms per organism
AI ml/L	active ingredient milliliters per liter	AI ng/org/d	active ingredient nanograms per organism per day
AI ml/m	active ingredient milliliters per meter	AI ng/uL diet	Active ingredient nanograms per microliter diet
AI ml/m²	active ingredient milliliters per square meter		
AI ml/m² canopy	active ingredient milliliters per square meter canopy		
AI ml/mi	active ingredient milliliters per minute		

ECOTOX Code Appendix

Code	Description	Code	Description
AI nL/L	active ingredient nanoliters per liter	AI ppt	active ingredient parts per trillion
AI oz/100 gal	active ingredient ounces per 100 gallons	AI pt/acre	active ingredient pints per acre
AI oz/1000 ft	active ingredient ounces per 1000 feet	AI ug	active ingredient micrograms
AI oz/100 lb sd	active ingredient ounces per 100 pounds seed	AI ug/0.5 ul	active ingredient micrograms per 0.5 microliters
AI oz/25lbs bdwt	active ingredient ounces per 25 pounds body weight	AI ug/100 cm²	active ingredient micrograms per 100 square centimeters
AI oz/40 gal	active ingredient ounces per 40 gallons	AI ug/120g soil	active ingredient micrograms per 120 grams soil
AI oz/acre	active ingredient ounces per acre	AI ug/cm²	active ingredient micrograms per square centimeter
AI oz/bu	active ingredient ounces per bushel	AI ug/cm² diet	active ingredient micrograms per square centimeters diet
AI oz/bu sd	active ingredient ounces per bushel of seed	AI ug/cm² media	active ingredient micrograms per square centimeter of media
AI oz/cwt sd	active ingredient ounces per hundredweight seed	AI ug/eu	active ingredient micrograms per *experimental unit
AI oz/in dbh	active ingredient ounces per inches diameter at breast height	AI ug/g	active ingredient micrograms
AI oz/lb seed	active ingredient ounces per pound seed	AI ug/g bdwt	active ingredient micrograms per gram body weight
AI ppb	active ingredient parts per billion	AI ug/g dry fd	active ingredient micrograms per gram dry food
AI ppm	active ingredient parts per million	AI ug/g dry soil	active ingredient micrograms per gram dry soil
AI ppm dry soil	active ingredient parts per million dry soil	AI ug/g egg	active ingredient micrograms per gram egg
AI ppm food	active ingredient parts per million food	AI ug/g eu	active ingredient micrograms per gram *experimental unit
AI ppm H₂O	active ingredient parts per million water	AI ug/g org	active ingredient micrograms per gram organism
AI ppm soil	active ingredient parts per million soil		
AI ppm soil w/w	active ingredient parts per million soil weight per weight basis		
AI ppm w/w	active ingredient parts per million weight per weight		
AI ppmw/soil vol	active ingredient parts per million by weight per soil volume		

ECOTOX Code Appendix

Code	Description	Code	Description
AI ug/g soil	active ingredient micrograms per gram soil	AI ul/ml	active ingredient microliters per milliliter
AI ug/g wet media	active ingredient micrograms per gram wet media	AI uM	active ingredient microMolar
AI ug/kg	active ingredient micrograms per kilogram	AI umol/kg dry soil	active ingredient micromoles per kilogram dry soil
AI ug/kg bdwt/d	active ingredient micrograms per kilogram body weight per day	ALB:YK	albumen to yolk ratio
AI ug/kg dry media	active ingredient micrograms per kilogram dry media	amend:unamend	ratio of amended to unamended treatments
AI ug/kg dry soil	active ingredient micrograms per kilogram dry soil	amol/cel	attomoles per cell
AI ug/kg fd	active ingredient micrograms per kilogram food	AU	arbitrary units
AI ug/kg soil	active ingredient micrograms per kilogram soil	B'	Chromatid break
AI ug/kg wet media	active ingredient micrograms per kilogram wet media	B''	Isochromatid break
AI ug/L	active ingredient micrograms per liter	BB units	BB units
AI ug/mg 100 ml solv	active ingredient micrograms per milligram in 100 milliliters of solvent	beats*ml/mi2	beats * milliliter per square minutes
AI ug/mg bdwt	active ingredient micrograms per milligram body weight	beats/mi	beats per minute
AI ug/ml	active ingredient micrograms per milliliter	births	births
AI ug/org	active ingredient micrograms per organism	bits	bits
AI ug/sd	active ingredient micrograms per seed	BO:LI	bone to liver ratio
AI ug.ul	active ingredient micrograms per microliter	Bq	becquerels
AI ul/10 ul	active ingredient microliters per 10 microliters	Bq/g	becquerels per gram
AI ul/L	active ingredient microliters per Liter	Bq/kg	becquerels per kilogram
AI ul/kg dry soil	active ingredient microliters per kilogram dry soil	Bq/L	becquerels per liter
		Bq/mg	becquerels per milligram
		Bq/ml	becquerels per milliliter
		Bq/org	becquerels per organism
		BR:BL	ratio of brain to blood
		branches/org	number of branches per organism
		bud/org	buds per organism
		burrows	burrows
		bushels	bushels
		C	Centigrade, degrees
		cal	calories
		castings	earthworm castings
		casts/eu	casts per *experimental unit
		casts/m2/d	casts per square meter per day

Code	Description	Code	Description
casts/pl	casts per plot	Ci/mol	curies per mole
cc	cocoons	clusters	clusters
cc/10 ad	cocoons per 10 adults	clutches	clutches
cc/ad	cocoons per adult	cm	centimeter
cc/cntr	cocoons per container	cm H₂O	centimeters of water
cc/eu	cocoons per *experimental unit	cm/cm³	centimeters per cubic centimeter
cc/org	cocoons per organism	cm/cm³	centimeters per cubic centimeter
cc/org/8wk	cocoons per organism per 8 weeks	cm/d	centimeters per day
cc/org/wk	cocoons per organism per week	cm/dm³	centimeters per cubic decimeter
cc/sad	cocoons per surviving adult	cm/g bw^{ht}/h	centimeters per gram bodyweight per hour
cc/unit	cocoons per unit	cm/g soil	centimeters per gram soil
cell/8 srtl cel	cells per 8 Sertoli cells	cm/org	centimeters per org
cell/mi x10x3	cells per minute x10x3	cm/wk	centimeters per week
cell/mm³	cells per cubic millimeter	cm²	centimeters squared
cell/u.a.	cells per unit area	cm²/kg	centimeters squared per kilogram
cell:nuclei	ratio of cells to nuclei		
cells	cells	cm²/org	centimeters squared per organism
cells/100 clm	cells per 100 coelomocytes	cm³	cubic centimeters
cells/1e+6 cell	cells per 1 X 10 +6 cells	cm³ O₂/g/h	cubic centimeters of O ₂ per gram per hour
cells/50 mg	cells per 50 milligrams	cm³/0.7 ha	cubic centimeters per 0.7 hectare
cells/area	cells per area	cm³/100 L	cubic centimeters per 100 liters
cells/mg TI	cells per milligram tissue	cm³/4L	cubic centimeters per 4 liters
cells/ml	cells per milliliter	cm³/dm³	cubic centimeters per cubic decimeter
cells/mm cortex	cells per millimeter cortex	cm³/eu	cubic centimeters per *experimental unit
cells/mm folium	cells per millimeter folium	cm³/feddan	cubic centimeters per feddan, or faddan (1 feddan = 1.038 acres)
cells/mm²	cells per square millimeter	cm³/ft	cubic centimeters per foot
cells/TI	cells per tissue	cm³/ha	cubic centimeters per hectare
cells/tubule	cells per tubule		
cfu/mg	colony forming units per milligram		
chem/d	chemical per day		
CHLA:CHLB	ratio of chlorophyll a to chlorophyll b		
CI	color index		
Ci/L	curies per liter		
Ci/mmol	curies per millimole		

ECOTOX Code Appendix

Code	Description	Code	Description
cm3/hL	cubic centimeters per hectoliter	CWU	CW units
cm3/kg sd	cubic centimeters per kilogram seed	cyc/deg	cycles per degree
cm3/l	cubic centimeters per liter	d	day
cm3/m3	cubic centimeters per cubic meter	DB/mg pro	lipid aliphatic double bounds per milligram protein
cm3/org	cubic centimeters per organism	dead:live	ratio of dead to live organisms
cm3/yd	cubic centimeters per yard	divisions/cell	divisions per cell
cmol/kg	centimoles of charges per kilogram	dm3/ha	cubic decimeter per hectare
cpm	counts per minute	DNA:protein	DNA to protein ratio
cpm 1e-4	counts per minute * 1 X 10-4	DNA:RNA	DNA to RNA ratio
cpm X 1000	counts per minute X 1000	dpm	disintegrations per minute
cpm/1e+5 cells	counts per minute per 1X10+5 cells	dpm 1e-3/ml	disintegrations per minute * 1 X 10-3 per milliliter
cpm/cc	counts per minute per cocoon	dpm treat:cntl	ration of disintegrations per minute treated to control
cpm/g TI	counts per minute per gram tissue	dpm/167 mg TI	disintegrations per minute per 167 milligrams tissue
cpm/L	counts per minute per liter	dpm/800g soil	disintegrations per minute per 800 grams of soil
cpm/mg	counts per minute per milligram	dpm/EU	disintegrations per minute per *experimental unit
cpm/mg DNA	counts per minute per milligram DNA	dpm/g	disintegrations per minute per gram of tissue
cpm/mg pro	counts per minute per milligram protein	dpm/g*100	disintegrations per minute per gram*100
cpm/mg RNA	counts per minute per milligram RNA	dpm/mg	disintegrations per minute per milligram
cpm/mg UA	counts per minute per milligram uronic acid	dpm/mg FA	disintegrations per minute per milligram fatty acid
cpm/ml	counts per minute per millimeter	dpm/mg GH	disintegrations per minute per milligram growth hormone
cpm/org	counts per minute per organism	dpm/mg GH*100	disintegrations per minute per milligram growth hormone*100
CRB:BR	ratio of cerebellum to brain	dpm/mg pro	disintegrations per minute per milligram protein
CRM:BR	ration of cerebrum to brain	dpm/ml	disintegrations per minute per milliliter
cRNA/mgRNA/DNA	(counts per minute RNA per milligram RNA) per milligram DNA	Draize score	Draize score
cwt/acre	hundredweights per acre	dS/m	deciSiemens per meter

ECOTOX Code Appendix

Code	Description	Code	Description
e/100hd	eggs per 100 hen days	final:initial	ratio of initial parameter to final parameter
e/hd	eggs per hen day	f _l	femtoliters
ea/eu	ears per *experimental unit	f _l oz	fluid ounces
egg cap/org	egg capsules per organism	f _l oz mat/cwt	fluid ounces material per hundredweight
egg/100 ad	eggs per 100 adults	f _l oz/10 gal	fluid ounces per 10 gallons
eggs	egg(s)	f _l oz/10 gal/1k sqft	fluid ounces per 10 gallons per 1000 square feet
eggs/100 wk	eggs per 10 wk	f _l oz/100 gal	fluid ounces per 100 gallons
eggs/BDAY	eggs per bird-day	f _l oz/1000 ft	fluid ounces per 1000 feet
eggs/d	eggs per day	f _l oz/1000 ft ²	fluid ounces per 1000 square feet
eggs/fm	eggs per female	f _l oz/50 gal/acre	fluid ounces per 50 gallons per acre
eggs/fm/8 wk	eggs per female per 8 weeks	f _l oz/acre	fluid ounces per acre
eggs/fm/d	eggs per female per week	f _l oz/cwt	fluid ounces per hundredweight
eggs/fm/wk	eggs per female per week	f _l oz/gal	fluid ounces per gallon
eggs/org	eggs per organism	f _l oz/in dbh	fluid ounces per inches diameter at breast height
eggs/org/d	eggs per organism per day	fledge/pair	fledglings per pair or young fledged per pair
eggs/org/wk	eggs per organism per week	FM	female
eggs/pair	eggs per pair	FM/lit	females per litter
eggs/raft	eggs per raft	FM:ML	female to male ratio
em	embryos	f _m ol	femtomol
em/FM	embryos per female	f _m ol/mg pro	femtomol per milligram protein
enz act	enzyme activity or enzyme activity unit	FTS:PLC	fetus to placenta ratio
enz act/mg	enzyme activity per milligram	FU/g	fluorescence units per gram
eu	enzyme unit	g	grams
EU/g	enzyme unit (amount of enzyme needed to catalyze)/g	g bt	grams bait
failures	failures	g bt/eu	grams bait per experimental unit
FD:Gain	ratio of weight of food consumed to weight gained	g food	grams food
FD:WTR	food to water ratio	g GAIN/g fd/d	grams weight gained per gram food per day
FER	feed efficiency ratio	g GAIN/kg fd	grams weight gained per kilogram food
fet	fetuses		
fetuses/litter	fetuses per litter		
fg/org	femtograms per organism		
fibers/L	fibers per liter		

ECOTOX Code Appendix

Code	Description	Code	Description
g H₂O/dm²/h	grams H ₂ O per squared decameter per hour	g/100 stl	grams per 100 stolons
g TI/100 g bdwt	grams tissue per 100 grams bodyweight	g/1000 ft	grams per 1000 feet
g%	gram percent	g/1000 ft²	grams per 1000 square feet
g% w/v	gram percent on a weight per volume basis	g/1000 ft³	grams per 1000 cubic feet
g/0.25 acre	grams per 0.25 acres	g/1000 g	grams per 1000 grams
g/0.4 ha	grams per 0.4 hectare	g/1000 g food	grams per 1000 grams food
g/0.5 m²	grams per 0.5 meters squared	g/1000 kg food	grams per 1000 kilograms food
g/0.76 m³ soil	grams per 0.76 cubic meter soil	g/1000 L	grams per 1000 liters
g/1.2 kg soil	grams per 1.2 kilogram soil	g/1000 org	grams per 1000 organisms
g/1.6 kg soil	grams per 1.6 kilogram soil	g/1000gr	grams per 1000 grains
g/1.7 kg soil	grams per 1.7 kilograms soil	g/100g	grams per 100 grams
g/1.8 kg soil	grams per 1.8 kilogram soil	g/100g bdwt/h	grams per 100 grams per bodyweight/hour
g/1.8kg sd	grams per 1.8 kilograms seed	g/100g BW	grams per 100 grams body weight
g/10 acre	grams per 10 acres	g/100g BW/d	grams per 100 grams body weight per day
g/10 ft	grams per 10 feet	g/100g diet	grams per 100 grams diet
g/10 gal/acre	grams per 10 gallons per acre	g/100g org	grams per 100 grams organism
g/10 kg food	grams per 10 kilograms food	g/100kg	grams per 100 kilograms
g/10 L	grams per 10 liters	g/100ml	grams per 100 milliliters
g/10 L soil	grams per 10 liters soil	g/10g diet	grams per 10 grams diet
g/10.2 L	grams per 10.2 liters	g/13.5 L	grams per 13.5 liters
g/100 cm³	grams per 100 cubic centimeters	g/13125 ft²	grams per 13125 square feet
g/100 g sd	grams per 100 grams seed	g/15 cm	grams per 15 centimeters
g/100 gal	grams per 100 gallons	g/150 sd	grams per 150 seeds
g/100 kg sd	grams per 100 kilograms seed	g/16 L	grams per 16 liters
g/100 L	grams per 100 liters	g/1600 org	grams per 1600 organisms
g/100 le	grams per 100 leaves	g/170 ml	grams per 170 milliliters
g/100 m	grams per 100 meters	g/189.25 L	grams per 189.25 liters
g/100 m²	grams per 100 square meters	g/2 L	grams per 2 liters
g/100 sd	grams per 100 seeds	g/2.25 m²	grams per 2.25 square meters
		g/200 kg sd	grams per 200 kilograms seed
		g/200 m²	grams per 200 square meters

ECOTOX Code Appendix

Code	Description	Code	Description
g/200 ml	grams per 200 milliliters	g/BDAY	grams per bird-day
g/250 L	grams per 250 liters	g/bdwt e0.75	grams per body weight * 1e0.75
g/27 kg sd	grams per 27 kilograms seed	g/bushel	grams per bushel
g/3 kg seed	grams per 3 kilograms seed	g/cc	grams per cocoon
g/3.75 L	grams per 3.75 liters	g/cm	grams per centimeter
g/3.78 L	grams per 3.78 liters	g/cm dbh	grams per centimeter diameter at breast height
g/30.5 m	grams per 30.5 meters	g/cm2	grams per square centimeter
g/300 g seed	grams per 300 grams seed	g/d	grams per day
g/305 m	grams per 305 meters	g/d/100 g bdwt	grams per day per 100 grams body weight
g/37.9L/0.1 ha	grams per 37.9 liters per 0.1 hectare	g/d/100kg org	grams per day per 100 kilograms organism
g/300 L/ha	grams per 300 liters per hectare	g/d/org	grams per day per organism
g/379 L	grams per 379 liters	g/d/wght	grams per day per weight
g/4 d	grams per 4 days	g/dl	grams per deciliter
g/4000 cm3 soil	grams per 4000 cubic centimeters soil	g/dm3	grams per cubic decimeter
g/45.4 kg bdwt/d	grams per 45.4 kilograms body weight per day	g/dm3	grams day per cubic meter
g/45.4 kg seed	grams per 45.4 kilograms seed	g/dn(Std)	grams per dunam, dunum or donum (Std 1000m2)
g/454 g seed	grams per 454 grams seed	g/eu	grams per *experimental unit
g/4719 cm3 soil	grams per 4719 cubic centimeters soil	g/eu/d	grams per *experimental unit per day
g/5 kg soil	grams per 5 kilograms soil	g/feddan	grams per feddan, or faddan (1 feddan = 1.038 acres)
g/5 L	grams per 5 liters		
g/5 m2	grams per 5 meters squared		
g/50 ml	grams per 50 milliliters	g/fish	grams per fish
g/50 org	grams per 50 organisms	g/FM	grams per female
g/50 seeds	grams per 50 seeds	g/fruit	grams per fruit
g/500 g diet	grams per 500 grams diet	g/ft2	grams per square foot
g/500 ml	grams per 500 milliliters	g/g bdwt	grams per gram body weight
g/60 cm	grams per 60 centimeters	g/g bdwt/d	grams per gram body weight per day
g/7 kg	grams per 7 kilograms	g/g dry humus	grams per gram dry humus
g/70 d	grams per 70 days	g/g fd	grams per gram food
g/800 ml	grams per 800 milliliters	g/g org	grams per gram organism
g/946 ml	grams per 946 milliliters	g/g TI	grams per gram tissue
g/acre	grams per acre		

ECOTOX Code Appendix

Code	Description	Code	Description
g/gal	grams per gallon	g/ML	grams per male
g/h	grams per hour	g/ml/100 L	grams per milliliter per 100 liters
g h/m3	grams hours per cubic meter	g/ml/eu	grams per milliliter per *experimental unit
g/ha	grams per hectare	g/org	grams per organism
g/hd	grams per hen day	g/org/42 d	grams per organism per 42 days
g/hL	grams per hectoliter	g/org/d	grams per organism per day
g/jv	grams per juvenile	g/org/eu	grams per organism per *experimental unit
g/kg	grams per kilogram	g/org/wk	grams per organism per week
g/kg bdwt	grams per kilogram body weight	g/org/yr	grams per organism per year
g/kg bdwt/d	grams per kilogram body weight per day	g/plot	grams per plot
g/kg bdwt/h	grams per kilogram body weight per hour	g/sample	grams per sample
g/kg dry fd	grams per kilogram dry food	g/sd	grams per seed
g/kg dry sd	grams per kilogram dry seed	g/ton	grams per ton
g/kg fd	grams per kilogram food	g/ug	grams per microgram
g/kg sd	grams per kilograms seed	g/wk	grams per week
g/kg soil	grams per kilogram soil	g/yd2	grams per square yard
g/kg*e0.75 bdwt	grams per kg * 1e0.75 body weight	G'	Chromatid gap
g/kg/d	grams per kilogram per day	G''	Isochromatid gap
g/L	grams per liter	Gain:FD	ratio of weight gained to weight of food consumed
g/3.79 L	grams per 3.79 liters	gal/0.5 rod2	gallons per 0.5 square rods
g/L diet	grams per liter diet	gal/100 gal	gallons per 100 gallons
g/L soil	grams per liter soil	gal/acre	gallons per acre
g/L/m2	grams per liter per square meter	gal/cwt	gallons per 100 weight
g/lb seed	grams per pound of seed	gal/gal	gallons per gallon
g/LE	grams per leaf	gamma/day	gamma/day (Von Bertalanffy growth)
g/linear ft	grams per linear foot	gamma/g TI	gamma counts per gram tissue
g/LIT	grams per litter	gg	gamma gamma
g/ml	grams per milliliter	gila:neuron	gila to neuron ratio
g/m	grams per meter	grade	grade
g/m2	grams per square meter	grain/panicle	grains per panicle
g/m2 soil	grams per square meter soil	granules	granules
g/m3	grams per cubic meter		

ECOTOX Code Appendix

Code	Description	Code	Description
granules/kg bwt	granules per kilogram body weight	IU/mg pro	International Units per milligrams protein
h	hour	IU/mg TI	International units per milligram tissue
H'	Shannon-Weiner Diversity index	IU/ml	International Units per milliliter
HA units	Hemagglutinating units	J/beat	Joules per beat
Haugh U	Haugh units	J/d	Joules per day
hsk:gr	ratio plant husk to grain	jv	juveniles
Hz	Hertz	jv/ad	juveniles per adult
Hz/s	Hertz per second	jv/cc	juveniles per cocoon
ICU/kg diet	International chick unit per kilogram diet	jv/eu	juveniles per *experimental unit
implants	implants	jv/fm	juveniles per female
in	inches	jv/ftcc	juveniles per fertile cocoon
in2	inches squared	jv/lit	juveniles per litter
index	index	jv/mated fm	juvenile per mated female
IU	International Units (One IU is the amount of enzyme consuming or forming 1 umol substrate or 1 umol product per minute under standard conditions.) May also be noted as "SI units" (Système International d'unités)	jv/nest	juveniles per nest
		jv/org	juveniles per organism
		jv/org/wk	juveniles per organisms per week
		K units	Karmen units
		k2/d	elimination rate constant 2 per day
		KA units	King/Armstrong units
IU/100 g bdwt	International Units per 100 grams body weight	ka/d	elimination rate constant a per day
IU/d	International units per day	KA/g	King/Armstrong units per gram
IU/g	International Units per gram	kBq	kilobecquerels
IU/g diet	International units per gram diet	kBq/dm3	kilobecquerels per cubic decimeter
IU/g TI	International Units per gram tissue	kBq/eu	kilobecquerels per *experimental unit
IU/kg	International Units per kilogram	kBq/L	kilobecquerels per liter
IU/kg bdwt	International units per kilogram body weight	kBq/ml	kilobecquerels per milliliter
IU/kg diet	International units per kilogram diet	kcal	kilocalories
IU/L	International Units per liter	kcal/100g	kilocalories per 100 grams
IU/mg Hb	International units per milligram hemoglobin	kcal/d	kilocalories per day
		kg	kilograms

Code	Description	Code	Description
kg bt/ha	kilograms bait per hectare	kg/mu	kilograms per mu
kg bt/m2	kilograms bait per square meter	kg/org	kilograms per organism
kg conc/d	kilograms of concentrate per day	kg/org/d	kilograms per organism per day
kg silage/d	kilograms of silage per day	kg/ton sd	kilograms per ton seed
kg/0.5 m2	kilograms per 0.5 square meters	kg/ton tubers	kilograms per ton of tubers
kg/10 ac	kilograms per 10 acres	kg/wk	kilograms per week
kg/100 kg sd	kilograms per 100 kilograms seed	KI:BR	kidney to brain ratio
kg/100 m2	kilograms per 100 square meters	kJ/d/org	kilojoules per day per organism
kg/11 m	kilograms per 11 meters	kJ/kg bdwt/d	kiloJoules per kilogram body weight per day
kg/2000 L	kilograms per 2000 liters	kmol/m3	kilomoles per cubic meter
kg/3.78 L	kilograms per 3.78 liters	L	liters
kg/50 m	kilograms per 50 meters	L/0.4 ha	liter per 0.4 hectares
kg/500 m2	kilograms per 500 square meters	L/1.4 m3 soil	liters per 1.4 cubic meters soil
kg/9.3 m2	kilograms per 9.3 square meters	L/1.5 cm3 soil	liters per 1.5 cubic centimeters soil
kg/9.9 m2	kilograms per 9.9 square meters	L/10 ac	liters per 10 acres
kg/ac	kilograms per acre	L/100 lbs sd	liters per 100 pounds seed
kg/cwt sd	kilograms per hundredweight seed	L/1000 bu	Liters per 1000 bushels
kg/d	kilograms per day	L/1041 L/ha	liters per 1041 liters per hectare
kg/eu	kilograms per *experimental unit	L/160 m soil	liters per 160 meters soil
kg/feddan	kilograms per feddan, or faddan (1 feddan = 1.038 acres)	L/161 m soil	liters per 161 meters soil
kg/ha	kilograms per hectare	L/24 h	liters per 24 hours
kg/ha/yr	kilograms per hectare per year	L/80 kg N/ha	liters per 80 kilograms nitrogen per hectare
kg/hL	kilograms per hektoliter	L/feddan	liters per feddan, or faddan (1 feddan = 1.038 acres)
kg/L	kilograms per liter	L/ha	liters per hectare
kg/m2	kilograms per square meter	L/hl	liters per hectoliter
kg/m3	kilograms per cubic meter	L/l	liter per liter
kg/mi2/mo	kilograms per square mile per month	L/m2	liters per square meter
kg/mm	kilograms per millimeter	L/m3	liters per cubic meter
		L/mg	liters per milligram
		L/ton sd	liters per ton seed
		lamellae/axon	lamellae per axon
		layers	Layers

ECOTOX Code Appendix

Code	Description	Code	Description
lb	pounds	log 10 ug/g org	log 10 micrograms per gram organism
lb bt/acre	pounds bait per acre	log rel	log relative activity/intensity
lb/100 ft2	pounds per 100 square feet	log s	log time in seconds
lb/100 gal	pounds per 100 gallons	log2 titers	log2 titers
lb/100 lb sd	pounds per 100 pounds seed	Iprog/Iprog itl	ratio of live progeny per live progeny initial
lb/100 yd2	pounds per 100 square yards	LU:BR	lung to brain ratio
lb/1000 ft2	pounds per 1000 square feet	M	Molar
lb/40 gal	pounds per 40 gallons	m enz act/mg	millienzyme activity per milligram
lb/5 gal/acre	pounds per 5 gallons per acre	M/dm3	molar per cubic decameter
lb/90 ft2	pounds per 90 square feet	M/m3	molar per cubic meter
lb/acre	pounds per acre	m/s	meters per second
lb/cwt sd	pounds per hundred weight seed	m3	cubic meters
lb/d	pounds per day	m3/ha	cubic meters per hectare
lb/eu	pounds per *experimental unit	maturity index	maturity index
lb/ft2	pounds per square foot	MBq	Megabecquerel
lb/ft2	pounds per cubic foot	MBq	millibecquerels
lb/gal	pounds per gallon	MBq/ml	millibecquerels per milliliter
lb/gal/acre	pounds per gallon acre	mcCi	milliCuries
lb/org/d	pounds per organism per day	mcCi mg	milliCuries milligram
lb/plot	pounds per plot	mcCi/kg	microCurie per kilogram
lb/rod2	pounds per square rod	mcCi/ml	milliCuries per milliliter
If prog/If intl	ratio of live females per live females initial	mcCi/mmol	milliCuries per millimoles
LGTH/s	length per second	meq	milliequivalents
LGTH:THIK	ratio of length to thickness	meq/100g	milliequivalents per 100 grams
LI:BR	liver to brain ratio	meq/100g soil	milliequivalents per 100 grams soil
lit	litters	meq/eu	milliequivalents per experimental unit
lit/pr	litters per pair	meq/g	milliequivalents per gram
litter %	litter percent	meq/L	milliequivalents per liter
Im prog/Im intl	ratio of live males per live males initial	metric t/ha	metric tons per hectare
In(Wf/Wi)	natural log(mean survivor weight/mean initial weight)	mg	milligrams
		mg %	milligrams percent

ECOTOX Code Appendix

Code	Description	Code	Description
mg C/g OM	milligrams carbon per gram organic matter	mg/%	milligrams per percent
mg C2H4/eu/d	milligrams of ethylene produced per experimental unit per day	mg/10 g food	milligrams per 10 grams food
mg C2H4/eu/h	milligrams of ethylene produced per experimental unit per hour	mg/10 g soil	milligrams per 10 grams soil
mg CO2/100g soil	milligrams carbon dioxide per 100 grams of soil	mg/10 L	milligrams per 10 liters
mg CO2/dm2/h	milligrams carbon dioxide per squared decameter per hour	mg/10 ml	milligrams per 10 milliliters
mg CO2/h/g	milligrams carbon dioxide per hour per gram	mg/100 kg org	milligrams per 100 kilograms of organism
mg CO2/hr/g ndl	milligrams carbon dioxide per hour per gram of needles	mg/100 L	milligrams per 100 liters
mg CO2/m2/sec	milligrams carbon dioxide per squared meter per second	mg/100 lbs	milligrams per 100 pounds
mg H2O/d*cm2*T	milligrams water per day*square centimeters*Torr	mg/100 mg TI	milligrams per 100 milligrams tissue
mg N/100 ml	milligrams nitrogen per 100 milliliter	mg/100g	milligrams per 100 grams
mg NH3/g org	milligrams ammonia per gram of organism	mg/100g bw	milligrams per 100 grams body weight
mg NH3/g org/h	milligrams ammonia per gram of organism per hour	mg/100g bw/d	milligrams per 100 grams body weight per day
mg O2/g org	milligrams oxygen per gram of organism	mg/100g food	milligrams per 100 grams food
mg P/100 g	milligrams phosphorus per 100 grams	mg/100g org	milligrams per 100 grams organism
mg P/h/g TI	milligrams phosphorus per hour per gram tissue	mg/100g sd	milligrams per 100 grams seed
mg pro/g	milligrams protein per gram	mg/100g soil	milligrams per 100 grams soil
mg pro/mi	milligrams protein per minute	mg/100g/d	milligrams per 100 grams per day
mg TI/g bdwt	milligrams tissue per gram body weight	mg/100kg bdwt	milligrams per 100 kilograms body weight
mg TI/kg bdwt	milligrams tissue per kilogram body weight	mg/100lb/d	milligrams per 100 pounds per day
mg urea/g org	milligrams urea per gram of organism	mg/100ml	milligrams per 100 milliliters
mg%	milligram %	mg/100ml diet	milligrams per 100 milliliters diet
		mg/100ul	milligrams per 100 microliters
		mg/10g	milligrams per 10 grams
		mg/10g sd	milligrams per 10 grams seed
		mg/10g bdwt	milligrams per 10 grams body weight
		mg/10g org	milligrams per 10 grams organism

ECOTOX Code Appendix

Code	Description	Code	Description
mg/12 h	milligrams per 12 hours	mg/cm3	milligrams per cubic centimeter
mg/15 g fd	milligrams per 15 grams food	mg/cntr	milligrams per container
mg/150ml	milligrams per 150 milliliters	mg/d	milligrams per day
mg/2.5 cm dia	milligrams per 2.5 centimeter diameter	mg/d/100 lbs	milligrams per day per 100 pounds
mg/20 cm3	milligrams per 20 cubic centimeters	mg/d/100 mg org	milligrams per day per 100 grams organisms
mg/200 ml	milligrams per 200 milliliters	mg/d/bdwt	milligrams per day per body weight
mg/24 h	milligrams per 24 hours	mg/d/wght	milligrams per day per weight
mg/24 h/kg	milligrams per 24 hours per kilogram	mg/dl	milligrams per deciliter
mg/250 ml	milligrams per 250 milliliters	mg/dm2/h	milligrams per square decimeter per hour
mg/250g bdwt	milligrams per 250 grams body weight	mg/dm3	milligrams per cubed decimeter
mg/3 kg	milligrams per 3 kilograms	mg/dose	milligrams per dose
mg/3 L soil	milligrams per 3 liters soil	mg/egg	milligrams per egg
mg/3 ml	milligrams per 3 milliliters	mg/eu	milligrams per *experimental unit
mg/300 g	milligrams per 300 grams	mg/fish	milligrams per fish
mg/454g fd	milligrams per 454 grams food	mg/ft3	milligrams per cubic foot
mg/5 g soil	milligrams per 5 grams soil	mg/g	milligrams per gram
mg/50 cm2	Milligrams per 50 centimeters squared	mg/g ash	milligrams per gram ash
mg/500 g soil	milligrams per 500 grams soil	mg/g bdwt	milligrams per gram body weight
mg/500 ml	milligrams per 500 milliliters	mg/g bdwt/d	milligrams per gram body weight per day
mg/60 ml	milligrams per 60 milliliters	mg/g dry wt	milligrams per gram dry weight
mg/60g egg	milligrams per 60 grams egg	mg/g CRTN	milligrams per gram creatinine
mg/70g	milligrams per 70 grams	mg/g fd	milligrams per gram food
mg/bee	milligrams per bee	mg/g in solvent	milligrams per gram in solvent
mg/cc	milligrams per cocoon	mg/g MIT	micrograms per gram mitochondria
mg/cm	milligrams per centimeter	mg/g N	milligrams per gram nitrogen
mg/cm2	milligrams per square centimeter	mg/g org	milligrams per gram of organism
mg/cm2*torr	milligrams per square centimeter X Torr	mg/g pod	milligrams per gram of pod
mg/cm2/d	milligrams per square centimeter per day		

ECOTOX Code Appendix

Code	Description	Code	Description
mg/g pro	milligrams per gram protein	mg/kg litter	milligrams per kilogram litter
mg/g soil	milligrams per gram of soil	mg/kg media	milligrams per kilogram media
mg/g TI	milligrams per gram tissue	mg/kg org	milligrams per kilogram organism
mg/g TI/h	milligrams per gram tissue per hour	mg/kg org/d	milligrams per kilogram organism per day
mg/g/d	milligrams per gram per day	mg/kg p/d	milligrams per kilograms parent per day
mg/gal	milligrams per gallon	mg/kg seed	milligrams per kilogram seed
mg/gland/g bdwt	milligrams per gland per gram body weight	mg/kg soil	milligrams per kilogram soil
mg/h	milligrams per hour	mg/kg TI	micrograms per milligrams tissue
mg/h/g bdwt	milligrams per hour per gram body weight	mg/kg wet fd	milligrams per kilogram wet food
mg/ha	milligrams per hectare	mg/kg wet wt	milligrams per kilogram wet weight
mg h/L	milligrams hours per liter	mg/kg wet wt media	milligrams per kilogram wet weight media
mg/in²/d	milligrams per square inch per day	mg/kg wt	milligrams per kilogram weight
mg/jv	milligrams per juvenile	mg/kg wt/d	milligrams per kilogram weight per day
mg/kg	milligrams per kilogram	mg/kg/d	milligrams per kilogram per day
mg/kg bdwt	milligrams per kilogram body weight	mg/kg/fish	milligrams per kilogram per fish
mg/kg bdwt/d	milligrams per kilogram body weight per day	mg/kg/h	milligrams per kilograms per hour
mg/kg bdwt/wk	milligrams per kilogram body weight per week	mg/kg/L	milligrams per kilogram per liter
mg/kg diet	milligrams per kilogram diet	mg/kg/min	milligrams per kilogram per minute
mg/kg dry fd	milligrams per kilogram dry food	mg/kg/org	milligrams per kilogram organism
mg/kg dry soil	milligrams per kilograms dry soil	mg/kg/wk	milligrams per kilogram per week
mg/kg dry soil	milligrams per kilogram dry soil	mg/L	milligrams per liter
mg/kg dry wt	milligrams per kilogram dry weight	mg/L 10 mi	milligrams per liter 10 minutes
mg/kg dw org/d	milligrams per kilogram dry weight organism per day	mg/L fd	milligrams per liter food
mg/kg egg	milligrams per kilogram egg	mg/L H₂O	milligrams per liter water
mg/kg fd/d	milligrams per kilogram food per day		
mg/kg food	milligrams per kilogram food		
mg/kg humus	milligrams per kilogram humus		

ECOTOX Code Appendix

Code	Description	Code	Description
mg/L media	milligrams per liter media	mi/nmol Rh	minutes per nanomoles per nanomol rhodopsin
mg/L/d	milligram per liter per day	mi/org	minutes per organism
mg/L/h	milligrams per liter per hour	micronaires	micronaires
mg/lb	milligrams per pound	microns	microns
mg/m²	milligrams per square meter	miU/kg bdwt/h	millInternational Units per kilogram body weight per hour
mg/m³	milligrams per cubic meter	MK:SR	milk to serum ratio
mg/mg CREA	milligrams per milligrams creatinine	ml	milliliters
mg/mg node	milligrams per milligram nodules	ML	male
mg/mg wet bdwt	milligrams per milligram wet body weight	ml CO₂/mi	milliliters CO ₂ per minute
mg/mi	milligrams per minute	ml O₂	milliliters O ₂
mg/ml	milligrams per milliliter	ml O₂/mg TI	milliliters O ₂ per milligram tissue
mg/ml fd	milligrams per milliliter food	ml/10 g bdwt	milliliters per 10 grams body weight
mg/mm²	milligrams per square milliliter	ml/10 L	milliliter per 10 liters
mg/ml/g wt	milligrams per milliliter per gram weight	ml/10 L soil	milliliter per 10 liters soil
mg/org	milligrams per organism	ml/10 L/100 m²	milliliters per 10 liters per 100 square meters
mg/org/d	milligrams per organism per day	ml/10.2 L	milliliters per 10.2 liters
mg/org/wk	milligrams per organism per week	ml/100 g bdwt	milliliter per 100 grams body weight
mg/orwt	milligrams per organ weight	ml/100 gal	milliliters per 100 gallons
mg/quintal	miligrams per quintal	ml/100 kg fd	milliliters per 100 kilograms food
mg/sd	milligrams per seed	ml/100 kg sd	milliliters per 100 kilograms seed
mg/TI	milligrams per tissue	ml/100 L	milliliters per 100 liter
mg/vol	milligrams per volume	ml/100 L H₂O/acre	milliliters per 100 liters water per acre
mg/wk	milligrams per week	ml/100 lb sd	milliliters per 100 pounds seed
mg^{1/3}	milligrams to 1/3 power	ml/100 m²	milliliters per 100 square meters
mgdryfd/gwetbdwt/d	milligrams dry food per gram wet body weight per day	ml/1000 L	milliliters per 1000 liters
mgdryfd/mgwetbdwt/d	milligrams dry food per milligrams wet body weight per day	ml/1000 ml H₂O	milliliters per 1000 milliliters water
mi	minute	ml/1000 org	milliliters per 1000 organisms
mi/12 h	minutes per 12 hours	ml/100g	milliliters per 100 grams
mi/d	minutes per day		

ECOTOX Code Appendix

Code	Description	Code	Description
ml/100g bdwt/d	milliliters per 100 grams body weight per day	ml/70d	milliliters per 70 days
ml/100g sd	milliliters per 100 grams seed	ml/8.5 L	milliliters per 8.5 liters
ml/100ml	milliliters per 100 milliliters	ml/81.8 kg wet media	milliliters per 81.8 kilograms wet media
ml/1150 ml	milliliters per 1150 milliliters	ml/92.9 m2	milliliters per 92.9 square meters
ml/15.1 L	milliliters per 15.1 liters	ml/929 cm2	milliliters per 929 square centimeters
ml/16 h	milliliters per 16 hours	ml/946 ml	milliliters per 946 milliliters
ml/189.25 L	milliliters per 189.25 liters	ml/acre	milliliters per acre
ml/2.5 cm eu	milliliters per 2.5 centimeters *experimental unit	ml/body wt	milliliters per body weight
ml/2.54 cm tkdi	milliliters per 2.54 cm trunk diameter	ml/cm circ	milliliters per centimeter circumference
ml/20 L	milliliters per 20 liters	ml/cntr	milliliters per container
ml/2000 L	milliliters per 2000 liters	ml/d	milliliters per day
ml/24 h	milliliters per 24 hours	ml/d/100g BW	milliliters per day per 100 grams bodyweight
ml/25 ft	milliliters per 25 feet	ml/d/kg BW	milliliters per day per kilogram body weight
ml/25 L	milliliters per 25 liters	ml/d/org	milliliters per day per organism
ml/25 ml	milliliters per 25 milliliters	ml/dm2	milliliters per square decimeter
ml/3.75 L	milliliters per 3.75 liters	ml/eu	milliliters per *experimental unit
ml/3.78 L	milliliters per 3.78 liters	ml/eu/d	milliliters per *experimental unit per day
ml/3.79 L	milliliters per 3.79 liters	ml/ft	milliliters per foot
ml/3.8 L	milliliters per 3.8 liters	ml/ft2	milliliters per square foot
ml/300 L/ha	milliliters per 300 liters per hectare	ml/ft3	milliliter per cubic foot
ml/35 L	milliliters per 35 liters	ml/g bdwt	milliliters per gram body weight
ml/37.8 L	milliliters per 37.8 liters	ml/g food	milliliters per gram food
ml/4.5 L/0.003 ha	milliliters per 4.5 liters per 0.003 hectares	ml/g soil	milliliters per gram soil
ml/45 mi	milliliters per 45 minutes	ml/g/h	milliliters per gram per hour
ml/454 g fd	milliliters per 454 grams food	ml/gal	milliliters per gallon
ml/50 gal	milliliters per 50 gallons	ml/h	milliliters per hour
ml/50 kg seed	milliliters per 50 kilograms seed	ml/h/g bdwt	milliliters per hour per gram body weight
ml/50 ml	milliliters per 50 milliliters	ml/ha	milliliters per hectare
ml/500 ml	milliliters per 500 milliliters	ml/hl	milliliter per hectoliter
ml/64 m2	milliliters per 64 square meters		

ECOTOX Code Appendix

Code	Description	Code	Description
ml/kg	milliliters per kilogram	mm x 100	millimeters x 100
ml/kg bdwt	milliliters per kilograms body weight	mm/d	millimeters per day
ml/kg diet	milliliters per kilogram diet	mm/h	millimeters per hour
ml/kg dry seed	milliliters per kilogram dry seed	mM/kg	millimolar per kilogram
ml/kg org/d	milliliters per kilogram organism per day	mm/org	millimeters per organism
ml/kg sd	milliliters per kilograms seed	mm/ug pro	millimeters per microgram protein
ml/kg soil	milliliters per kilogram soil	mm2	square millimeters
ml/kg/d	milliliters per kilogram per day	mm2/mm3 * 1e-9	square millimeters per cubic millimeter X 1 X 10 -9
ml/L	milliliters per liter	mm2/org/d	square millimeters per organism per day
ml/8 L	milliliters per 8 liters	mm3	cubic millimeters (abbreviated in some literature as cmm)
ml/L/1000 ft2	milliliters per liter per 1000 square foot	mm3/dm3	cubic millimeters per cubic decimeter
ml/L/org	milliliters per liter per organism	mm3/L	cubic millimeters per liter
ML/lit	males per litter	mm3/mg/h	cubic millimeters per milligram per hour
ml/m	milliliters per meter	mm3/mm3	cubic millimeters per cubic millimeter
ml/m2	milliliters per square meter	mmg	micronmilligrams
ml/m3	milliliters per cubic meter	mmHG	millimeters mercury
ml/mg	milliliters per milligram	mmHg/beat/mi*-3	millimeters mercury per beat per minute * 1 X 10-3
ml/mi	milliliters per minute	mmHG/s	millimeters mercury per second
ml/mi/100g	milliliters per minute per 100 grams	mmol	millimoles
ml/mi/kg	milliliters per minute per kilogram	mmol NO2/kg	millimoles nitrogen dioxide per kilogram
ml/org	milliliters per organism	mmol/g food	millimoles per gram food
ml/org/d	milliliters per organism per day	mmol/100 g	millimoles per 100 grams
ml/plot	milliliters per plot	mmol/100 g bdwt	millimoles per 100 grams body weight
ml/quintal	mililiters per quintal	mmol/d	millimoles per day
ML/total	males per total population	mmol/dm3	millimoles per cubic decimeter
ml/wk	milliliters per week	mmol/g	millimoles per gram
ML:FM	ratio of male to female	mmol/g dry wt	millimoles per gram dry weight
mM	milliMolar (millimoles per liter)		
mM fd	milliMolar food		
mm	millimeters		

Code	Description	Code	Description
mmol/h/g TI	millimoles per hour per gram tissue	mol/ha	moles per hectare
mmol/kg	millimoles per kilogram	mol/kg	moles per kilogram
mmol/kg bdwt	millimoles per kilogram body weight	mol/kg bdwt	moles per kilogram body weight
mmol/kg bdwt/d	millimoles per kilogram body weight per day	mol/L	moles per liter
mmol/kg dry bdwt/d	millimoles per kilogram dry body weight per day	mol/m3	moles per cubic meter
mmol/kg dry fd/d	millimoles per kilogram dry food per day	mol/ml	moles per milliliter
mmol/kg egg	millimoles per kilogram egg	mol/org	moles per organism
mmol/kg fd	millimoles per kilogram fd	molal	molality
mmol/kg soil	millimoles per kilogram soil	Mole %	mole percent
mmol/kg/d	millimoles per kilogram per day	morph/org	ectomycorrhizal morphotypes per organism
mmol/kg/h	millimoles per kilogram per hour	mOsm	milliosmoles
mmol/L	millimoles per liter (**equivalent to mg at/L)	mOsm/kg	milliosmoles per kilogram
mmol/L soil	millimoles per liter soil	mosmols/l	mosmoles (conc osmotic particles in solution) per liter
mmol/m2	millimoles per square meter	mouse unit/ml	mouse units per milliliter
mmol/m3	millimoles per cubic meter	mp/mg pro/15mi	microsomal proteins/milligram protein per 15 minutes
mmol/mg/mi	millimoles per milligram per minute	MPa	megaPascals
mmol/mi/mg	millimoles per minute per milligram	ms	milliseconds
mmol/mi/h	millimoles per milliliter per hour	mS/cm	milli Siemens per centimeter
mmu	absolute milli-mass units	mu	International milliunits (nmol substrate transformed/min/ml)
mo	month	mu/24 h	milliunit per 24 hours
mol	Moles	mu/24 h/kg	milliunit per 24 hours per kilogram
mol NO2/h/g	moles NO2 per hour per gram	mu/d	microunits per day
mol/1000 ft3	moles per 1000 cubic feet	mu/g	milliUnits per gram organism
mol/9.29 m2	moles per 9.29 square meters	mu/mg pro	microUnits per milligram protein
mol/dm3	moles per cubic decimeter	mu/mi/ml	milliunit per minute per milliliter
mol/g	moles per gram	mu/ml	milliunit per milliliter
mol/g bdwt	moles per gram body weight	mu/org	milliunit per organism
mol/g soil	moles per gram soil	mumol/0.5 ul	millimicromoles per 0.5 microliter

ECOTOX Code Appendix

Code	Description	Code	Description
mumol/g	mumoles per gram	ng/g dry wt	nanograms per gram dry weight
mumol/g/mi	mumoles per gram per minute	ng/g dw soil	nanograms per gram dry weight soil
munits	milliunits	ng/g egg	nanograms per gram egg
N	normal	ng/g org	nanograms per gram organism
NA	not applicable	ng/g org/d	nanograms per gram organism per day
nCi/g org	nanoCuries per gram organism	ng/g soil	nanograms per gram soil
nCi/L	nanoCuries per liter	ng/g TI	nanograms per gram tissue
neq/g	nanoequivalents per gram	ng/g TI/4 h	nanograms per gram tissue per 4 hours
ng	nanograms	ng/g wet wt	nanograms per gram wet weight
ng ATP/g dry soil	nanograms ATP per grams dry soil	ng/g wet wt diet	nanograms per gram wet weight diet
ng eq/ml	nanograms equivalents per milliliter	ng/g wet wt/d/pair	nanograms per gram wet weight per day per pair
ng/0.5 ml	nanograms per 0.5 milliliters	ng/g/d	nanograms per gram per day
ng/100 ml	nanograms per 100 milliliters	ng/gland	nanograms per gland
ng/100g bdwt	nanograms per 100 grams per bodyweight	ng/h	nanograms per hour
ng/20 ul fd	nanograms per 20 microliters food	ng/kg	nanograms per kilogram
ng/45 ml	nanograms per 45 milliliters	ng/kg fd	nanograms per kilogram food
ng/cm	nanograms per centimeter	ng/L	nanograms per liter
ng/cm²	nanograms per square centimeter	ng/mg	nanograms per milligram
ng/d	nanograms per day	ng/mg bdwt	nanograms per milligram body weight
ng/dl	nanograms per deciliter	ng/mg fd	nanograms per milligram food
ng/egg	nanograms per egg	ng/mg pro	nanograms per milligram protein
ng/eu	nanograms per *experimental unit	ng/mg/mi	nanograms per milligram per minute
ng/fish	nanograms per fish	ng/mi/kg bdwt	nanograms per minute per kilograms body weight
ng/g	nanograms per gram	ng/min	nanograms per minute
ng/g bdwt	nanograms per gram body weight	ng/ml	nanograms per milliliter
ng/g bdwt/d	nanograms per gram body weight per day	ng/ml blood/d	nanograms per milliliter blood per day
ng/g diet	nanograms per gram diet		
ng/g dry fd	nanograms per gram dry food		

ECOTOX Code Appendix

Code	Description	Code	Description
ng/ml fd	nanograms per milliliter food	nmol PBG/h/ml	nanomoles porphobilinogen per hour per milliliter
ng/ml/h	nanograms per milliliter per hour	nmol/100 mg pro	nanomoles per 100 milligrams protein
ng/mm/day	nanograms per millimeter per day	nmol/100mg pro/h	nanomoles per 100 milligrams protein per hour
ng/org	nanograms per organism	nmol/cm²	nanomoles per square centimeter
ng/org/d	nanograms per organism per day	nmol/egg	nanomoles per egg
ng/TI	nanograms per tissue	nmol/g	nanomoles per gram
ng/ul	nanograms per microliter	nmol/g bw	nanomoles per gram body weight
nkat/mg pro	nanokatals per milligrams protein	nmol/g dry wt	nanomoles per gram dry weight
nl/cm²	nanoliters per square centimeters	nmol/g food	nanomoles per gram food
nl/L	nanoliters per liter	nmol/g humus	nanomoles per gram per humus
nl/ml	nanoliters per milliliter	nmol/g lipid	nanomoles per gram lipid
nl/org	nanoliters per organism	nmol/g pro	nanomoles per gram protein
nM	nanomolar (nanomoles per liter)	nmol/g ro/4 h	nanomoles per gram root per 4 hours
nM DSMN:uM LYSI	nanomoles desmosine to micromoles lysine ratio	nmol/g soil	nanomoles per gram soil
nM/g	nanomolar per gram	nmol/g TI	nanomoles per gram tissue
nM/L	nanomolar per liter	nmol/g TI/h	nanomoles per g tissue per hour
nmol	nanomoles	nmol/g wet wt	nanomoles per gram wet weight
nmol/eu	nanomoles per experimental unit	nmol/g/30mi	nanomoles per gram per 30 minutes
nmol ATP/g soil	nanomoles adenosine triphosphate per gram of soil	nmol/g/4 mi	nanomoles per gram
nmol DOPA/g/h	nanomoles DOPA per gram per hour	nmol/g/h	nanomoles per gram per hour
nmol enz/hr	nanomoles enzyme per hour	nmol/g/mi	nanomoles per gram per minute
nmol H₂O₂/mi/mg	nanomoles of peroxide per minute per milligram protein	nmol/h/mg pro	nanomoles per hour per milligram protein
nmol MDA/mg pro	nanomoles malonaldehyde per milligram protein	nmol/h/ml RBC	nanomoles per hour per milliliter red blood cells
nmol mdhyde/g	nanomoles malonaldehyde per gram	nmol/kg	nanomoles per kilogram
nmol PBG/g TI/h	nanomoles porphobilinogen per gram tissue per hour	nmol/kg bdwt	nanomoles per kilogram body weight

ECOTOX Code Appendix

Code	Description	Code	Description
nmol/kg/mi	nanomoles per kilogram per minute	nmol/org/h	nanomoles per organism per hour
nmol/L	nanomoles per liter	nmol/org/h	nanomoles per organism per hour
nmol/mg	nanomoles per milligram	nmol/TI	nanomoles per tissue
nmol/mg pro	nanomoles per milligram protein	no	number
nmol/mg pro/h	nanomoles per milligram protein per hour	no >15cm	number that are greater than 15 centimeters
nmol/mg pro/mi	nanomoles per milligram protein per minute	no errors	no errors
nmol/mg TI	nanomoles per milligram tissue	no follicles	number of follicles
nmol/mg/15mi	nanomoles per milligram protein per 15 minutes	no/1 mi	number per 1 minute
nmol/mg/20mi	nanomoles per milligram per 20 minutes	no/10 mi	number per 10 minutes
nmol/mg/h	nanomoles per milligram per hour	no/100 blsm clt	number per 100 blossom cluster
nmol/mg/mi	nanomoles per milligram per minute	no/100 u2	number per 100 square microns
nmol/mgpro/30mi	nanomoles per milligram protein per 30 minutes	no/100 um2	number per 100 square micrometers
nmol/mi/g	nanomoles per minute per gram	no/100 WBC	number per 100 white blood cells
nmol/mi/mg	nanomoles per minute per milligram	no/1000 RBCE	number per 1000 red blood cells
nmol/mi/mg pro	nanomoles per minute per milligram protein	no/1000 sperm	number per 1000 sperm
nmol/mi/ml	nanomoles per minute per milliliter	no/1000 um2	number per 1000 square micrometers
nmol/mi/ml RBC	nanomoles per minute per milliliter red blood cells	no/12 h	number per 12 hours
nmol/mi/org	nanomoles per minute per organism	no/15 mi	number per 15 minutes
nmol/ml	nanomoles per milliliter	no/15000x field	number per 15000x field
nmol/ml RBC/h	nanomoles per milliliter red blood cells per hour	no/2.8 mm2	number per 2.8 square millimeters
nmol/mol	nanomoles per mole	no/200 cells	number per 200 cells
nmol/nm p450/mi	nanomoles per nanomole cytochrome P450 per minute	no/30 mi	number per 30 minutes
nmol/org	nanomoles per organism	no/33 lbs	number per 33 pounds
nmol/org/0.5h	nanomoles per organism per 0.5 hours	no/5 mi	number per 5 minutes
		no/5000 cells	number per 5000 cells
		no/area	number per area
		no/cell	number per cell
		no/cm	number per centimeter
		no/d	number per day
		no/eu	number per *experimental unit

ECOTOX Code Appendix

Code	Description	Code	Description
no/fm	number per female	OD/50 mg pro	optical density per 50 milligrams protein
no/g	number per gram	OD/g pro	units of optical density change per gram protein
no/g soil	number per gram soil	OD/mi/mg pro	optical density per minute per milligram protein
no/h	number per hour	OD/WGHT	optical density per unit weight
no/ha	number per hectare	oocytes	oocytes
no/litter	number of organisms per litter	open bol/org	open bolls per organism
no/m	number per meter	org	organisms
no/m2	number per square meter	org conc/soil c	organism concentration per soil concentration
no/mg TI	number per milligram tissue	org/0.25ft2	organisms per 0.25 square feet
no/mi	number per minute	org/0.25m2	organisms per 0.25 square meters
no/mm2	number per square millimeter	org/0.3m	organisms per 0.3 meters
no/mm2 * 1e-4	number per square millimeter X 1 X 10-4	org/10 m	organisms per 10 meters
no/mm3	number per cubic millimeter (also known as no/cmm)	org/100g soil	organisms per 100g soil
no/mm3 * 1e-4	number per cubic millimeter X 1 X 10 -4	org/200 m2	organisms per 200 square meters
no/mo	number per month	org/200cm3 soil	number of organisms per 200 cubic centimeters of soil
no/nuclei	number per nuclei		
no/org	number per organism	org/50cm2	organisms per 50 square centimeters
no/org/d	number per organism per day	org/60 leaves	organisms per 60 leaves
no/panicle	number per panicle	org/cm ro	organisms per centimeter root
no/plot	number per plot	org/cntr	organisms per container
no/preg FM	number per pregnant female	org/d/cntr	organisms per day per container
no/sec	number per second	org/eu	organisms per *experimental unit
no/section	number per section	org/fm	organisms per female
no/seed	number per seed	org/ft2	organisms per square foot
no/sertoli cell	number per sertoli cells	org/g	organisms per gram
no/so	number per shoot	org/g dry soil	organisms per gram dry soil
NR	not reported	org/g humus	organisms per gram humus
nuclei:nucleoi	ratio of nuclei to nucleoi	org/g root	organisms per gram root
OD	optical density	org/g soil	organisms per gram soil
OD/100% RBC	optical density of 100% red blood cells		

ECOTOX Code Appendix

Code	Description	Code	Description
org/ha	organisms per hectare	oz/305 m	ounces per 305 meters
org/kg soil	organisms per kilogram soil	oz/60 gal/acre	ounces per 60 gallons per acre
org/lit	organisms per litter	oz/acre	ounces per acre
org/m	organisms per meter	oz/bu	ounces per bushel
org/m2	organisms per square meter	oz/cwt	ounces per hundred weight
org/plot	organisms per plot	oz/cwt sd	ounces per hundred weight seed
org/sample	organisms per soil sample	oz/gal	ounces per gallon
org/sector	number of organisms per sector	oz/org	ounces per organism
org/trap	organisms per trap	pair	pair
org/tree	organisms per tree	pCi/g	picoCuries per gram
org/w>150 mmHg	organisms with blood pressure >150 millimeters mercury	pCi/L	picoCuries per liter
org/w>160 mmHg	organisms with blood pressure >160 millimeters mercury	pCi/ml	picoCuries per milliliter
org/wk	organisms per week	pecks/s	pecks per second
OT	optical transmission	pellet/d	pellets per day
OT/1 cm WDTH	optical transmission per 1 centimeter bone width	pellet/org/d	pellets per organism per day
OT/10 cm BO	optical transmission per 10 centimeters bone	pellets	pellets
OT/10kg WGHT	optical transmission per 10 kilograms weight	pg	picograms
OT/1mm CCT	optical transmission per 1 millimeter combined cortical thickness	pg/cell	picograms per cell
OV:BR	ovary to brain ratio	pg/cm2	picograms per square centimeter
oz	ounces	pg/dm3	picograms per cubic decimeter
oz/10 gal/acre	ounces per 10 gallons per acre	pg/g	picograms per gram
oz/100 gal	ounces per 100 gallons	pg/g diet	picograms per gram diet
oz/100 lb seed	ounces per 100 pound seed	pg/g egg	picograms per gram of egg
oz/1000 ft	ounces per 1000 feet	pg/g TI	picograms per gram tissue
oz/1000 ft2	ounces per 1000 square feet	pg/g wet wt	picograms per gram wet weight
oz/1000 ft3	ounces per 1000 cubic feet	pg/L	picograms per liter
oz/20 gal/acre	ounces per 20 gallons per acre	pg/mg org	picograms per milligram organism
oz/2.5 gal	ounces per 2.5 gallons	pg/ml	picograms per milliliter
		pg/org	picograms per organism
		pg/TI	picograms per tissue
		pg/uL	picograms per microliter
		pH	pH

Code	Description	Code	Description
PIg/L	PI grams per liter	ppb food	parts per billion food
PL:BL	plasma to blood ratio	ppb H₂O	parts per billion water
PLC:BL	placenta to blood ratio	ppb/2H/org	parts per billion per two hours per organism
pM	picoMolar	ppb/ml	parts per billion per milliliter
pmol	picomoles	ppm	parts per million
pmol/cell	picomoles per cell	ppm dry wt	parts per million dry weight
pmol/g	picomoles per gram	ppm dw fd	parts per million dry weight food
pmol/g bdwt	picomoles per gram body weight	ppm food	parts per million food
pmol/g egg	picomoles per gram egg	ppm for 36hr	parts per million per 36 hours
pmol/g/mi	picomoles per gram per minute	ppm H₂O	parts per million water
pmol/hr/mg	picomoles per hour per milligram	ppm soil	parts per million soil
pmol/L	picomoles per liter	ppm solvent	parts per million in solvent
pmol/mg	picomoles per milligram	ppm w/w	parts per million weight per weight
pmol/mg pro	picomoles per milligram protein	ppm wet wt fd	parts per million wet weight food
pmol/mg pro/h	picomoles per milligram protein per hour	ppm/100g bdwt/d	parts per million per 100 grams body weight per day
pmol/mg pro/mi	picomoles per milligram protein per minute	ppm/d	parts per million per day
pmol/mg/10 mi	picomoles per milligram per 10 minutes	ppm/d/kg bdwt	parts per million per day per kilogram body weight
pmol/mg/30 mi	picomoles per milligram protein per 30 minutes	ppm/eu	parts per million per *experimental unit
pmol/mg/d	picomoles per milligram per day	ppm/g bdwt	parts per million per gram body weight
pmol/mg/mi	picomoles per milligram per minute	ppm/g fd	parts per million per gram food
pmol/mg/nmol R	picomoles per milligram per nanomol rhodopsin	ppm/L	parts per million per liter
pmol/mi/g TI	picomoles per minute per gram tissue	ppm/mi	parts per million per minute
pmol/mi/mg pro	picomoles per minute per milligram protein	ppm/ml	parts per million per milliliter
pmol/ml	picomoles per millimeter	ppm/organi	parts per million per organism
pmol/nm p450/mi	picomoles per nanomole cytochrome P450 per minute	ppm-hour	parts per million hour
pmol/org	picomoles per organism	ppmv	parts per million by volume
ppb	parts per billion	ppmw	parts per million by weight
		ppmw diet	parts per million by weight diet

ECOTOX Code Appendix

Code	Description	Code	Description
ppmw H2O	parts per million by weight in water	s/16 rpm	seconds per 16 revolutions per minute
ppt	parts per trillion	s/8 rpm	seconds per 8 revolutions per minute
PSU	practical salinity units	s/g	seconds per gram
pt	pints	s/h	seconds per hour
pt/100 gal	pints per 100 gallons	SA	Specific activity
pt/acre	pints per acre	sd/org/d	seeds per organism per day
pt/gal	pints per gallon	sessions	sessions
ptm	parts per thousand million	SFU	sigma Frankel units
q/ha	quintals per hectare (1 quintal = 100 kilograms)	sgth:thik	Strength to thickness ratio
qt/100 gal	quarts per 100 gallons	sgth:wght	Strength to weight ratio
qt/acre	quarts per acre	sigma u/100ml	sigma units per 100 milliliters
qt/gal	quarts per gallon	SL units	SL units
R	weight/(length x width) an index of eggshell quality	SL:ME	Slice to median ratio
RA	ratio: use the number, no unit needed	so/ft2	shoots per square foot
RA 1e-3	ratio * 1e-3	so:gr	ratio shoot to grain
RA/wk	ratio per week	so:ro	ratio shoot to root
rate/100 org	rate per 100 organisms	SP:BR	spleen to brain ratio
rate/mi	rate per minute	spec gravity	specific gravity
rev	revolutions	species	species
rev/5 h	revolutions per 5 hours	spines/u area	spines per unit area
RF units	RF units	spots/le	spots per leaf
rgv	relative gray value	str:gr	ratio plant straw to grain
RI	Ratcliffe index (shell wt/egg length x width mm ²)	succ br	successful broods
RNA:DNA	RNA to DNA ratio	succ br/fm	successful broods per female
RNA:protein	RNA to protein ratio	t/ha gr/t/ha gr	tons per hectare grain plus straw
ro:so	root to shoot ratio	T3:T4	Ratio of triiodothyronine (T3) to thyroxine (T4)
rpm	revolution per minute	taxa	taxa
RR	Centric fusions	Tbsp/eu	Tablespoons per *experimental unit
RSA/TI	relative specific activity per tissue	Tbsp/gal	Tablespoons per gallon
RV:TV	ratio of right ventricle to total ventricle	TE:BR	testes to brain ratio
s	seconds	tillers/m²	tillers per square meter
s/12 rpm	seconds per 12 revolutions per minute	Tons	tons

ECOTOX Code Appendix

Code	Description	Code	Description
tons/acre	tons per acre	uCi/g soil	microcuries per gram soil
tons/ha	tons per hectare	uCi/kg	microcuries per kilogram
top:root	ratio plant tops to roots	uCi/L	microcuries per liter
treated:cntl	ratio treated to control	uCi/mg	microcuries per milligram
trials	trials	uCi/ml	microcuries per millimeter
TS:BR	thymus to brain ratio	uCi/nmol	microcuries per nanomoles
tsp/mound	teaspoons per mound	uCi/org	microcuries per organism
u act	unit activity (an increase in absorbance at 555 nm of 0.100, with a 1.0 cm light path, per milliliter of erythrocytes per hour, at 38 C).	uCi/ug	microcuries per microgram
u act/h	unit activity per hour	uCi/ul	microcuries per microliter
U of fl	units of fluorescence	ueq/g	microequivalents per gram
U/0.2 ml	units per 0.2 milliliters	ueq/g pro/mi	microatom equivalents per gram protein per minute
U/100 mg TI	Units per 100 milligram tissue	ueq/L	microequivalents per liter
u/d	units per day	ug	micrograms
u/g	units per gram	ug %	micrograms percent
U/kg dry diet	units per kilogram dry diet	ug chl/mg leaf	micrograms chlorophyll per milligram of leaf
u/mg N2	units per mg N2	ug CO2/g dry soil/h	micrograms carbon dioxide per grams dry soil per hour
u/mg TI	units per milligram tissue	ug dry fd/d	micrograms dry food per day
u/TI	units per tissue	ug enz/g/h	microgram enzyme per gram per hour
u2	square microns	ug frmzn/100 g	micrograms formazan formed per 100 grams tissue.
u2/300,000 u2	square micrometers per 300,000 micrometers squared	ug GHA/1e+6 c/h	micrograms gamma-glutamylhydroximate per 1X10 +6 cells per hour
u3	cubic microns	ug Hg203/g TI	micrograms Hg203 per gram tissue
u-atoms/egg	microatoms per egg	ug NANA/TI	micrograms N-acetyl neuraminic acid per tissue
uBq	microBecquerels	ug O/g pro/mi	micrograms oxygen per gram protein per minute
uCi	microcuries	ug PAP/g/20 mi	micrograms peroxidase-anti-peroxidase (PAP) per gram per 20 minutes
uCi/100 g org	microcuries per 100 grams organism	ug Pi/mg	micrograms Pi/milligram
uCi/3.6mg	microcuries per 3.6 milligrams	ug Pi/mg MIT	micrograms Pi/milligram mitochondria
uCi/30mg	microcuries per 30 milligrams		
uCi/g	microcuries per gram		
uCi/g org	microcuries per gram organism		

ECOTOX Code Appendix

Code	Description	Code	Description
ug Pi/mg TI	micrograms Pi/milligram tissue	ug/200mg/30mi	micrograms per 200 milligrams per 30 minutes
ug POH/mg pro/m	micrograms phenol per milligrams protein per minute	ug/24h	micrograms per 24 hours
ug pro Id/ne	ug proteolipid per nerve pair	ug/24h/org	micrograms per 24 hours per organism
ug TE/kg	micrograms Toxic Equivalent per kilogram	ug/250 g bdwt	micrograms per 250 grams body weight
ug TE/kg	micrograms Toxic Equivalent per kilogram	ug/3.5L	micrograms per 3.5 liters
ug TTC/mg pro/h	micrograms triphenyl tetrazolium chloride reduced per milligram	ug/300 g bdwt	micrograms per 300 grams body weight
ug/0.1 ml/d/org	micrograms per 0.1 milliliter per day per organism	ug/4 d	micrograms per 4 days
ug/0.5 g	micrograms per 0.5 grams	ug/50 g bdwt	micrograms per 50 grams body weight
ug/10 g bdwt	micrograms per 10 grams body weight	ug/50 ml	micrograms per 50 milliliters
ug/10 L	micrograms per 10 liters	ug/500g	micrograms per 500 grams
ug/100 g bdwt	micrograms per 100 grams body weight	ug/50ul	micrograms per 50 microliters
ug/100 g bdwt/d	micrograms per 100 grams body weight per day	ug/72h	micrograms per 72 hours
ug/100 mg	micrograms per 100 milligrams	ug/bee	micrograms per bee
ug/100 mg TI	micrograms per 100 milligram tissue	ug/cell	micrograms per cell
ug/100g	micrograms per 100 grams	ug/cm2	micrograms per centimeter squared
ug/100g org/d	micrograms per 100 grams organism per day	ug/cm2 If	micrograms per square centimeter leaf
ug/100g/d	micrograms per 100 grams per day	ug/cm2/d	micrograms per square centimeter per day
ug/100mg/30mi	micrograms per 100 milligrams per 30 minutes	ug/cm3	micrograms per cubic centimeter
ug/100mg/h	micrograms per 100 milligrams per hour	ug/d	micrograms per day
ug/100ml	micrograms per 100 milliliters	ug/d/org	micrograms per day per organism
ug/100ml RBC	micrograms per 100 milliliters red blood cells	ug/disk	micrograms per disk
ug/2 org/d	micrograms per 2 organisms per day	ug/dl	micrograms per deciliter
ug/2.5 ul/h	micrograms per 2.5 microliters per hour	ug/dm3	micrograms per cubic decimeter
		ug/egg	micrograms per egg
		ug/em	micrograms per embryo
		ug/eu	micrograms per *experimental unit
		ug/eu/d	micrograms per *experimental unit per day
		ug/fish	micrograms per fish

ECOTOX Code Appendix

Code	Description	Code	Description
ug/g	micrograms per gram	ug/g pellet	micrograms per gram pellet
ug/g ash	micrograms per gram ash	ug/g pro	micrograms per gram protein
ug/g bdwt	micrograms per gram body weight	ug/g sd	micrograms per gram seed
ug/g bdwt/d	micrograms per gram body weight per day	ug/g soil	micrograms per gram soil
ug/g bdwt/wk	micrograms per gram body weight per week	ug/g TI	micrograms per gram tissue
ug/g CREA	micrograms per gram creatinine	ug/g wet fd/d	micrograms per gram wet food per day
ug/g diet	micrograms per gram diet	ug/g wet soil	micrograms per gram wet soil
ug/g dry cmpst	micrograms per gram dry compost	ug/g wet wt	micrograms per gram wet weight
ug/g dry fd	micrograms per gram dry food	ug/g wet wt diet	micrograms per gram wet weight diet
ug/g dry fd/d	micrograms per gram dry food per day	ug/g/30 min	micrograms per gram per 30 minutes
ug/g dry soil	micrograms per gram dry soil	ug/g/d	micrograms per gram per day
ug/g dry wt	micrograms per gram dry weight	ug/g/kg bdwt	micrograms per gram per kilogram body weight
ug/g egg	micrograms per gram egg	ug/g/wk	micrograms per gram per week
ug/g eu	micrograms per gram *experimental unit	ug/h	micrograms per hour
ug/g food	micrograms per gram food	ug/h/100 g	micrograms per hour per 100 grams
ug/g LD wt	micrograms per gram lipid weight	ug/h/100 ml	micrograms per hour per 100 milliliters
ug/g lipid diet	micrograms per gram lipid in diet	ug/kg	micrograms per kilogram
ug/g media	micrograms per gram media	ug/kg bdwt	micrograms per kilogram body weight
ug/g npro	micrograms per gram nonprotein	ug/kg bdwt/d	micrograms per kilogram body weight per day
ug/g om	micrograms per gram organic matter	ug/kg bdwt/h	micrograms per kilogram body weight per hour
ug/g org	micrograms per gram organism	ug/kg dry soil	micrograms per kilogram dry soil
ug/g org x 1E2	micrograms per gram organism x 1E2	ug/kg dry wt org	micrograms per kilogram dry weight organism
ug/g org/d	micrograms per gram organism per day	ug/kg egg	micrograms per kilogram egg
ug/g org/wk	micrograms per gram organism per week	ug/kg fd	micrograms per kilogram food
		ug/kg LD	micrograms per kilogram lipid

ECOTOX Code Appendix

Code	Description	Code	Description
ug/kg org	micrograms per kilogram organism	ug/min/ml	micrograms per minute per milliliter
ug/kg org/d	micrograms per kilogram organism per day	ug/ml	micrograms per milliliter
ug/kg soil	micrograms per kilogram soil	ug/ml fd	micrograms per milliliter food
ug/kg TI	micrograms per kilograms tissue	ug/ml H₂O	micrograms per milliliter water
ug/kg wet media	micrograms per kilogram wet media	ug/mm³	micrograms per cubic millimeter
ug/kg/d	micrograms per kilogram per day	ug/org	micrograms per organism
ug/kg/mi	micrograms per kilogram per minute	ug/org dry wt	micrograms per organism dry weight
ug/kg/wk	micrograms per kilogram per week	ug/org/d	micrograms per organism per day
ug/L	micrograms per liter	ug/sample	micrograms per sample
ug/l fd	micrograms per liter food	ug/tank/wk	micrograms per tank per week
ug/l soil	micrograms per liter soil	ug/TI	micrograms per tissue
ug/L/d	micrograms per liter per day	ug/ul	micrograms per microliter
ug/L/hr	microgram per liter per hour	ug/ul fd	micrograms per microliter food
ug/lf	micrograms per leaf	ug-atoms/L	micrograms atoms per liter
ug/m²	micrograms per square meter	ulU/ml	microlInternational units per milliliter
ug/m³	micrograms per cubic meter	ul	microliter
ug/mg	micrograms per milligram	ul Eq/ml	microliters equivalents per milliliter
ug/mg bdwt	micrograms per milligram body weight	ul O₂/g/h	microliters O ₂ per gram per hour
ug/mg food	micrograms per milligram food	ul O₂/hr/g	microliters oxygen per hour per gram
ug/mg MIT	micrograms per milligram mitochondria	ul O₂/mi/g	microliters oxygen per minute per gram
ug/mg org	micrograms per milligram organism	ul/0.5 m²	microliters per 0.5 square meters
ug/mg pro	micrograms per milligrams protein	ul/10 ml	microliters per 10 milliliters
ug/mg pro/hr	micrograms per milligram protein per hour	ul/100 g bdwt	microliters per 100 grams body weight
ug/mg TI	micrograms per milligram tissue	ul/100 L	microliters per 100 liters
ug/mi	micrograms per minute	ul/100ml	microliter per 100 millimeter
ug/mi/mg pro	micrograms per minute per milligram protein		

ECOTOX Code Appendix

Code	Description	Code	Description
ul/200 ml	microliters per 200 milliliters	uICO2/50mgTl/10	microliters carbon dioxide per 50 milligrams tissue per 10 minutes
ul/20ml	microliter per 20 millimeter	uM	microMolar
ul/300 ml	microliters per 300 milliliters	uM BAPNA/mi/mgP	micromoles of BAPNA (benzoylarginine-p-nitroanilide) inhibited per minute per milligram protein
ul/720 ml	microliter per 720 milliliter	uM BAPNA/mi/ml	micromoles of BAPNA (benzoylarginine-p-nitroanilide) inhibited per minute per milliliter
ul/beat	microliters per beat	um B-naph/h/mgP	micromoles beta-naphthalene per hour per milligram protein
ul/beat/kg	microliters per beat per kilogram	uM B-naph/h/ml	micromoles beta-naphthalene per hour per milliliter
ul/cm2	microliter per square centimeter	uM BTEE/mi/mgP	micromoles BTEE (N-benzyl-L-tyrosine ethyl ester) per minute per milligram protein
ul/d	microliters per day	uM P/g	micromoles Phosphorus per gram
ul/egg	microliters per egg	uM SAPNA/mi/mgP	micromoles of SAPNA (succinyl-1-(ala)3-p-nitroanilide) inhibited per minute per milligram protein
ul/eu	microliters per *experimental unit	uM SAPNA/mi/ml	micromoles of SAPNA (succinyl-1-(ala)3-p-nitroanilide) inhibited per minute per milliliter
ul/g	microliters per gram	uM TAME/mi/mgP	micromoles TAME (toluenesulfonyl-L-arginine methyl ester) per minute per milliliter
ul/g bdwt	microliters per gram body weight		
ul/g dry soil	microliters per gram dry soil		
ul/g/d	microliters per gram per day		
ul/g/h	microliters per gram per hour		
ul/kg	microliters per kilograms		
ul/kg bdwt	microliter per kilogram body weight		
ul/kg fd	microliters per kilogram food		
ul/L	microliter per liter		
ul/L/24h	microliters per liter per 24 hours		
ul/L/7 h	microliters per liter per 7 hours		
ul/L/9 h	microliters per liter per 9 hours	uM/100g	microMolar per 100 grams
ul/L/h	microliters per liter per hour	uM/cm3	micromoles per squared centimeter
ul/m2	microliters per square meter	uM/h	micromoles per hour
ul/mg	microliters per milligram	uM/h/mg pro	micromolar per hour per milligram protein
ul/ml	microliter per milliliter	uM/kg	micromolar per kilogram
ul/ml fd	microliters per milliliter food	uM/kg wght	micromolar per kilogram weight
ul/org	microliter per organism	uM/kg/mi	microMolar per kilogram per minute
ul3	cubic microliters		

ECOTOX Code Appendix

Code	Description	Code	Description
uM/L	microMolar per liter	umol pyv mg p/h	micromoles pyruvate per milligram protein per hour
uM/mg pro	micromoles per milligram protein	umol/100 g	micromoles per 100 grams
uM/min/g	micromoles per minute per gram	umol/100 ml	micromoles per 100 milliliters
um/s	micrometers per second	umol/100g org	micromoles per 100 grams organism
um/um2	micrometers per square micrometer	umol/10g/h	micromoles per 10 grams per hour
um2	micromoles squared	umol/10mg/h	micromoles per 10 milligrams per hour
um3	cubic micromoles	umol/cm2	micromoles per square centimeter
um3/cell	cubic micrometers per cell	umol/dl/h	micromoles per decaliter per hour
umol	micromoles	umol/dm3	micromoles per cubic decimeter
umol C2H4/g/h	micromoles of ethylene produced per gram per hour	umol/egg	micromoles per egg
umol C2H4/org/h	micromoles of ethylene produced per organism per hour	umol/eu	micromoles per *experimental unit
umol CO2/g ch/s	micromoles carbon dioxide per gram chlorophyll per second	umol/g	micromoles per gram
umol CO2/m2/s	micromoles CO2 per square meter per second	umol/g ash	micromoles per gram ash
umol GH/mgpro/m	micromoles reduced glutathione per milligram protein per minute	umol/g diet	micromoles per gram diet
umol HA/mg pro	micromoles hippuric acid per milligram protein	umol/g dry wt fd	micromoles per gram dry weight food
umol NADPH/mg P	micromoles NADPH per milligram protein per minute	umol/g LD	micromoles per gram lipid
umol P/g/20 mi	micromol phosphorus per gram per 20 minutes	umol/g org	micromoles per gram organism
umol P/g/h	micromoles phosphorus per gram per hour	umol/g pro/h	micromoles per gram protein per hour
umol P/mg pro/h	micromoles phosphorus per milligram protein per hour	umol/g soil	micromoles per gram soil
umol Pbg/h/g	micromoles of porphobilinogen per hour per gram tissue	umol/g TI	micromole per gram tissue
umol Pi/mgp/30m	micromoles Pi per milligram protein per 30 minutes	umol/g TI/h	micromoles per gram tissue per hour
umol Pi/mgpro/h	micromoles Pi per milligram protein per hour	umol/g TI/h	micromoles per gram tissue per hour
		umol/g wet wt	micromoles per gram wet weight
		umol/g/15 mi	micromoles per gram per 15 minutes
		umol/g/30 mi	micromoles per gram per 30 minutes

ECOTOX Code Appendix

Code	Description	Code	Description
umol/g/h	micromoles per gram per hour	umol/mg/h	micromoles per milligram per hour
umol/g/mi	micromoles per gram per minute	umol/mg/mi	micromoles per milligram per minute
umol/h/g pro	micromoles per hour per grams protein	umol/mgpro/20mi	micromoles per milligram protein per 20 minutes
umol/h/g TI	micromoles per hour per gram tissue	umol/mgpro/30mi	micromoles per mg protein per 30 minutes
umol/h/mg pro	micromoles per hour per milligram protein	umol/mi	micromoles per minute
umol/h/mg TI	micromols per hour per milligram tissue	umol/mi/g	micromoles per minute per gram
umol/h/TI	micromoles per hour per tissue	umol/mi/g TI	micromoles per minute per gram of tissue
umol/kg	micromoles per kilogram	umol/mi/l	micromoles per minute per liter
umol/kg bdwt	micromoles per kilogram body weight	umol/mi/mg	micromoles per minute per milligram
umol/kg dry soil	micromoles per kilogram dry soil	umol/mi/mg pro	micromoles per minute per milligram protein
umol/kg egg	micromoles per kilogram egg	umol/mi/ml	micromoles per minute per milliliter
umol/kg LD	micromoles per kilogram lipid	umol/ml	micromoles per milliliter
umol/kg media	micromoles per kilogram media	umol/ml/h	micromole per milliliter per hour
umol/kg org	micromoles per kilogram organism	umol/ml/mi	micrograms per milliliter per minute
umol/kg soil	micromoles per kilogram soil	umol/mol	micromoles per mole
umol/kg/d	micromoles per kilogram per day	umol/mol C	micromoles per mole Carbon
umol/kg/mi	micromoles per kilogram per minute	umol/org	micromoles per organism
umol/L	micromoles per liter	umol/TI	micromoles per tissue
umol/l RBC/mi	micromoles per liter red blood cells per minute	umolASCA/mg pro	micromoles ascorbic acid per milligram protein
umol/mg pro	micromoles per milligram protein	umoles/l agar	micromoles per liter agar
umol/mg pro/h	micromoles per milligram protein per hour	umolNH3/1e+6c/h	micromoles NH3 per 1X10 ⁺⁶ cells per hour
umol/mg pro/mi	micromoles per mg protein per minute	unit/mg pro/mi	enzyme unit per milligram protein per minute
umol/mg/15 mi	micromoles per milligram per 15 minutes	units	units
		units/g diet	units per gram diet
		units/l	units per liter
		units/mg	units per milligram

ECOTOX Code Appendix

Code	Description	Code	Description
units/mg pro	units per milligram protein	V	response value
units/ml	units per milliliter	v/v	volume per volume
units/ml RBC	units per milliliter red blood cells	W units	Wrobleski units
USP/org	USP unit per organism	WER	water efficiency ratio
uU/ml	microunits per milliliter	wght/lit	weight per litter
uu/ml	microunits per milliliter	Wijs number	Wijs' number
uV	microvolts	wk	week
		WO:LI	whole organism to liver ratio

*Experimental Unit (EU) is unspecified area or volume, e.g. vial, petri dish, tree, plot, etc.

Appendix O. Ionic Fraction Codes

Code	Description
24D	2,4-Dichlorophenoxyacetic
Ag	Silver
Al	Aluminum
Am	Americium
As	Arsenic
As2O3	Arsenic trioxide
AsO2	Arsenite
AsO4	Arsenate
Au	Gold
B	Boron
B2O3	Borate
B4O7	Borate
Ba	Barium
Be	Beryllium
Bi	Bismuth
BO3	Borate
Br	Bromine
Br2	Bromine
BrO3	Bromate
C	Carbon
Ca	Calcium
Cd	Cadmium
Ce	Cerium
Cf	Californium
Cl	Chlorine
Cl2	Chlorine
ClO-	Hypochlorite
ClO2	Chlorite
ClO3	Chlorate
ClO4	Perchlorate
CN	Cyanide
CNO	Cyanate
Co	Cobalt
CO3	Carbonate

Code	Description
CPOX	Chlorine produced oxidant
Cr	Chromium
Cr2O7	Dichromate
Cr3	Chromium (+3)
CrO3	Chromium trioxide
CrO4	Chromate
CrVI	Chromium (+6)
Cs	Cesium
Cu	Copper
DETC	Diethyldithiocarbamate
DQT	Diquat
Dy	Dysprosium
Er	Erbium
Eu	Europium
F	Fluorine
Fe	Iron
Ga	Gallium
Gd	Gadolinium
Ge	Germanium
H	Hydrogen
H2S	Hydrogen sulfide
HCN	Hydrogen Cyanide
HCO3	Bicarbonate
Hf	Hafnium
Hg	Mercury
Ho	Holmium
HS-	Hydrogen sulfide ion
HSO3	Bisulfite
I	Iodine
I2	Iodine
In	Indium
IO3	Iodate
Ir	Iridium
K	Potassium

ECOTOX Code Appendix

Code	Description
La	Lanthanum
Li	Lithium
Lu	Lutetium
Md	Mendelevium
MeHg	Methylmercury
Mg	Magnesium
Mn	Manganese
MnO4	Manganate
Mo	Molybdenum
MoO4	Molybdate
N	Nitrogen
N3	Azide
Na	Sodium
NaN3	Sodium Azide
Nb	Niobium
Nd	Neodymium
NH ₃	Ammonia (un-ionized)
NH4	Ammonium (total)
Ni	Nickel
NO2	Nitrite
NO2N	Ammonium nitrite
NO3-	Nitrate
NO3N	Ammonium nitrate
NR	Not reported
O	Oxygen
OH	Hydroxide
Os	Osmium
P	Phosphorus
P2O3	Phosphorus oxide
P2O5	Phosphate
Pb	Lead
Pb3E	Triethyl lead
PCP	Pentachlorophenol
Pd	Palladium
PHC	Petroleum hydrocarbon
Po	Polonium

Code	Description
PO4	Phosphate
PPHN	Phosphine
PQT	Paraquat
Pr	Praseodymium
Pt	Platinum
Pu	Plutonium
Ra	Radium
Rb	Rubidium
Re	Rhenium
Rh	Rhodium
Ru	Ruthenium
S	Sulfur
S2O3	Thiosulfate
Sb	Antimony
SbO4	Antimonate
Sc	Scandium
SCN	Thiocyanate
Se	Selenium
SeO3	Selenite
SeO4	Selenate
Si	Silicon
SiO2	Silicate
Sm	Samarium
Sn	Tin
SO2	Sulfur dioxide
SO3	Sulfite
SO4	Sulfate
Sr	Strontium
Ta	Tantalum
Tb	Terbium
TBT	Tributyltin
TBTO	Tributyltin oxide
Tc	Technetium
TcO4	Pertechnetate
Te	Tellurium
Th	Thorium

ECOTOX Code Appendix

Code	Description
Ti	Titanium
TI	Thallium
Tm	Thulium
TPT	Triphenyltin
TRBr	Total Residual Bromine
TRCl	Total Residual Chlorine
TROX	Total Residual Oxidant
U	Uranium
UO2	Uranium oxide (Uraninite)

Code	Description
V	Vanadium
VO3	Vanadate
W	Wolfram
WO4	Tungstate
Y	Yttrium
Yb	Ytterbium
Zn	Zinc
Zr	Zirconium

Appendix P. Chemical Analysis Methods

Code	Definition	Description
M	Measured	Author clearly states in the paper that the concentrations reported by the author were measured.
NR	Not Reported	Author describes methods for analyzing chemical concentrations, but it is not clear that the values presented are based on measured or nominal concentrations.
U	Unmeasured	Author clearly identifies that the concentrations are based on nominal values, or the author presents concentration information, but does not report information that chemical analysis was conducted.
X	Unmeasured (some measured values reported in article)	Author clearly identifies that some of the concentrations are based on nominal values while other concentrations are based on measured values, with the original nominal values also reported. Record the measured values for the concentrations reported as measured and the unmeasured values for the concentrations reported as nominals in the dose data field.
Z	Chemical analysis reported	Author identifies that chemical analysis was completed AND states that the concentrations were within a percentage of nominal, but only nominal concentrations are reported.

Appendix Q. Sample Unit Codes

Code	Definition
AB	Above ground portion (plants)
AD	Adult
BH	Both male and female organisms exposed or observed
BR	Brood
C1	First Clutch, brood or litter
C2	Second Clutch, brood or litter
CB	Combs
CC	Cocoons
CL	Cells
CO	Colony
CT	Containers
DC	Deceased organism
EG	Egg
EM	Embryo
EU	Experimental unit
F0	F0 generation
F1	F1 generation
F2	F2 generation
F3	F3 generation
F4	F4 generation
F5	F5 generation
F6	F6 generation
F7	F7 generation
F8	F8 generation
F9	F9 generation
F12	F12 generation
F16	F16 generation
FD	Frond
FET	Fetus
FFE	Female fetus

Code	Definition
FG	Female gametophyte
FI	Fingerling
FL	Flower
FM	Female organisms
FR	Fruit
FT	Froglet
FX	multiple generations
FY	Fry
G1	female, 1st generation
G2	female, 2nd generation
G3	female, 3rd generation
G4	female, 4th generation
G5	female, 5th generation
G6	female, 6th generation
G7	female, 7th generation
G8	female, 8th generation
G9	female, 9th generation
G10	female, 10th generation
GR	Grains
GS	Germinated seed
HM	Hermaphrodite
HT	Hatchling
IM	Immature
JV	Juvenile
KR	Kernal
LE	Leaf
LE1	1st leaf
LE2	2nd leaf
LE3	3rd leaf
LE4	4th leaf
LE5	5th leaf

Code	Definition
LE6	6 th leaf
LE7	7 th leaf
LE8	8 th leaf
LT	Litters
LV	Larvae
M1	male, 1 st generation
M2	male, 2 nd generation
M3	male, 3 rd generation
M4	male, 4 th generation
M5	male, 5 th generation
M6	male, 6 th generation
M7	male, 7 th generation
M8	male, 8 th generation
M9	male, 9 th generation
M10	male, 10 th generation
MD	Mature dormant
MFE	Male fetus
MG	Male gametophyte
ML	Male organisms
MT	Mature, no specified stage
MU	Multiple
MX	male, multiple generations
NF	Non-pregnant female
NR	Not Reported
NT	Nest
NU	Nauplii
NY	Nymph
OR	Organism
P1	Parent, 1st generation
PC	Plant cutting (unspecified)
PF	Pregnant female
PL	Plots
PO	Pollen, pollen grain
PR	Pair

Code	Definition
PU	Pupae
RB	Mature reproductive, 2nd generation
RO	Root
RP	Mature reproductive
RS	Root segments
SA	Subadult
SC	Second generation (M2), no specific stage
SD	Seed
SF	Sac Fry, yolk-sac fry
SHL	Shell
SL	Seedling
SM	Samples
SO	Shoot
SPR	Spore
TA	Tadpole
TC	Tissue culture callus
TU	Tubers
VC	Vegetative clone
VG	Mature vegetative

Appendix R. Effect Group Codes and Definitions

GROUP/EFFECT CODE(S)	DEFINITION
ACC/ACC	Accumulation: Effects, measurements and endpoints which characterize the process by which chemicals are taken into and stored in plants or animals. Includes lethal body burden.
BEH/AVO, BEH, FDB	Behavior: Overt activity of an organism represented by three <i>effect</i> groups - avoidance, general behavior, and feeding behavior. All measurements related to reproductive behavior are listed under the major effect group REP.
BCM/BCM, ENZ, HRM,	Biochemical: measurement of biotransformation or metabolism of chemical compounds, modes of toxic action, and biochemical responses in plants and animals including three <i>effect</i> groups - biochemical, enzyme and hormone effects.
CEL/CEL, GEN, HIS	Cellular Effects: measurements and endpoints regarding changes in structure and chemical composition of cells and tissues of plants or animals as related to their functions; the three <i>effect</i> groups include cellular, genetic and histological effects.
GRO/DVP, GRO, MPH	Growth: a broad category which encompasses measures of weight and length and includes effects on development, growth and morphology. Development covers toxicant effects on tissue organization in growing progeny. Growth represents length and weight changes at any point in the life cycle. Morphology measurements and endpoints address the structure (bones) and form (organ/tissue development) of an organism at any stage of its life history.
MOR/MOR	Mortality: measurements and endpoints where the cause of death is by direct action of the chemical.
PHY/INJ, IMM, ITX, PHY	Physiology: measurements and endpoints regarding basic activity in cells and tissues of plants or animals. Four <i>effect</i> groups include injury, immunity, intoxication and general physiological response.
POP/POP	Population: measurements and endpoints relating to a group of organisms or plants of the same species occupying the same area at a given time.
REP/ REP	Reproduction: measurements and endpoints to track the effect of toxicants on the reproductive cycle. All measurements related to reproduction and care of progeny are included in this category, including behavioral and physiological measurements. Measurements related to development of progeny are found under the major <i>effect</i> group GRO, minor <i>effect</i> group DVP.
SYS/PRS	Ecosystem: measurements and endpoints to track the effects of toxicants on ecosystem processes. Includes microbial processes.
MLT/MLT	Undefined or Multiple: measurements related to multiple or undefined effects.

Appendix S. Group Effect, Effect and Measurement Codes and Definitions

Note: Codes in < > need maintenance and should not be used for coding at this time.

ACC Accumulation Group

ACC	Accumulation Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GACC	Accumulation, General	Biological accumulation is the accumulation of elements and compounds of harmful substances in the tissues of living organisms.	http://stats.oecd.org
ASMC	Assimilation of test chemical	The conversion of nutrient into a useable form (e.g. liquid or solid) that is incorporated into the tissues and organs following the processes of digestion.	www.biology-online.org/dictionary/Assimilation
<BDBN>	Body Burden	The total amount of a chemical, metal or radioactive substance present at any time after absorption in the body of man or animal.	www.biology-online.org/dictionary/Body_burden
ELIM	Elimination	General term for loss or disappearance of a substance from an organism by either passive or active transport mechanism, e.g. diffusion and metabolic transformation.	ECOTOX
LBCN	Lethal Body Concentration	Also Lethal Body Burden. The body residue of a chemical that is associated with mortality.	ECOTOX
RATO	Ratio	The relationship in quantity, amount, or size between two or more things.	http://www.merriam-webster.com/dictionary/ratio
RSDE	Residue	Amount of test chemical remaining in tissue after exposure. This includes body burden or body concentrations. This also includes autoradiography results.	ECOTOX
TSLC	Translocation	The conduction of the test substance from one part of an organism to another.	ECOTOX
UPTK	Uptake	The fraction of total available chemical in a medium (food, water) that is transferred to the organism (measured as the incoming - outgoing concentrations) OR a process by which materials are transferred into and onto an organism.	ECOTOX

BEH Behavior Group

ECOTOX Code Appendix

AVO	Avoidance Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GAVO	Avoidance, General	Unknown or multiple types of avoidance responses.	ECOTOX
CHEM	Chemical Avoidance	Avoidance or attraction to a chemical gradient.	ECOTOX
FOOD	Food Avoidance	Avoidance or attraction to a chemical gradient in food.	ECOTOX
STIM	Stimulus Avoidance	Learning to avoid a noxious stimulus indicates that prior experience of the stimulus is remembered by the animal and appropriate action taken in the future to avoid or reduce potential damage.	http://en.wikipedia.org/wiki/Pain_in_invertebrates
WATR	Water Avoidance	Avoidance or attraction to a chemical gradient in water.	ECOTOX

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DTCH	Ability to Detach from Substrate	Change in ability of an organism to detach from or attach to a substrate.	ECOTOX
ACTP	Accuracy of Learned Task, Performance	The act of performing; the carrying into execution or action; execution; achievement; accomplishment	www.biology-online.org/dictionary/Performance
ATSK	Acquired task	Ability to learn a new task.	ECOTOX
ACTV	Activity, General	The state of being active : behavior or actions of a particular kind	http://www.merriam-webster.com/dictionary/activity
ADOT	Adopt/adoption	Adopt: to take by choice into a relationship; especially : to take voluntarily (an offspring) as one's own child	www.merriam-webster.com/dictionary/adopted?show=0&t=1349804956
AGCL	Aggregation/Clumping	Grouped with the other organisms; aggregating in a group.	ECOTOX
AGGT	Aggression	Hostile, injurious, or destructive behavior or outlook especially when caused by frustration.	http://www.m-w.com/
ALRT	Alert	Quick to perceive and act	www.merriam-webster.com/dictionary/alert
ATCL	Antennal Cleaning	Grooming behavior of insects	jeb.biologists.org/content/55/3/749.full.pdf
APCH	Approach	To make advances to especially in order to create a desired result, to come very near to.	http://www.m-w.com/

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ATTK	Attack, attacking	To begin to affect or to act on injuriously	http://www.merriam-webster.com/dictionary/attack
BATH	Bathing	To immerse in liquid; wet.	http://www.thefreedictionary.com/Bathing
BWAX	Bees Wax Produced	A yellow to brown wax secreted by honeybees to build honeycombs	http://beeswax.askdefine.com/
GBHV	Behavioral Changes, General	Change in activity in response to stimuli	facultyfiles.deanza.edu/gems/heyerbruce/G.Behave.pdf
BITE	Bite or biting	To wound, pierce, or sting especially with a fang or a proboscis	http://www.merriam-webster.com/medical/bite
BOBB	Bobbing	To move or cause to move up and down repeatedly	http://www.collinsdictionary.com/dictionary/english/bobbing
BOWW	Bow, bowing	To bend the knee or body or incline the head, as in reverence, submission, salutation, recognition, or acknowledgment.	http://dictionary.reference.com/browse/bow
BBBH	Burrow or Burial Behavior	Vigorous burrowing, shoveling and flicking movements...to displace... material	http://www.usm.edu/neurolab/ShockProbe.html
CNBL	Cannibalism	Eating other individuals of one's own species.	www.biology-online.org/dictionary/Cannibalism
CASE	Case Leaving Behavior	Change in number of organisms emerging from a casing.	
COMA	Colony Maintenance (Bees)	Maintenance of honey bee colonies, commonly in hives, by bees	http://apiculture.askdefine.com/
COMB	Comb Built	Natural comb built by the bees without any comb foundation being supplied to them	http://www.resistatbees.com/index.php?r=085
CMST	Compactness of Swimming Track	No definition available.	
CRTP	Continual reinforcement task performed	Performance of a task under continual reinforcement.	ECOTOX
CRDN	Coordination	Harmonious functioning of muscles or groups of muscles in the execution of movements.	http://www.m-w.com/
DHST	Diameter of Helix of Swimming Track	No definition available.	

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DIGG	Dig/digging	To advance by removing or pushing aside material.	www.merriam-webster.com/dictionary/dig
DPLY	Displaying Behavior	Responses or reactions or movements made by an organism in any situation.	http://www.biology-online.org/dictionary/Behavior
LOCO	Distance Moved, Change in Direct Movement	A change in place or position.	http://www.thefreedictionary.com/movement
DUMV	Diurnal movements	Response to the sun's movement across the sky.	ebooks.cambridge.org/chapter.jsf?bid=CBO9780511752308&cid=CBO9780511752308A015
DRMT	Dormant, Adverse Condition Response	A state when organisms are in unfavourable conditions, and slow down their metabolic processes to a minimum to retain resources until conditions are more favourable.	www.biology-online.org/dictionary/Dormancy
ECMB	Empty Combs	Combs without bees	www.cd3wd.com/cd3wd_40/INPHO/..EN/X0070E0AH/TM
EQUL	Equilibrium	Change in ability to maintain balance.	ECOTOX
ESCR	Escape response	Possible reaction in response to stimuli indicative of danger. In particular, it initiates an escape motion of an animal; includes escape performance.	https://en.wikipedia.org/wiki/Escape_response and http://onlinelibrary.wiley.com/doi/10.1002/jez.580/abstract
EXTN	Extinction	The disappearance of a conditioned response as a result of nonreinforcement.	http://medical-dictionary.thefreedictionary.com/Extinction+(biology)
FLTR	Filtration Rate	The speed or frequency with which filtration occurs per unit of time, population, or other standard of comparison.	http://medical-dictionary.thefreedictionary.com/glomerular+filtration+rate
FRTP	Fixed ratio task performed	A response is reinforced only after a specified number of responses.	http://psychology.about.com/od/findindex/g/def_fixedratio.htm
FLHM	Flehmen response	the collection of pheromone signals through the curling of the upper lip during exploration of the oral and anogenital areas of other animals during social encounters	http://www.hhmi.org/news/katz2.html

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FLIT	Flight	Behaviors include flag, evade, retreat, flee, freeze, defensive upright posture, defensive sideways posture and oblique.	ECOREF 58432
FTTR	Flutter	To move with quick wavering or flapping motions.	http://www.merriam-webster.com/dictionary/flutter
FLYG	Flying Behavior	Moving in the air with, or as with, wings; moving lightly or rapidly; intended for rapid movement.	www.biology-online.org/dictionary/Flying
FOOT	Foot Retraction	In mussels, the foot being pulled into the shell	ECOTOX
FRZG	Freezing Behavior	The act of stopping motion brought on by a stimulus.	ECOTOX
GRAB	Grab, grabbing	To take or seize by or as if by a sudden motion or grasp.	www.merriam-webster.com/dictionary/grab
GPST	Grip strength	The duration of hanging on thin wire or special apparatus with the fore and hind limbs	http://www.oecd.org/dataoecd/38/46/34030071.pdf
GROM	Grooming	An animal's cleaning and caring for the body surface. This includes preening, the cleaning and oiling of feathers with the bill or of hair with the tongue.	www.biology-online.org/dictionary/Grooming
HDLF	Head lift	Lifting of the head by an organism.	ECOTOX
HONY	Honey Produced	Honey is the natural sweet substance, produced by honeybees from the nectar of plants or from secretions of living parts of plants, or excretions of plant-sucking insects on the living parts of plants, which the bees collect, transform by combining with specific substances of their own, deposit, dehydrate, store and leave in honeycombs to ripen and mature.	ftp://ftp.fao.org/docrep/fao/012/i0842e/i0842e10.pdf
HMVT	Horizontal movements	Measured or contained in a plane of the horizon.	www.biology-online.org/dictionary/Horizontal
JUMP	Jumping	To spring into the air: leap; especially: to spring free from the ground or other base by the muscular action of feet and legs.	http://www.m-w.com/
KILL	Kill	One organism killing another organism.	ECOTOX
MIGR	Migration	the process by which people or animals migrate to another place or country	http://www.macmillandictionary.com/us/dictionary/american/migration

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MOTL	Motility	The ability to move spontaneously.	http://medical-dictionary.thefreedictionary.com/motility
NMVM	Movements, Number of	Natural or appropriate motion; progress; advancement	www.biology-online.org/dictionary/Movement
NGRX	Negative geotaxis reflex	The time to turn 180 degrees when placed head downward on an inclined plane.	http://www.oecd.org/dataoecd/38/46/34030071.pdf
WINK	Nictitation	To open and close the eyelids or an eyelid rapidly. Synonym: nictation.	www.thefreedictionary.com/blink
NRES	No response	No response to the toxicant.	
NCMV	Nocturnal movements	Movements made during the night.	ECOTOX
NACT	Non-social activity	Behaviors include explore, scan, dig, push-dig, wash, self-groom, scratch, jump and eat.	ECOREF 58432
STRS	Observed Stress	The sum of the biological reactions to any adverse stimulus, physical, mental or emotional, internal or external	www.biology-online.org/dictionary/Stress
ORNT	Orientation	The act or process of orienting; one's position in relation to true north, to points on the compass, or to a specific place or object.	http://dictionary.reference.com/browse/orientation
PALR	Palmar grasp	Flexion of the fingers caused by stimulation of the palm of the hand.	http://medical-dictionary.thefreedictionary.com/palmar+grasp+reflex
PHTR	Phototactic Response	A locomotory movement, that occurs when a whole organism moves in response to the stimulus of light.	http://en.wikipedia.org/wiki/Phototaxis
PLAR	Placing reflex	Flexion followed by extension of the leg.	Dorlands Medical Dictionary
POLC	Pollen collected	Collection of a mass of microspores in a seed plant appearing usually as a fine dust.	Webster's
POST	Posture	The position of the limbs or the carriage of the body as a whole.	www.biology-online.org/dictionary/Posture
PRVU	Predator Vulnerability	Susceptible to attack.	www.thefreedictionary.com/Vulnerability
PNPY	Prey penetration	The ability of a predator to penetrate or capture a prey organism	ECOTOX

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RSPT	Response Time to a Stimulus	The time that elapses between a stimulus and the response to it.	www.biology-online.org/dictionary/Response_Time
REST	Rest	A state of motionlessness or inactivity or a bodily state characterized by minimal functional and metabolic activities.	http://www.m-w.com/
RSNR	Resting and not ruminating	Lying down and not chewing cud.	
RSRU	Resting and ruminating	Lying down and chewing cud.	ECOTOX
RVSE	Reversals	To turn completely about in position or direction.	http://www.m-w.com/
RRSP	Righting Response	A reflex process in which an animal immediately tries to turn over after being placed in a supine position.	www.ebi.ac.uk/QuickGO/GTerm?id=GO:0060013
RUBB	Rub	To move along the surface of a body with pressure.	www.biology-online.org/dictionary/Rub
RUNN	Run	To go faster than a walk; specifically: to go steadily by springing steps so that both feet leave the ground for an instant in each step	www.merriam-webster.com/dictionary/run
SCRT	Scratch	to scrape, dig, rub, tear or mark a surface of with something sharp or jagged such as claws or nails	http://www.m-w.com/
SEBH	Search/explore/forage behavior	An active movement by which an organism seek resources. To wander or rove in search of food	http://www.colostate.edu/Depts/Entomology/courses/en507/student_papers_1995/bradbury.html and http://cancerweb.ncl.ac.uk/omd/
SLEP	Sleep/Sleeping	The natural periodic suspension of consciousness during which the powers of the body are restored.	Webster's
INST	Sleeping Time, Induced	Sleep time was defined as the time required for the animal to regain spontaneous movements	www.ncbi.nlm.nih.gov/pmc/articles/PMC3038564/
SMEL	Smell/Sniff	To perceive the odor or scent of through stimuli affecting the olfactory nerves.	Webster's
SACT	Social Activity	Behaviors include attend, nose, groom, sniff, investigate, follow, push-under, push-past, crawl-over and crouch.	ECOREF 58432
SRED	Spread, Spreading	To stretch out.	ECOTOX
SDNR	Standing and not ruminating	Standing and not chewing cud.	ECOTOX

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SDRU	Standing and ruminating	Standing and chewing cud.	ECOTOX
STLT	Startle	To frighten or surprise suddenly.	Webster's
STPY	Stereotypy	Frequent almost mechanical repetition of the same posture, movement, or form of speech (as in schizophrenia).	http://www.m-w.com/
SRCH	Stretch	To enlarge or distend especially by force.	Webster's
SURF	Surfacing	The act or an instance of rising to the surface of a body of water.	http://dictionary.reference.com/browse/surfacing
SWIM	Swimming	To move in water by movements of the limbs, fins, tail, etc.	http://dictionary.reference.com/browse/swim
THML	Temperature Tolerance	Change in tolerance to temperature change.	ECOTOX
TUBE	Tube Building	The process of constructing open-ended, cylindrical tubes using mucus or silk to bind together detritus	ECOTOX
VACL	Valve Closure	Change in the ability to open or close a shell valve upon mechanical stimulation and/or gaping response.	ECOTOX
VRTP	Variable Interval Reinforcement Task Performed	Variable interval (VI) schedules deliver reinforcement for the first response after a random average length of time passes since the last reinforcement.	http://en.wikipedia.org/wiki
VMVT	Vertical or rearing movements	To rise up on the hind legs.	http://www.m-w.com/
VORX	Vestibulo-ocular reflex	The vestibulo-ocular reflex (VOR), is eye movement that functions to stabilize gaze by counteracting movement of the head. In VOR the semicircular canals of the inner ear measure rotation of the head and provide a signal for the oculomotor nuclei of the brainstem, which innervate the eye muscles. The muscles counter-rotate the eyes in such a way that a rightward head rotation causes an equal leftward rotation of both eyes, with the result that gaze direction stays stationary.	http://www.britannica.com/EBchecked/topic/626984/vestibulo-ocular-reflex-VOR
VIBR	Vibrissae placing	Specialized hairs, usually employed for tactile sensation, but can also refer to the stiff feathers near the mouths of some birds. Touching a vibrissa causes it to bend, and the blood in the sinus is pushed to one side or the other. The blood amplifies the movement and allows the mechanoreceptors at the base of the vibrissa to detect extremely small deflections.	www.websters-online-dictionary.org/definitions/Vibrissa
VCLF	Visual Cliff	A visual cliff involves an apparent, but not actual drop from one surface to another.	http://psychology.about.com/od/vindex/f/visual-cliff.htm

ECOTOX Code Appendix

BEH	Behavior Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VISP	Visual placing	The reaction of an organism in response to a visual stimuli. For example: The fast movement of a finger towards a mouse normally elicits an immediate reaction from the mouse. In addition, the mouse is held a few centimeters above a grid (a wire mouse cage top) and should extend its front limbs in an attempt to grasp the grid. This response is known as visual placing.	http://cmhd.mshri.on.ca/pdf
NVOC	Vocalizations	The use of uttered sounds for auditory communication. Including but not limited to: Song, barking, grunting, hissing, growling, and purring.	www.thefreedictionary.com/vocalization
WALK	Walk	to move along on foot, advance by steps	www.merriam-webster.com/dictionary/walk
WTCH	Watch, watching	To keep something under close observation.	http://www.merriam-webster.com/dictionary/watch
WEBB	Web-building	The network of silken thread spun by most spiders and used as a resting place and as a trap for small prey.	http://www.merriam-webster.com/dictionary/spiderweb
YAWN	Yawn	To open the mouth wide usually as an involuntary reaction to fatigue or boredom.	Webster's

FDB	Feeding Behavior	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BGNG	Begging Behavior	An animal solicits being given resources by another animal. This is usually a young animal soliciting food from their parents, brood hosts or other adults.	http://en.wikipedia.org/wiki/Begging_in_animals
FECL	Fecal Production	Solid excretory product evacuated from the bowels.	http://www.thefreedictionary.com/excretory+product
FDNG	Feeding Behavior (Activity)	Getting food or nourishment.	www.biology-online.org/dictionary/Feeding
GFDB	Feeding Behavior, General	Behavioural responses or sequences associated with eating including modes of feeding, rhythmic patterns of eating, and time intervals.	www.biology-online.org/dictionary/Feeding_behavior
FEFF	Feeding Efficiency	In animal husbandry, feed conversion ratio (FCR), feed conversion rate, or feed conversion efficiency (FCE), is a measure of an animal's efficiency in converting feed mass into increases of the desired output.	http://en.wikipedia.org/wiki/Feed_conversion_ratio

FDB	Feeding Behavior	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FTIM	Feeding Time	Time spent eating	ECOTOX
FCNS	Food Consumption	A behavioral response in feeding measured by the amount of food eaten, the feeding rate, ingestion of food, food handling time, accuracy of feeding or eating.	ECOTOX
FSTR	Food Storage	The search, selection, and transportation of food to a definite place by animals to be used (usually during the foodless season) by the animals or their offspring.	http://encyclopedia2.thefreedictionary.com/Food+Storage,+Animal
LTBD	Litter Breakdown	Breakdown of the undecomposed plant and animal material found on the forest floor.	www.biology-online.org/dictionary/Litter
PRBE	Predatory Behavior	Aggressive behavior involving attack on prey by a predator.	www.ebi.ac.uk/QuickGO/GTerm?id=GO:0002120
STRK	Strikes	To make an attack; to aim a blow	www.biology-online.org/dictionary/Strike
WCON	Water Consumption	Amount of water consumed	ECOTOX

BCM Biochemical Group

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
O1LA	(omega-1)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O2LA	(omega-2)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O3LA	(omega-3)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744
O4LA	(omega-4)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 176781
O5LA	(omega-5)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 176781
O6LA	(omega-6)-Hydroxy lauric acid	Hydroxylation product of the metabolism of lauric acid.	ECOREF 67744

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DPHZ	1, 1-Diphenyl-2-picryl hydrazyl	It is a dark-colored crystalline powder composed of stable free-radical molecules. DPPH has two major applications, both in laboratory research: one is a monitor of chemical reactions involving radicals and another is a standard of the position and intensity of electron paramagnetic resonance signals.	http://en.wikipedia.org/wiki/DPPH
DHCA	1,25-Dihydrocholecalciferol	25 dihydroxyvitamin D3. The form of vitamin D3 that is biologically active in intestinal transport and calcium resorption by bone. Also Calcitriol.	www.biology-online.org/dictionary/Calcitriol
2CLA	10 trans, 12 cis-conjugated linoleic acid	10(E),12(Z)-Octadecadienoic acid, or 10 trans, 12 cis-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX
10HC	10-Hydroxycamptothecin	10-Hydroxycamptothecin is a DNA topoisomerase I inhibitor with potent anti-tumor activity. An agent obtained from higher plants that has demonstrable cytostatic or antineoplastic activity. Also: 10-hydroxycamptothecine, Hydroxycamptothecin, 10-Hydroxy camptothecin, 10-Hydroxy-Camptothecin.	http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?sid=103170545&loc=es_recs , http://www.ncbi.nlm.nih.gov/cgi/mesh/2014/MB_cgi , http://www.ncbi.nlm.nih.gov/cgi/mesh/2014/MB_cgi?mode=&term=Antineoplastic+Agents,+Phylogenetic+and http://www.selleckchem.com/products/10-hydroxycamptothecin.html
3CLA	11 cis, 13 trans-conjugated linoleic acid	11(Z),13(E)-Octadecadienoic acid, or 11 cis, 13 trans-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX
11HE	11-Hexadecenoic acid	A fatty acid with the formula C16H30O2. Also: C16:1n-5, AC1NSMOV, (E)-hexadec-11-enoic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/5312413#section=Canonical-SMILES
HD12	12-hydroxydodecanoic acid	12-hydroxydodecanoic acid, also: 12 hydroxy lauric acid, omega-hydroxylauric acid	http://www.ncbi.nlm.nih.gov
FA18	18:1(n-5) fatty acid	A fatty acid with 18 carbon atoms.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
1ACC	1-Aminocyclopropane-1-carboxylic acid	1-Aminocyclopropane-1-carboxylic acid (ACC) is a disubstituted cyclic alpha-amino acid in which a three-membered cyclopropane ring is fused to the C(alpha)-atom of the amino acid.	http://en.wikipedia.org/wiki
1HPY	1-Hydroxypyrene	Main metabolite compound of polycyclic aromatic hydrocarbons with four to six rings.	ECOREF#50442
DPPA	2,3-Diphosphoglyceric acid	A by- product of glycolysis can bind with hemoglobin.	http://www.hhp.ufl.edu/classes/ess/Spring/Pet3351jd/pdf3351/3351Chapter10.PDF
20SP	20S Proteasome	Catalytic core of the proteasome complex, is responsible for the breakdown of key proteins involved with apoptosis, DNA repair, endocytosis, and cell cycle control.	http://www.emdmillipore.com/US/en/product/20S-Proteasome-Activity-Assay,MM_NF-APT280
25HC	25-Hydroxycholecalciferol	A sterol C ₂₇ H ₄₄ O ₂ that is a metabolite of cholecalciferol formed in the liver, is the circulating form of vitamin D, and has some activity in maintaining calcium homeostasis and preventing rickets.Synonym: calcidiol, calcifediol	www.merriam-webster.com/medical/25-hydroxycholecalciferol
2AAF	2-Acetylaminofluorene	2-Acetylaminofluorene is a hepatic carcinogen whose mechanism of activation involves N-hydroxylation to the aryl hydroxamic acid followed by enzymatic sulfonation to sulfoxylfluorenylacetamide. It is used to study the carcinogenicity and mutagenicity of aromatic amines. Also: Fluoren-2-ylacetamide, N-2-Fluorenylacetamide, 2AAF	http://www.ncbi.nlm.nih.gov
2ACG	2-Arachidonoylglycerol	An endocannabinoid, an endogenous agonist of the CB1 receptor. It is an ester formed from the omega-6 fatty acid arachidonic acid and glycerol. It is present at relatively high levels in the central nervous system, with cannabinoid neuromodulatory effects.	http://en.wikipedia.org/wiki/2-Arachidonoylglycerol
DOPC	3,4-Dihydroxyphenylacetic acid	(DOPAC) is a metabolite of the neurotransmitter dopamine. Dopamine can be metabolized into one of three substances. One such substance is DOPAC. Another is 3-methoxytyramine (3-MT). Both of these substances are degraded to form homovanillic acid (HVA).	http://en.wikipedia.org/wiki/3,4-Dihydroxyphenylacetic_acid
DCDA	3,4-Dihydroxyphenylacetic acid to Dopamine ratio	The ratio of 3,4-Dihydroxyphenylacetic acid to Dopamine.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
3AIB	3-aminoisobutyrate	A beta-amino acid anion that is the conjugate base of 3-aminoisobutyric acid, arising from deprotonation of the carboxy group.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:49096
3ABD	3-Aminoisobutyric acid	A beta-amino-acid that is isobutyric acid in which one of the methyl hydrogens is substituted by an amino group. It has a role as a metabolite and derives from an isobutyric acid. It is a conjugate acid of a 3-aminoisobutyrate. Also: 3-Amino-2-methylpropanoic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/64956#section=Top
3HBA	3-Hydroxybutyric acid	Butyric acid substituted in the beta or 3 position. It is one of the ketone bodies produced in the liver. Also: (+ -)-3-Hydroxybutyric Acid, 3-Hydroxybutyrate ,3 Hydroxybutyric Acid, 3-Hydroxybutyrate, beta Hydroxybutyrate, beta-Hydroxybutyric Acid, beta-Hydroxybutyrate, beta-Hydroxybutyric Acid.	https://www.online-medical-dictionary.org/definitions-~/3-hydroxybutyric-acid.html
MHPS	3-methoxy-4-hydroxyphenylethylene glycol sulfate	A catecholamine metabolite.	pharmrev.aspetjournals.org/cgi/content/full/56/3/31
MHNR	3-Methoxy-4-hydroxyphenylglycol to Norepinephrine ratio	The ratio of 3-Methoxy-4-hydroxyphenylglycol to Norepinephrine found in a sample.	ECOTOX
3MTA	3-Methoxytyramine	(3-MT), also known as 3-methoxy-4-hydroxyphenethylamine, is a metabolite of the neurotransmitter dopamine formed by the introduction of a methyl group to dopamine by the enzyme catechol-O-methyl transferase (COMT).	http://en.wikipedia.org/wiki/3-Methoxytyramine
3MDO	3-Methoxytyramine to Dopamine ratio	The ratio of 3-Methoxytyramine to Dopamine.	ECOTOX
3NTT	3-nitrotyrosine to tyrosine ratio	Ratio of 3-nitrotyrosine to tyrosine in a sample.	ECOTOX
3PPG	3-Phosphoglycerate	3-Phosphoglycerate is an intermediate in the glycolysis, gluconeogenesis, and Calvin cycle pathways and in metabolism of serine, cysteine, and glycine. 3-Phosphoglycerate is acted on by the glycolytic enzymes phosphoglycerate kinase and phosphoglycerate mutase and the important photosynthesis enzyme, ribulose-1,5-bisphosphate carboxylase (rubisco).	http://www.pearsonghigered.com/mathews/ch13/pg.htm
HMPG	4-Hydroxy-3-methoxyphenylglycol	Synthesized from endogenous epinephrine and norepinephrine in vivo. It is found in brain, blood, CSF, and urine, where its concentrations are used to measure catecholamine turnover	http://medicaltermfinder.com/definition-of-4-hydroxy-3-methoxyphenylglycol.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
4ORA	4-Oxo-retinoic acid	An oxidative metabolite of retinoic acid. A highly active endogenous active retinoid.	http://www.niwi.knaw.nl/elecpubl/imwo/niob/niobb.htm
5HAA	5-Hydroxyindole Acetic Acid	An acid produced by serotonin metabolism, measured in the blood and urine to aid in the diagnosis of certain kinds of tumors. Abbreviated 5-HIAA.	http://medical-dictionary.thefreedictionary.com/5-hydroxyindoleacetic+acid
5HSR	5-Hydroxyindole Acetic Acid to Serotonin ratio	The ratio of 5-Hydroxyindole Acetic Acid to Serotonin. Also the ratio of 5-Hydroxyindole Acetic Acid to 5-Hydroxytryptamine ratio. Also: 5-HIAA 5-HT ratio.	ECOTOX
5OPL	5-Oxoproline	A cyclized derivative of L-glutamic acid. It is an uncommon amino acid derivative in which the free amino group of glutamic acid cyclizes to form a lactam. It is formed nonenzymatically from glutamate, glutamine, and gamma-glutamylated peptides, but it can also be produced by the action of gamma-glutamylcyclotransferase on an L-amino acid. Also: Pyroglutamic acid, Pidolic acid, Pyrrolidonecarboxylic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/7405#section=Synonyms
6BHC	6-beta-Hydroxcortisol	6-beta-Hydroxcortisol is a cortisol metabolite. Synonyms: 6-beta-Hydrocortisol; 6-beta,17-dihydroxcorticosterone; 6,11-beta,17,21-tetrahydroxypregn-4-ene-3,20-dione	ECOTOX and http://pubchem.ncbi.nlm.nih.gov
6KPA	6-keto-prostaglandin F1 alpha	6-keto prostaglandin F1α (6-keto PGF1α) is the inactive, non-enzymatic hydrolysis product of PGI2. 6-keto PGF1α serves as a useful marker of PGI2 biosynthesis in vivo. When [3H]-PGI2 is injected into healthy human males, 6.6% of the radioactivity is recovered from urine as [3H]-6-keto PGF1α.	ECOTOX and https://www.caymanchem.com/product/15210
78GR	78 kDa glucose-regulated protein	A member of the HSP family of molecular chaperones required for endoplasmic reticulum integrity and stress-induced autophagy. Plays a central role in regulating the unfolded protein response (UPR), and is an obligatory component of autophagy in mammalian cells. May play an important role in cellular adaptation and oncogenic survival. Also: GRP-78, GRP78, BiP, Endoplasmic reticulum luminal Ca(2+)-binding protein grp78, Heat shock 70 kDa protein 5, heat shock 70kD protein 5 (glucose-regulated protein, 78kD), Immunoglobulin heavy chain-binding protein, HSPA5, MIF2.	http://www.phosphosite.org/proteinAction.do?id=9327 and http://www.uniprot.org/uniprot/P11021

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
7BRF	7-Benzyloxyresorufin	7-Benzylxoyresorufin-O-Dealkylase : A major cytochrome P-450 enzyme which is inducible by phenobarbital in both the liver and small intestine. It is active in the metabolism of compounds like pentoxyresorufin, testosterone, and androstenedione. CYP2B1 also mediates the activation of cyclophosphamide and ifosfamide to mutagens. EC 1.-.	http://medcaltermfinder.com/definition-of-7-benzyloxyresorufin-o-dealkylase.html
7ERF	7-Ethoxyresorufin	A compound used as the substrate in the measurement of cytochrome P450 (CYP1A1) induction using the ethoxyresorufin-O-deethylase (EROD) assay system in cell culture and environmental samples, produced in response to exposure to aryl hydrocarbons. The compound is catalysed by the enzyme to produce the same fluorescent product, resorufin.	http://en.wikipedia.org/wiki/Resazurin
7MRF	7-Methoxyresorufin	A substrate used to differentiate isozymes of cytochrome P-450	http://www.sigmaaldrich.com/catalog/product/sigma/69125?lang=en&region=US
7PRF	7-Pentoxyresorufin	Fluorogenic cytochrome P-450 substrate that generates red fluorescent product upon enzyme cleavage	http://www.anaspec.com/products/product.asp?id=51414
8ODG	8-hydroxydeoxyguanosine	A biomarker of oxidative stress on DNA	ECOREF#76203
8O2D	8-Oxo-2'-deoxyguanosine	8-Oxo-2'-deoxyguanosine (8-oxo-dG) is an oxidized derivative of deoxyguanosine. 8-oxo-dG is one of the major products of DNA oxidation. Concentrations of 8-oxo-dG within a cell are a measurement of oxidative stress. Also: 8-oxo-7,8-dihydro-2'-deoxyguanosine.	http://en.wikipedia.org/wiki/8-oxo-2'-deoxyguanosine and http://www.sciencedirect.com/science/article/pii/S0009898112003488
1CLA	9 trans, 11 cis-conjugated linoleic acid	9(E),11(Z)-Octadecadienoic acid, or 9 trans, 11 cis-conjugated linoleic acid, is a conjugated linoleic acid.	ECOTOX
ABAG	Abscisic acid glucoside	A major metabolite of abscisic acid.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4243626/
ACAH	Acetaldehyde	A colourless, flammable liquid used in the manufacture of acetic acid, perfumes, and flavors. It is also an intermediate in the metabolism of alcohol. It has a general narcotic action and also causes irritation of mucous membranes. Large doses may cause death from respiratory paralysis.	www.biology-online.org/dictionary/Acetaldehyde

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ACTD	Acetamide	A member of the class of acetamides that results from the formal condensation of acetic acid with ammonia.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:27856
ACTT	Acetate	Derivative of acetic acid. Included under this heading are a broad variety of acid forms, salts, esters, and amides that contain the carboxymethane structure.	https://www.onlinemedical-dictionary.org/definitions-a/acetates.html
ACTE	Acetone	In the body, a chemical that is formed when the body uses fat instead of glucose for energy. The formation of acetone means that cells lack insulin or cannot effectively use available insulin to burn glucose for energy. It passes through the body into the urine as ketone bodies, the simplest ketone. It is normally present in urine in small amounts but can increase in those who have diabetes mellitus. Results in having "fruity" acetone breath.	ECOREF#73878 http://medical-dictionary.thefreedictionary.com/acetone
ACHL	Acetylcholine	The acetic acid ester of choline, which is a neurotransmitter at cholinergic synapses in the central, sympathetic, and parasympathetic nervous systems; used in the form of the chloride salt as a miotic.	http://medical-dictionary.thefreedictionary.com/acetylcholine
ACCL	Acetylcholine to choline ratio	The ratio of acetylcholine to choline.	
ACRR	Acetylene Reduction Rate/plant Roots Nodulated	No definition available.	
ACID	Acid Produced	Amount of acid produced	ECOTOX
ADRT	Acid resistant thiol	Thiols which dissociate only at alkaline pHs	ECOREF#89702
CDST	Acid Soluble Thiol	No definition available.	
AIHP	Acid-insoluble hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing agent.	
ACHP	Acid-soluble hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing agent.	
ACTN	Actin	A protein found especially in microfilaments (as those comprising myofibrils) and active in muscular contraction, cellular movement, and maintenance of cell shape	www.merriam-webster.com/medical/actin

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ARP1	Actin-related protein 1	Participates in a diverse array of cellular processes. They modulate assembly of conventional actin, contribute to microtubule-based motility catalyzed by dynein, and serve as integral components of large protein complexes required for gene expression.	http://www.ncbi.nlm.nih.gov/pubmed/10611965
AVTP	Active Transport	The movement of materials across cell membranes and epithelial layers against an electrochemical gradient, requiring the expenditure of metabolic energy.	http://www.online-medical-dictionary.org/definitions-a/active-transport.html
CAMP	Adenosine 3',5'-cyclic Monophosphate	A cyclic nucleotide, adenosine 3',5'-cyclic monophosphate, that serves as an intracellular, and sometimes extracellular, "second messenger" mediating the action of many peptide or amine hormones.	http://medical-dictionary.thefreedictionary.com/adenosine
ADPT	Adenosine diphosphate (ADP)	A nucleotide, the 5'-pyrophosphate of adenosine, involved in energy metabolism; it is produced by the hydrolysis of adenosine triphosphate (ATP) and converted back to ATP by the metabolic processes oxidative phosphorylation and substrate-level phosphorylation.	http://medical-dictionary.thefreedictionary.com/adenosine+diphosphate+(ADP)
ADAT	Adenosine diphosphate (ADP) to Adenosine triphosphate (ATP)	The ratio of Adenosine diphosphate (ADP) to Adenosine triphosphate (ATP).	ECOTOX
ADOX	Adenosine diphosphate to oxygen ratio	The ratio of adenosine diphosphate to oxygen.	
AMPT	Adenosine monophosphate (AMP)	A nucleotide, the 5'-phosphate of adenosine, involved in energy metabolism and nucleotide synthesis. Called also adenylic acid.	http://medical-dictionary.thefreedictionary.com/adenosine+monophosphate
AMDT	Adenosine phosphates (AMP+ADP+ATP)	Total of adenosine monophosphate, adenosine diphosphate and adenosine triphosphate in a sample. (AMP+ADP+ATP). Also: total adenylates, total adenylate nucleotide pool, TANP.	ECOTOX, http://www.plantphysiol.org/content/104/1/217 , and http://bit.ly/2TreObV
ATPT	Adenosine Triphosphate	An organic compound that is composed of adenosine (an adenine ring and a ribose sugar) and three phosphate groups. (ATP) The universal energy currency for metabolism	http://www.biology-online.org/dictionary/Adenosine_Triphosphate

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ATAD	Adenosine Triphosphate (ATP) to Adenosine diphosphate (ADP)	The ratio of Adenosine Triphosphate (ATP) to Adenosine diphosphate (ADP)	ECOTOX
ATAM	Adenosine Triphosphate (ATP) to Adenosine monophosphate (AMP)	The ratio of Adenosine Triphosphate (ATP) to Adenosine monophosphate (AMP)	ECOTOX
ATPP	Adenosine triphosphate to Phosphocreatine ratio	Ratio of Adenosine triphosphate to Phosphocreatine in a sample.	ECOTOX
ADCD	Adenylic acid	A condensation product of adenosine and phosphoric acid; a nucleotide found among the hydrolysis products of all nucleic acids. 3'-adenylic acid (adenosine 3'-monophosphate) and 5'-adenylic acid (adenosine 5'-monophosphate) differ in the place of attachment of the phosphoric Acid to the d-ribose; deoxyadenylic acid differs in having H instead of OH at the 2' position of d-ribose.	www.biology-online.org/dictionary/Adenylic_acid
APTE	Adipate	A dicarboxylic acid dianion obtained by the deprotonation of both the carboxy groups of adipic acid. It has a role as a human xenobiotic metabolite. Also: Adipate dianion, hexanedioate.	https://pubchem.ncbi.nlm.nih.gov/compound/200164
ADNA	Adrenic Acid	Adrenic Acid (C22:4n-6), also all cis-7,10,13,16-docosatetraenoic acid, is a poly unsaturated fatty acid.	ECOTOX
AFB1	Aflatoxin B1	Out of about 20 known aflatoxins, the molds <i>Aspergillus flavus</i> and <i>A. parasiticus</i> produce exclusively aflatoxin B1, B2, G1 and G2, and all the other aflatoxins are derivatives of these four. The derivatives are developed either by metabolism in humans, animals and microorganisms or by environmental reactions. Aflatoxins belong to the strongest mycotoxins, which act primarily in a hepatotoxic and carcinogenic way. B1 is without doubt the most toxic aflatoxin. Contaminations with aflatoxins occur mostly with nuts and grain.	www.usbio.net/item/A0925-08

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AB12	Aflatoxin B1 and B2	Out of about 20 known aflatoxins, the molds <i>Aspergillus flavus</i> and <i>A. parasiticus</i> produce exclusively aflatoxin B1, B2, G1 and G2. B1 is without doubt the most toxic aflatoxin, followed by G1, B2 and G2. Of special importance for human beings are the chronological intoxications by aflatoxins. To the diseases, which develop after such chronological intoxications, belong primary liver carcinoma, hepatitis, Reye's syndrome and Kwashiorkor. Besides the generation of primary liver carcinoma, aflatoxins are presumably also responsible for other sorts of tumors, like intestinal cancer.	www.usbio.net/item/A0925-08
AFB2	Aflatoxin B2	A fungal toxin which is a powerful liver carcinogen, found particularly in undeveloped and developing countries; produced by <i>aspergillus flavus</i> and <i>a. Parasiticus</i>	www.biology-online.org/dictionary/Aflatoxin
AFG1	Aflatoxin G1	Aflatoxin G1 is a mycotoxin produced by strains of the fungi <i>Aspergillus flavus</i> and <i>A. parasiticus</i> .	http://www.cfsan.fda.gov
AFG2	Aflatoxin G2	A mycotoxin, which may be produced by mold species of the genus <i>Aspergillus</i> . Synonyms: AFG2, Dihydroaflatoxin G1.	http://www.biopure.at/biopure-index/datasheets/mdc/Aflatoxin_G2.htm
ALAN	Alanine	A nonessential amino acid; is involved in the energy-producing breakdown of glucose. (Ala)	www.biology-online.org/dictionary/Alanine
AAGO	Alanine aminotransferase to glutamate oxaloacetate ratio	Ratio of Alanine aminotransferase to glutamate oxaloacetate AAT/GOT	ECOTOX
ALBM	Albumin	Any of a group of simple water-soluble proteins that are coagulated by heat and are found in blood plasma, egg white, etc	http://dictionary.reference.com/browse/albumen
ALGL	Albumin:Globulin ratio	The ratio of Albumin to Globulin in a sample.	ECOTOX
APHT	Alkaline phosphate	No definition available.	
ALKD	Alkaloids, Total	Any of various organic compounds normally with basic chemical properties and usually containing at least one nitrogen atom in a heterocyclic ring, occurring chiefly in many vascular plants and some fungi. Many alkaloids, such as nicotine, quinine, cocaine, and morphine, are known for their poisonous or medicinal attributes.	The American Heritage Dictionary of the English Language, Fourth Edition (2000)

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AKLD	Alkoxylipids	Lipids with long alkyl or 1-alkenyl chains—called alkoxylipids or ether lipids—are widely distributed in human and animal tissues. These compounds comprise neutral alkoxylipids, i. e. 1-O-alkyl or 1-O-(1-alkenyl)-2,3-di-O-acylglycerols, and alkoxylipids which are linked by a phosphate residue at C-3 to aminoethanol, choline or serine. Alkoxylipids are employed in biomedical investigations, e.g. as substrates in acyl-hydrolase systems or in fat absorption studies.	Mangold, H. K. (1979), Synthesis and Biosynthesis of Alkoxylipids. Angew. Chem. Int. Ed. Engl., 18: 493–503. doi: 10.1002/anie.197904933
AKRL	Alkylresorcinol	Phenolic lipids that are present exclusively in bran and specifically in the outer layer of the seed coat.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1000000/
ALLT	Allantoic Acid	A crystalline acid C ₄ H ₈ N ₄ O ₄ obtained by hydrolysis of allantoin; di-ureido-acetic acid	www.merriam-webster.com/dictionary/allantoic%20acid
ALLA	Allantoin	A chemical compound (5-ureidohydantoin), C ₄ H ₆ N ₄ O ₃ , that occurs as a white crystallizable substance found in many plants and in the allantoic and amniotic fluids and fetal urine of primates; used medicinally to promote tissue growth.	http://medical-dictionary.thefreedictionary.com/allantoin
APCY	Allophycocyanin	Allophycocyanin (APC) is a large protein (approximate molecular weight 80 kd) containing many fluors.	http://www.drmr.com/abcon/APC.html
APCR	Allophycocyanin to chlorophyll a ratio	The ratio of allophycocyanin to chlorophyll a in a sample.	ECOTOX
ATCA	Alpha-tocopherol to chlorophyll a ratio	The ratio of alpha-tocopherol to chlorophyll a.	ECOTOX
A2UG	Alpha 2u-globulin	Alpha 2u-globulin is an androgen-dependent urinary protein; synthesized by hepatic tissue; released into plasma and filtered through kidneys into urine. Major urinary proteins (MUPs), also known as alpha2u-globulins, are a subfamily of proteins found in high abundance in the urine and other secretions of many mammals.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1000000/ and www.wikipedia.org/wiki/Alpha_2u-globulin

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
A1GL	Alpha-1 globulin	The alpha-1 protein fraction is comprised of alpha1-antitrypsin, thyroid-binding globulin, and transcortin.	Gammopathies, Monoclonal Versus Polyclonal. "Understanding and interpreting serum protein electrophoresis." Am Fam Physician 71.1 (2005): 105-112.
A2GL	Alpha-2 globulin	The alpha-2 protein fraction is comprised of ceruloplasmin, alpha-2 macroglobulin, and haptoglobin.	Gammopathies, Monoclonal Versus Polyclonal. "Understanding and interpreting serum protein electrophoresis." Am Fam Physician 71.1 (2005): 105-112.
AABA	alpha-Aminobutyric Acid	<p>α-Aminobutyric acid (AABA) is an isomer of the amino acid aminobutyric acid with chemical formula C4H9NO2. It has two other isomers, gamma-aminobutyric acid (GABA) and beta-aminobutyric acid.</p> <p>It is a key intermediate in the biosynthesis of ophthalmic acid or ophthalmate.</p> <p>AABA is used as an amino acid by cells as the building block of proteins, therefore it is often referred to as amino acid aminobutyric acid, or simply aminobutyric acid. In contrast, GABA is a neurotransmitter and not used in protein synthesis, and it is almost always referred to as GABA</p>	http://en.wikipedia.org/wiki/Alpha-Aminobutyric_acid
AAIB	alpha-Aminoisobutyrate	Aminoisobutyrate: an anionic form of aminoisobutyric acid.	www.homeopathywithoutborders.gr/index.php?option=com_content&view=article&catid=59:health-concepts&id=31085
ACAR	alpha-Carotene	A carotenoid abundant in carrots, sweet potatoes, cantalope, which has vitamin A and immunostimulatory activity.	http://medical-dictionary.thefreedictionary.com/alpha+carotene

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ACXN	alpha-Cryptoxanthin	Alpha-cryptoxanthin is a naturally occurring carotenoid pigment with provitamin A activity whose structure is very similar to that of beta-carotene (HMDB00561). These dietary hydroxycarotenoids have been identified in human serum, milk, and ocular tissues.	http://www.hmdb.ca/metabolites/HMDB02268
AGLB	alpha-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α_1 -, α_2 -, and β -globulins, which serve as carrier proteins; and γ -globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 < http://www.encyclopedia.com >.
AGPT	alpha-glycerophosphate	Glycerophosphate is a salt or ester of either of the glycerophosphoric acids.	www.merriam-webster.com/medical/glycerophosphate
KTBA	alpha-ketobutyric acid	A product of the lysis of cystathionine. It is also one of the degradation products of threonine. It can be converted to propionyl-CoA (and subsequently methylmalonyl CoA, which can be converted to succinyl CoA, a CAC intermediate), and thus enter the citric acid cycle.	http://en.wikipedia.org
KGTA	alpha-ketoglutarate	alpha-ketoglutarate (also called oxo-glutarate) is an important biological compound. It is the keto acid produced by de-amination of glutamate, and is an intermediate in the Krebs cycle. Synonyms: alpha-oxoglutaric acid, 2-oxoglutarate.	http://en.wikipedia.org
ALCD	Alpha-linoleic acid	A type of omega-3 fatty acid found in plants. It is found in flaxseed oil, and in canola, soy, perilla, and walnut oils.	http://pennstatehersey.adam.com/content.aspx?productId=107&pid=33&gid=000284#Overview
ALAC	alpha-Linolenic acid	alpha-Linolenic acid (ALA) is an organic compound found in many common vegetable oils. In terms of its structure, it is named all-cis-9,12,15-octadecatrienoic acid. Also: 18:3 (n-3), C18:3omega3.	http://en.wikipedia.org/wiki/Alpha-Linolenic_acid
PINE	Alpha-pinene	Either of two colourless liquid hydrocarbons, alpha-pinene and beta-pinene, occurring as major components of the essential oil of pine trees and used as a chemical raw material. Both compounds belong to the isoprenoid series and have the molecular formula C ₁₀ H ₁₆ .	http://dictionary.reference.com/browse/pinene

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
APRO	alpha-Proteins	Protein: Any of a group of complex organic macromolecules that contain carbon, hydrogen, oxygen, nitrogen, and usually sulfur and are composed of one or more chains of amino acids. Proteins are fundamental components of all living cells	www.thefreedictionary.com/protein
ASYC	Alpha-synuclein	a protein found in the brain. It is predominantly a presynaptic neuronal protein	http://en.wikipedia.org/wiki/Alpha_synuclein
ATGT	alpha-Tocopherol and gamma - Tocopherol	Tocopherol are any of a group of closely related, fat-soluble alcohols that behave similarly to vitamin E and are present in milk, lettuce, and wheat germ oil and certain other vegetable oils.	The American Heritage Medical Dictionary, 2007, 2004 by Houghton Mifflin Company. http://medical-dictionary.thefreedictionary.com/tocopherol
ATCO	alpha-Tocopherol concentration	Most prevalent form of vitamin E in the body and that administered as a supplement; often used synonymously with vitamin E. Also used as the acetate and acid succinate esters; is an antioxidant.	http://medical-dictionary.thefreedictionary.com/alpha-tocopherol
ATUB	alpha-Tubulin	The alpha form of a Tubulin which is one of several members of a small family of globular proteins.	en.wikipedia.org
ALTL	Alternariol	A principle Alternaria mycotoxin	http://www.micotoxinas.com.br/altertoxins.htm
ALTN	Alternariol monomethyl ether	A principle Alternaria mycotoxin	http://www.micotoxinas.com.br/altertoxins.htm
ALCO	Aluminum Content	The concentration of aluminum found in a sample.	ECOTOX
AMAN	Amino Acid Nitrogen	The nitrogen associated with the amino acids in the body.	ECOTOX
AMAC	Amino Acid(s), General Term	A molecule consisting of the basic amino group (NH ₂), the acidic carboxylic group (COOH), a hydrogen atom (-H), and an organic side group (R) attached to the carbon atom, thus, having the basic formula of NH ₂ CHR ₁ COOH	www.biology-online.org/dictionary/Amino_acid
ESAA	Amino Acids, Essential	Essential or indispensable amino acids cannot be synthesized in the body and can only be obtained through food. They are histidine, isoleucine, leucine, lysine, methionine, phenylalanine, threonine, tryptophan, and valine.	www.biology-online.org/dictionary/Amino_acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NEAA	Amino Acids, Nonessential	Non-essential or dispensable amino acids are synthesized in the body. They are alanine, arginine, aspartic acid, asparagine, cysteine, glutamic acid, glutamine, glycine, proline, serine, and tyrosine.	www.biology-online.org/dictionary/Amino_acid
TTAA	Amino Acids, Total	Measure of total amino acids - any organic compound containing an amino and a carboxyl group.	
TFAA	Amino Acids, Total Free	No definition available.	
AMNN	Amino Nitrogen	Nitrogen combined with hydrogen in the amino group. Also known as ammonia nitrogen.	www.answers.com/topic/amino-nitrogen
AMMO	Ammonia	A pungent colorless gaseous alkaline compound of nitrogen and hydrogen NH ₃ that is very soluble in water and can easily be condensed to a liquid by cold and pressure.	www.merriam-webster.com/medical/ammonia
NH4I	Ammonium ion	The ammonium cation is a positively charged polyatomic cation of the chemical formula NH ₄ ⁺ . It has a molecular mass of 18.04 and is formed by protonation of ammonia (NH ₃). The resulting ion has a pKa of 9.25. Ammonium and aminium are also general names for positively charged or protonated substituted amines and quaternary ammonium cations N+R ₄ , where one or more hydrogen atoms are replaced by organic radical groups (which could be symbolized as R).	http://en.wikipedia.org/wiki/Ammonium_ion
NHPN	Ammonium ion Nitrogen ratio	The ratio of Ammonium ion (NH ₄ ⁺) to nitrogen in a sample.	ECOTOX
AMYD	Amyloid	A glycoprotein deposited extracellularly in tissues in amyloidosis.	www.biology-online.org/dictionary/Amyloid
AMYS	Amylose	Amylose is an unbranched glucan in starch.	http://www.ncbi.nlm.nih.gov
AION	Anions	Negatively charged atoms or radicals.	www.biology-online.org/dictionary/Anions
ANA1	Annexin A1	Protein of the annexin family exhibiting lipid interaction and steroid-inducibility.	https://www.online-medical-dictionary.org/definitions-a/annexin-a1.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AA13	Annexin A13	A member of the annexin family of calcium-dependent phospholipid-binding proteins. Annexins have unique N-terminal domains and homologous C-terminal domains which contain the calcium-dependent phospholipid-binding sites. Alternate names: Annexin XIII, Annexin-13, Intestine-specific annexin, ANXA13.	http://www.omim.org/entry/602573 and http://www.uniprot.org/uniprot/P27216
AA1A	Annexin A1a	A protein involved in calcium-dependent phospholipid binding, calcium ion binding and phospholipase inhibitor activity.	http://refgene.com/gene/334724
ANRN	Anserine	A dipeptide comprising of beta-alanine and 3-methyl-L-histidine units. It has a role as an animal metabolite and a mouse metabolite. It is a beta-alanine derivative and a dipeptide. Also: L-anserine, N-beta-Alanyl-3-methyl-L-histidine.	https://pubchem.ncbi.nlm.nih.gov/compound/anserine
AHDA	Anteisoheptadecanoic acid	14-methylhexadecanoic acid, or anteisoheptadecanoic acid (C17:0 ai), is a saturated fatty acid.	ECOTOX
APDA	Anteisopentadecanoic acid	12-methyltetradecanoic acid, anteisopentadecanoic acid (C15:0 ai) is a saturated fatty acid. Also: sarcinic acid	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
ANXH	Antheraxanthin	A neutral yellow plant pigment unique to the Euglenophyta.	http://encyclopedia2.thefreedictionary.com/antheraxanthin
ANTH	Anthocyanins	Any of a class of water-soluble glycosidic pigments, esp those responsible for the red and blue colours in flowers. They are closely related to vitamins E and P.	http://dictionary.reference.com/browse/anthocyanin
SBCO	Antimony concentration	The concentration of Antimony found in a sample.	ECOTOX
ANTO	Antioxidant activity	Antioxidants are man-made or natural substances that may prevent or delay some types of cell damage. Antioxidants are found in many foods, including fruits and vegetables.	http://www.nlm.nih.gov/medlineplus/antioxidants.html
ANPY	Antipyrine	An artificial alkaloid, believed to be efficient in abating fever.	www.biology-online.org/dictionary/Antipyrine
APAI	Apolipoprotein A-I	The most abundant protein component of High Density Lipoproteins or HDL. This protein serves as an acceptor for Cholesterol released from Cells thus promoting efflux of Cholesterol to HDL then to the LIVER for excretion from the body (reverse Cholesterol transport). It also acts as a cofactor for Lecithin Cholesterol Acyltransferase that Forms Cholesterol Esters on the HDL particles.	http://www.online-medical-dictionary.org/definitions-a/apolipoprotein-a-i.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ALPB	Apolipoprotein B100	Apolipoprotein B100 (apoB100) is a protein that plays a role in moving cholesterol around your body. It is a form of low density lipoprotein (LDL).	https://www.ncbi.nlm.nih.gov/medlineplus/ency/article/03502.htm
AQP1	Aquaporin-1	A protein that forms a water-specific channel that provides the plasma membranes of red cells and kidney proximal tubules with high permeability to water, thereby permitting water to move in the direction of an osmotic gradient. Also: Aquaporin 1.	http://www.uniprot.org/uniprot/P29972
ARCA	Arachidic acid	Arachidic acid, or Eicosanoic acid (C20:0), is a saturated fatty acid.	ECOTOX
ARCH	Arachidonate	A polyunsaturated 20-carbon essential fatty acid occurring in animal fats and formed by biosynthesis from linoleic acid; it is a precursor to leukotrienes, prostaglandins, and thromboxane. Also Arachidonic acid, C20:4n-6	http://medical-dictionary.thefreedictionary.com/Arachidonate+acid
ARGI	Arginine	A nonessential amino acid occurring in proteins and involved in the urea cycle, which converts ammonia to urea, and in the synthesis of creatine. Preparations of the base or the glutamate or hydrochloride salt are used in the treatment of hyperammonemia and as a diagnostic aid in the assessment of pituitary function.	Dorland's Medical Dictionary for Health Consumers. 2007
ARST	Arrestin	A 48-Kd protein of the outer segment of the retinal rods and a component of the phototransduction cascade. Arrestin quenches G-protein activation by binding to phosphorylated photolyzed rhodopsin.	https://www.online-medical-dictionary.org/definitions-a/arrestin.html
ASCO	Arsenic content	The concentration of arsenic found in a sample.	ECOTOX
ASCN	Arsenic to creatinine ratio	The ratio of arsenic to creatinine.	ECOTOX
ASBT	Ascorbate	A salt or ester of ascorbic acid.	www.biology-online.org/dictionary/Ascorbate
AOAR	Ascorbate to oxidized Ascorbate ratio	Ratio of Ascorbate to oxidized Ascorbate in sample.	ECOTOX
ASCA	Ascorbic Acid	A water-soluble, white crystalline vitamin present in citrus fruits, tomatoes, berries, potatoes, and fresh green and leafy vegetables. It is essential for the formation of collagen and fibrous tissue for normal intercellular matrices in teeth, bone, cartilage, connective tissue, and skin, and for the structural integrity of capillary walls. It also aids in fighting bacterial infections and interacts with other nutrients. Vitamin C.	http://medical-dictionary.thefreedictionary.com/ascorbic+acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AADA	Ascorbic acid to Dehydroascorbate ratio	The ratio of Ascorbic acid to Dehydroascorbate found in a sample.	ECOTOX
ASHC	Ash Content	When either organic compounds are decomposed or released at high temperature (500C -600C), the remaining residue is the ash. This residue consists of oxides and salts containing anions such as phosphates, chlorides, sulfates, and other halides and cations such as sodium, potassium, calcium, magnesium, iron, and manganese.	www.foodscience-avenue.com/2008/05/what-is-ash-content.html
ASPR	Asparagine	A nonessential amino acid that is the beta-amide if aspartic acid. It is found in most plants, and has diuretic properties. It is used as a culture medium for certain bacteria.	Dorlands Medical Dictionary
ASPA	Aspartate	A nonessential amino acid that has a central role in transferring amino groups by aspartate aminotransferase in the liver; in proteins, aspartate takes the form of its amide, asparagine.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
ASPC	Aspartic Acid	One of the non-essential amino acids commonly occurring in the L-form. It is found in animals and plants.	http://www.ncbi.nlm.nih.gov
ASRA	AST(reduced):total AST including oxidized glutathione	the ratio of reduced acid-soluble thiols to total acid soluble thiols including oxidized glutathione	ECOTOX
ASTA	Astaxanthin	A reddish pigment that belongs to a group of chemicals called carotenoids. It occurs naturally in certain algae and causes the pink or red color in salmon, trout, lobster, shrimp, and other seafood.	http://www.webmd.com/vitamins-supplements/ingredientmono-1063-astaxanthin.aspx?activeingredientid=1063&activeingredientname=astaxanthin
ACBN	Aucubin	An iridoid glycoside with a wide range of biological activities, including anti-inflammatory, anti-microbial, anti-algesic as well as anti-tumor activities.	https://www.mechchemexpress.com/Aucubin.html
AVER	Averufin	An anthraquinone that is involved with aflatoxin biosynthesis	ECOTOX 75785
AVDN	Avidin	Avidin is a tetrameric protein produced in the oviducts of birds, reptiles and amphibians deposited in the whites of their eggs. Avidin interacts with biotin to render it unavailable to mammals, thereby producing biotin deficiency.	http://www.ncbi.nlm.nih.gov/mesh and http://en.wikipedia.org/wiki

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BACA	Barium Calcium ratio	The ratio of barium to calcium in a sample.	ECOTOX
BACO	Barium content	The concentration of barium found in a sample.	ECOTOX
BCLN	Beclin-1	Plays a central role in autophagy. Acts as core subunit of the PI3K complex that mediates formation of phosphatidylinositol 3-phosphate.	http://www.uniprot.org/uniprot/Q14457
BHNC	Behenic Acid	CH ₃ (CH ₂) ₂₀ COOH; a constituent of most fats and fish oils; large amounts are found in jamba, mustard seed, rapeseed oils, and cerebrosides.	Farlex Partner Medical Dictionary, 2012
BAPY	Benzo(a)pyrene content	The concentration of benzo(a)pyrene found in a sample.	ECOTOX
BECO	Beryllium concentration	The concentration of Beryllium found in a sample.	ECOTOX
BGCY	Beta/gamma crystallin	Two subclasses of crystallins found in the lens of vertebrates, both contain Greek key motifs.	https://www.online-medical-dictionary.org/definitions-b/beta-crystallins.html and https://www.online-medical-dictionary.org/definitions-g/gamma-crystallins.html
BGPR	beta- and gamma-Protein	Protein: Any of numerous naturally occurring extremely complex substances (as an enzyme or antibody) that consist of amino acid residues joined by peptide bonds, contain the elements carbon, hydrogen, nitrogen, oxygen, usually sulfur, and occasionally other elements (as phosphorus or iron), that are essential constituents of all living cells	www.merriam-webster.com/medical/protein
BGBN	beta globin	The polypeptide moiety of haemoglobin that is designated beta and that when deficient or defective causes various anemias (as beta-thalassemia or sickle-cell anemia).	http://cancerweb.ncl.ac.uk/omd/ and medical.merriam-webster.com
B2MG	beta2-Microglobulin	A polypeptide found free in serum and which also combines with the α (heavy) chain to form class I major histocompatibility heterodimer.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BATP	beta-ATP (beta-Adenosine triphosphate)	Beta-ATP (beta-Adenosine triphosphate) consists of adenosine, composed of an adenine ring and a ribose sugar, and three phosphate groups (triphosphate). The phosphoryl group is in the beta position relative to the ribose group.	http://en.wikipedia.org/wiki/ATP and ECOTOX
BCAR	beta-Carotene	A phytonutrient that is an isomer of carotene found in dark green and yellow fruits and vegetables and that is converted to vitamin A, primarily in the liver.	http://medical-dictionary.thefreedictionary.com/beta+carotene
CBCH	beta-Carotene to Chlorophyll A Ratio	Ratio of beta-Carotene to Chlorophyll A	
BCXN	beta-Cryptoxanthin	Beta-cryptoxanthin is a common carotenoid that is found in fruit, and in human blood and tissues. Beta-cryptoxanthin has several functions that are important for human health, including roles in antioxidant defense and cell-to-cell communication. Most importantly, beta-cryptoxanthin is a precursor of vitamin A, which is an essential nutrient needed for eyesight, growth, development and immune response.	http://www.ncbi.nlm.nih.gov/pubmed/25270992
BGLB	beta-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α_1 -, α_2 -, and β -globulins, which serve as carrier proteins; and γ -globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 < http://www.encyclopedia.com >.
BTNE	Betaine	A naturally occurring compound that has been of interest for its role in osmoregulation. It is a Methylating Agent. The mechanism of action of betaine is as a methylating activity.	https://pubchem.ncbi.nlm.nih.gov/compound/betaine#section=Top
BTBL	beta-Tubulin	Tubulin is microtubule subunit protein found in large quantities in mammalian brain. It has also been isolated from sperm flagellum; cilia; and other sources. One of the most common members of the tubulin family is beta-tubulin.	http://en.wikipedia.org/wiki/Beta_tubulin and http://www.ncbi.nlm.nih.gov
HCO3	Bicarbonate (HCO_3^-) concentration	A carbonate in which but half the hydrogen of the acid is replaced by a positive element or radical, thus making the proportion of the acid to the positive or basic portion twice what it is in the normal carbonates; an acid carbonate; sometimes called supercarbonate. They are an important factor in determining the pH of the blood and the concentration of bicarbonate ions is regulated by the kidney. Levels in the blood are an index of the alkali reserve or buffering capacity.	www.biology-online.org/dictionary/Bicarbonate

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BIDP	Bid protein	Bid, a pro-apoptotic member of the Bcl-2 family, was initially discovered through binding to both pro-apoptotic Bax and anti-apoptotic Bcl-2. During apoptosis, Bid can be cleaved not only by caspase-8 during death receptor apoptotic signaling, but also by other caspases, granzyme B, calpains and cathepsins.	http://www.ncbi.nlm.nih.gov/pubmed/19641510
BILE	Bile	An alkaline fluid secreted by the liver and delivered to the duodenum to aid in the emulsification, digestion, and absorption of fats. Also known as gall.	http://www.accessscience.com/overflow.aspx?searchStr=Fluids&stype=4&term=Fluids&rootID=792937&p=10
BLAC	Bile Acids	Steroid acids found in bile; e.g., taurocholic and glycocholic acid's, used when biliary secretion is inadequate and for biliary colic. Their physiological roles include fat emulsification. Their synthesis is reduced in disorders of the peroxisomes.	http://medical-dictionary.thefreedictionary.com/Bile+(biology)
BLLB	Bilirubin	A reddish yellow pigment C33H36N4O6 that occurs especially in bile and blood and causes jaundice if accumulated in excess.	http://www.m-w.com/
TLBL	Bilirubin, Total	Bilirubin: a bile pigment produced by breakdown of heme and reduction of biliverdin; it normally circulates in plasma and is taken up by liver cells and conjugated to form bilirubin diglucuronide, the water-soluble pigment excreted in bile.	http://medical-dictionary.thefreedictionary.com/bilirubin
GBCM	Biochemical, General	The study of the chemical substances and vital processes occurring in living organisms; biological chemistry; physiological chemistry.	www.thefreedictionary.com/biochemical
BGAM	Biogenic amines	A group of naturally occurring amines derived by enzymatic decarboxylation of the natural amino acids. Many have powerful physiological effects (e.g., histamine, serotonin, epinephrine, tyramine). Those derived from aromatic amino acids, and also their synthetic analogs (e.g., amphetamine), are of use in pharmacology.	https://www.online-medical-dictionary.org/definitions-b/biogenic-amines.html
BPTN	Biopterin	A natural product that has been considered as a growth factor for some insects.	http://www.online-medical-dictionary.org/definitions-b/biopterin.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BIOT	Biotin Content	A colorless, crystalline, water-soluble B complex vitamin that acts as a coenzyme in fatty acid production and in the oxidation of fatty acids and carbohydrates. It also aids in the use of protein, folic acid, pantothenic acid, and vitamin B12. Rich sources are egg yolk, beef liver, kidney, unpolished rice, brewer's yeast, peanuts, cauliflower, and mushrooms. Formerly called vitamin H.	Mosby's Medical Dictionary, 8th edition, 2009
BICO	Bismuth concentration	The concentration of Bismuth found in a sample.	ECOTOX
BAGA	Bisphenol A glucuronic acid	A major degradation product of bisphenol A subjected to renal excretion.	ECOREF 60614
<BUNT>	Blood Urea Nitrogen	Nitrogen in the form of urea in the blood or serum, used as a indicator of kidney function.	http://medical-dictionary.thefreedictionary.com/blood+urea+nitrogen
BCON	Boron Content	The concentration of boron found in a sample.	ECOTOX
BPHY	b-Phycoerythrin	A phycobilin pigment present in cyanobacteria which can be coupled to antibodies for detecting proteins and antigens due to the extremely bright (red) signal immunofluorescence assays.	Segen's Medical Dictionary, 2012
BRKN	Bradykinin	Vasoactive nonapeptide (RPPGFSPFR) formed by action of proteases on kininogens. Bradykinin is a very potent vasodilator and increases permeability of post capillary venules, it acts on endothelial cells to activate phospholipase A2. It is also spasmogenic for some smooth muscle and will cause pain.	www.biology-online.org/dictionary/Bradykinin
BRCO	Bromine Concentration	The level of bromine in a sample	ECOTOX
BFCO	Bromoform concentration	Bromoform: A colorless heavy liquid compound CHBr ₃ that is similar to chloroform in properties and methods of preparation and is used chiefly in separating minerals (as in assaying) and in organic synthesis.	www.merriam-webster.com/dictionary/bromoform
C4CD	C4 acids	Initial product of photosynthesis.	ECOTOX
CADV	Cadaverine	A syrupy colorless poisonous ptomaine C ₅ H ₁₄ N ₂ formed by decarboxylation of lysine especially in putrefaction of flesh.	http://www.merriam-webster.com/dictionary/cadaverine
CDBP	Cadmium binding proteins	Cadmium binding proteins, metallothionein and non-m metallothionein proteins.	ECOTOX
CDCO	Cadmium Content	The concentration of cadmium found in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CDSE	Cadmium Selenium Ratio	The ratio of cadmium to selenium in a sample.	ECOTOX
CDZN	Cadmium to Zinc Ratio	The ratio of cadmium to zinc.	ECOTOX
CFCA	Caffeic Acids	Caffeic Acids are a class of phenolic acids related to chlorogenic acid, p-coumaric acid, vanillic acid, etc., which are found in plant tissues. It is involved in plant growth regulation.	http://www.ncbi.nlm.nih.gov
CABN	Calbindin	A protein that plays a fundamental role in the Vitamin D mediated transport of calcium in reptiles, amphibians, birds and mammals. It is found in the intestine, kidneys, egg shell gland, brain, and possibly other organs. Its molecular weight is species dependent. Also known as Cholecalciferol, Vitamin D-Dependent Calcium-Binding Protein, Intestinal Membrane Calcium-Binding Protein	http://www.ncbi.nlm.nih.gov
CLCN	Calcein	Calcein is a fluorescent compound created by non-specific intracellular esterases. The acetoxymethyl derivative can be transported into live cells and the reagent is useful as a viability test and for short term marking of cells. A calcium chelating agent that fluoresces brightly in the presence of bound calcium.	http://cancerweb.ncl.ac.uk and http://www.ncbi.nlm.nih.gov
CGRP	Calcitonin Gene-Related Peptide	Calcitonin gene-related peptide. A 37-amino acid peptide derived from the calcitonin gene. It occurs as a result of alternative processing of mRNA from the calcitonin gene. The neuropeptide is widely distributed in neural tissue of the brain, gut, perivascular nerves, and other tissue. The peptide produces multiple biological effects and has both circulatory and neurotransmitter modes of action. In particular, it is a potent endogenous vasodilator.	http://www.ncbi.nlm.nih.gov
CABC	Calcium Boron ratio	The ratio of calcium to boron found in a sample.	ECOTOX
CACO	Calcium Content	The concentration of calcium found in a sample.	ECOTOX
CANR	Calcium Nitrogen ratio	The ratio of calcium to nitrogen in a sample.	ECOTOX
CPHR	Calcium Phosphorus to Hydroxyproline ratio	The ratio of Calcium and Phosphorus to Hydroxyproline in a sample.	ECOTOX
CAAL	Calcium to aluminum Ratio	The ratio of the amount of calcium to aluminum in an organism or organism's parts.	ECOTOX
CANA	Calcium to sodium ratio	Ratio of calcium to sodium in an organism or organism's tissues.	ECOTOX
CAZN	Calcium to Zinc Ratio	Ratio of calcium to zinc in an organism or organism's tissues.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CAPH	Calcium/Phosphorus Ratio	Calcium and phosphorus form Calcium phosphate, the dense hard material found in teeth and bones	ECOTOX
CALO	Callose	A plant polysaccharide composed of glucose residues linked together through beta-1, 3-linkages secreted by an enzyme complex (callose synthase), resulting in the hardening or thickening of plant cell walls.	https://www.biologyonline.org/dictionary/Callose
CLMD	Calmodulin	A calcium-binding protein found in all nucleated cells that affects the activity of many calcium-sensitive enzymes, including those involved in muscular contraction.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000
CLRT	Calreticulin	Calcium-binding chaperone that promotes folding, oligomeric assembly and quality control in the endoplasmic reticulum (ER) via the calreticulin/calnexin cycle. This lectin interacts transiently with almost all of the monoglycosylated glycoproteins that are synthesized in the ER. Interacts with the DNA-binding domain of NR3C1 and mediates its nuclear export. Involved in maternal gene expression regulation. May participate in oocyte maturation via the regulation of calcium homeostasis. Also: CRP55, Calregulin, Endoplasmic reticulum resident protein 60.	http://www.uniprot.org/uniprot/P14211
CMPH	Camphor Concentration	The concentration of camphor found in a sample.	ECOTOX
CPTC	Camptothecin	An alkaloid isolated from the stem wood of the Chinese tree, <i>Camptotheca acuminata</i> . This compound selectively inhibits the nuclear enzyme DNA Topoisomerases, Type I. Several semisynthetic analogs of camptothecin have demonstrated antitumor activity. Also: (S)-(+)-Camptothecin, (+)-Camptothecin, (+)-Camptothecine, d-Camptothecin, 20(S)-Camptothecine, (S)-Camptothecin.	http://www.ncbi.nlm.nih.gov/mesh/68002166 and http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=24360
CAPA	Capric acid	Capric acid, decanoic acid, is a C10:0 fatty acid found in animal oils and fats; has an unpleasant smell resembling goats.	http://wordnetweb.princeton.edu/ and http://en.wikipedia.org/wiki/
CPRA	Caproic Acid	A liquid fatty acid C6H12O2 that is found as a glycerol ester in fats and oils or made synthetically and used in pharmaceuticals and flavors. Also called hexanoic acid.	http://www.merriam-webster.com/medical/caproic%20acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CARB	Carbohydrate	Any of a class of organic compounds that are polyhydroxy aldehydes or polyhydroxy ketones, or change to such substances on simple chemical transformations, as hydrolysis, oxidation, or reduction, and that form the supporting tissues of plants and are important food for animals and people.	http://dictionary.reference.com/browse/carbohydrate
CCON	Carbon Content	The concentration of carbon found in a sample.	ECOTOX
CPRT	Carbon phosphorus ratio	The ratio of carbon to phosphorus in a sample.	ECOTOX
CNRA	Carbon to Nitrogen Ratio	The ratio of carbon to phosphorus in a sample.	ECOTOX
CHMG	Carboxyhemoglobin	Hemoglobin that has carbon monoxide instead of the normal oxygen bound to it.	http://www.merriam-webster.com/script/main/art.asp?articlekey=39016
CARO	Carotene	Any of several red, crystalline carotenoid hydrocarbon pigments occurring widely in nature, convertible in the animal body to Vitamin A.	www.merriam-webster.com/medical/carotene
CACH	Carotene to Chlorophyll A Ratio	Ratio of Carotene to Chlorophyll A	ECOTOX
CARC	Carotenoid Content	Any of a class of yellow to red pigments found especially in plants, algae, and photosynthetic bacteria. Carotenoids generally consist of conjoined units of the hydrocarbon isoprene, with alternating single and double bonds. The carotenoids absorb light energy of certain frequencies and transfer it to chlorophyll for use in photosynthesis. They also act as antioxidants for chlorophyll, protecting it from damage by oxidation in the presence of sunlight. Carotenoids are nutritionally important for many animals, giving flamingoes their color, for example, and also have antioxidant properties	The American Heritage® Science Dictionary, 2005
CTCR	Carotenoid to total chlorophyll	The ratio of carotenoid to total chlorophyll in a sample.	ECOTOX
CRCA	Carotenoids Chlorophyll A ratio	The ratio of carotenoids to chlorophyll a	ECOTOX
CRVN	Carvone	An oily liquid terpenoid ketone C ₁₀ H ₁₄ O having a characteristic odor of caraway, found in many essential oils (as caraway, dill, or spearmint), and used as a flavoring agent and perfume.	http://www.merriam-webster.com/dictionary/carvone
CSEN	Casein	Group of proteins isolated from milk; amphipathic polypeptides of around 200 amino acids with substantial hydrophobic c terminal domains that associate to give micellar polymers in divalent cation rich medium, casein is a glycoprotein.	www.biology-online.org/dictionary/Casein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CTPL	Catalpol	An iridoid glycoside, has neuroprotective, anti-inflammatory, and anti-hepatitis virus effects. Also: Catalpinoside.	https://www.mechanexpress.com/Catalpol.html
CT4P	Caudal type homeobox transcription factor 4 protein	Caudal type homeobox transcription factor 4 protein (cdx4) is a member of the caudal-type homeobox genes which are candidates for directing tissue and organ development and differentiation.	http://www.allelebiotech.com/content/pdf/AB/ABP-PAB-10470.pdf
CRMD	Ceramide	Any of a group of amido sphingolipids formed by linking a fatty acid to sphingosine and found widely in small amounts in plant and animal tissue	www.merriam-webster.com/medical/ceramide
CRBR	Cerebroside	Glycolipid found in brain (11% of dry matter). Sphingosine core with fatty amide or hydroxy fatty amide and a single monosaccharide on the alcohol group (either glucose or galactose).	www.biology-online.org/dictionary/Cerebroside
CRLF	Ceroid and Lipofuscin	Ceroid and Lipofuscin are naturally occurring lipid pigments.	http://www.ncbi.nlm.nih.gov
CA26	Cerotic acid	Cerotic acid is a 26-carbon saturated (26:0) fatty acid. Elevated plasma levels of saturated very-long-chain fatty acids and in particular hexacosanoic acid, are found in peroxisomal disorders including adrenoleukodystrophy. Also hexacosanoic acid, ceric acid, ceratinic acid, cerinic acid, cerotate.	https://www.caymanchem.com/app/template/Product.vm/catalog/13354
CFLP	c-FLIP protein	Cellular FLICE (FADD-like IL-1 β -converting enzyme)-inhibitory protein (c-FLIP) is a master anti-apoptotic regulator and resistance factor that suppresses tumor necrosis factor- α (TNF- α), Fas-L, and TNF-related apoptosis-inducing ligand (TRAIL)-induced apoptosis, as well as apoptosis triggered by chemotherapy agents in malignant cells.	http://www.ncbi.nlm.nih.gov/pubmed/23070002
CCL2	Chemokine (C-C motif) ligand 2	One of the key chemokines that regulate migration and infiltration of monocytes/macrophages. Also: Monocyte chemoattractant protein-1 (MCP-1), and CCL2.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2755091/
CHTN	Chitin	Chitin is a linear polysaccharide of beta-1->4 linked units of acetylglucosamine. It is the second most abundant biopolymer on earth, found especially in insects and fungi.	http://www.ncbi.nlm.nih.gov
CHLR	Chloride	A binary compound of chlorine.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CLCO	Chlorine concentration	The concentration of chlorine found in a sample.	ECOTOX
CLGA	Chlorogenic acid	A naturally occurring phenolic acid which is a carcinogenic inhibitor. It has also been shown to prevent paraquat-induced oxidative stress in rats. Chemical name: Cyclohexanecarboxylic acid	www.biology-online.org/dictionary/Chlorogenic_acid
CHLA	Chlorophyll A Concentration	The major pigment found in all oxygen-evolving photosynthetic organisms (higher plants, and red and green algae).	Farlex Partner Medical Dictionary, 2012
CACC	Chlorophyll A to Chlorophyll C ratio	The ratio of Chlorophyll A and Chlorophyll C found in a sample.	ECOTOX
CHAP	Chlorophyll A to Phaeophytin A ratio	Ratio of Chlorophyll A to Phaeophytin A in a sample.	ECOTOX
CHAB	Chlorophyll A:Chlorophyll B	The ratio of Chlorophyll A and Chlorophyll B found in a sample.	ECOTOX
CHLB	Chlorophyll B Concentration	Chlorophyll B: A yellow-green chlorophyll pigment which occurs only in plants and green algae. It functions as a light harvesting pigment that pass on the light excitation to chlorophyll a. It absorbs well at wavelength of 450-500 nm and 600-650 nm of the electromagnetic spectrum. Its molecular formula is C ₅₅ H ₇₀ O ₆ N ₄ Mg.	www.biology-online.org/dictionary/Chlorophyll_b
CHLC	Chlorophyll C concentration	Chlorophyll C: A form of chlorophyll that occurs only in algae, specifically the diatoms, dinoflagellates and brown algae. Its role is to pass on the light excitation to chlorophyll a. Its molecular formula is C ₃₅ H ₂₈ O ₅ N ₄ Mg.	www.biology-online.org/dictionary/Chlorophyll_c
CHCR	Chlorophyll Carbon ratio	The ratio of chlorophyll to carbon found in a sample.	ECOTOX
CHLO	Chlorophyll Concentration	Any of a group of related green pigments found in photosynthetic cells that converts light energy into ATP and other forms of energy needed for biochemical processes; it is found in green plants, brown and red algae, and certain aerobic and anaerobic bacteria.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
CHCT	Chlorophyll:Carotenoids	The ratio of chlorophyll to carotenoids in a sample	ECOTOX
COAN	Chlorpyrifos-o-analog	A metabolite of the chemical Chlorpyrifos.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CHOL	Cholesterol	A pearly, fatlike steroid alcohol, C ₂₇ H ₄₅ OH, crystallizing in the form of leaflets or plates from dilute alcohol and found in animal fats and oils, in bile, blood, brain tissue, milk, yolk of egg, myelin sheaths of nerve fibres, the liver, kidneys and adrenal glands. It is a precursor of bile acids and is important in the synthesis of steroid hormones.	www.biology-online.org/dictionary/Cholesterol
CLET	Cholesterol ethers	Ether compound of cholesterol.	ECOTOX
CHES	Cholesteryl ester	Esterified cholesterol.	ECOREF 67751
CHLN	Choline	A quaternary amine, often classified as a member of the B vitamin complex; it occurs in phosphatidylcholine and acetylcholine, is an important methyl donor in intermediary metabolism, and prevents the deposition of fat in the liver.	Dorland's Medical Dictionary for Health Consumers, 2007
CHDS	Chondroitin Sulfate	Chondroitin Sulfate is a derivative of chondroitin which has a sulfate moiety esterified to the galactosamine moiety of chondroitin, found in various tissues (as cartilage, adult bone, and tendons).	http://www.ncbi.nlm.nih.gov and http://www.merriam-webster.com
CHOR	Choriogenin	An estrogen-mediated protein.	ECOREF #167808
CRCO	Chromium content	The concentration of chromium found in a sample.	ECOTOX
CRPR	Chromium to Phosphorus Ratio	The ratio of chromium to phosphorus in a sample.	ECOTOX
CMYS	Chymotrypsin	(Protein) serine proteases from pancreas. Preferentially hydrolyse phe, Tyr or trp peptide and ester bonds.	www.biology-online.org/dictionary/Chymotrypsin
CHYM	Chymotrypsinogen	An inactive proenzyme secreted by the pancreas and cleaved by trypsin in the small intestine to yield chymotrypsin.	Dorland's Medical Dictionary for Health Consumers, 2007
C12O	cis-12-octadecenoic acid	cis-12-octadecenoic acid (C ₁₈ :1 cis12) is a mono unsaturated fatty acid.	ECOTOX
C13O	cis-13-octadecenoic acid	cis-13-octadecenoic acid (C ₁₈ :1 cis13) is a mono unsaturated fatty acid.	ECOTOX
C7HD	cis-7-hexadecenoic acid	cis-7-hexadecenoic acid (C ₁₆ :1 cis7) is a mono unsaturated fatty acid.	ECOTOX
C9HD	cis-9-heptadecenoic acid	cis-9-heptadecenoic acid (C ₁₇ :1 cis9) is a mono unsaturated fatty acid.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CANT	cis-Aconitic acid	An intermediate in the isomerization of citrate to isocitrate in the citric acid cycle . Also: Cis-aconitate, Citridinic acid, Pyrocitric acid, Achilleic acid, Equisetic acid.	http://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:16383 and https://en.wikipedia.org/wiki/Aconitic_acid
C11O	cis-vaccenic acid	cis-11-Octadecenoic acid (C18:1 cis11), or cis-vaccenic acid, is a mono unsaturated fatty acid.	ECOTOX
CITT	Citrate	Citrate can refer either to the conjugate base of citric acid, (C ₃ H ₅ O(COO) ₃), or to the esters of citric acid.	http://en.wikipedia.org/wiki/Citrate
CITA	Citric acid	An important intermediate in the citric acid cycle which breaks down glucose into water and carbon dioxide when oxygen is present.	www.biology-online.org/dictionary/Citric_acid
CITR	Citrulline	The organic compound citrulline is an a-amino acid. It is a key intermediate in the urea cycle, the pathway by which mammals excrete ammonia.	http://en.wikipedia.org/wiki/Citrulline
CO2C	CO2 conentration (Carbon Dioxide Content)	The concentration of carbon dioxide found in a sample.	ECOTOX
FCIX	Coagulation Factor IX	Storage-stable blood coagulation factor acting in the intrinsic pathway. Its activated form, IXa, forms a complex with factor VIII and calcium on platelet factor 3 to activate factor X to Xa. Deficiency of factor IX results in Hemophilia B (Christmas Disease).	http://www.ncbi.nlm.nih.gov/mesh/68005164
FVII	Coagulation Factor VII	Heat- and storage-stable plasma protein that is activated by tissue thromboplastin to form factor VIIa in the extrinsic pathway of blood coagulation. The activated form then catalyzes the activation of factor X to factor Xa. Also known as: Blood Coagulation Factor VII ,Stable Factor, Proconvertin.	http://www.ncbi.nlm.nih.gov/mesh/68005167
CFCX	Coagulation Factor X	Storage-stable glycoprotein blood coagulation factor that can be activated to factor Xa by both the intrinsic and extrinsic pathways. A deficiency of factor X, sometimes called Stuart-Prower factor deficiency, may lead to a systemic coagulation disorder. Also known as: Autoprothrombin III , Stuart Factor.	http://www.ncbi.nlm.nih.gov/mesh/68005170
COCO	Cobalt Content	The concentration of cobalt found in a sample.	ECOTOX
CIBP	Cold inducible RNA binding protein a	Consists of an N-terminal RNA-binding domain and a C-terminal gly-rich domain, and plays an essential role in cold-induced suppression of cell proliferation.	http://www.omim.org/entry/602649?search=602649&highlight=602649

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CLLG	Collagen	The protein substance of the white fibers (collagenous fibers) of skin, tendon, bone, cartilage and all other connective tissue, composed of molecules of tropocollagen, it is converted into gelatin by boiling. Collagenous pertaining to collagen, forming or producing collagen.	www.biology-online.org/dictionary/Collagen
CLHP	Collagen to hydroxyproline ratio	Ratio of collagen to hydroxyproline	ECOTOX
CSF2	Colony-Stimulating Factor, Granulocyte-Macrophage (CSF2)	Granulocyte-Macrophage Colony-Stimulating Factor is an acidic glycoprotein of MW 23 kDa with internal disulfide bonds. The protein is produced in response to a number of inflammatory mediators by mesenchymal cells present in the hemopoietic environment and at peripheral sites of inflammation. GM-CSF is able to stimulate the production of neutrophilic granulocytes, macrophages, and mixed granulocyte-macrophage colonies from bone marrow cells and can stimulate the formation of eosinophil colonies from fetal liver progenitor cells. GM-CSF can also stimulate some functional activities in mature granulocytes and macrophages. Also: CSF-2	http://www.ncbi.nlm.nih.gov
CCC3	Complement component C3-1	A protein of the immune system. It plays a central role in the complement system and contributes to innate immunity.	http://en.wikipedia.org/wiki/Complement_component_3
CCC9	Complement component C9	Constituent of the membrane attack complex (MAC) that plays a key role in the innate and adaptive immune response by forming pores in the plasma membrane of target cells. C9 is the pore-forming subunit of the MAC.	http://www.uniprot.org/uniprot/P02748#section_comments
CNDN	Conjugated Dienes	Dienes are hydrocarbons which contain two double bonds. Dienes are intermediate between alkenes and polyenes. Conjugated dienes have conjugated double bonds separated by one single bond. They are also the most stable.	http://en.wikipedia.org
CJLA	Conjugated Linoleic Acids	Conjugated Linoleic Acids represent a group of around nine geometric and positional isomers of Linoleic Acid in which the trans/cis double bonds are conjugated, where double bonds alternate with single bonds.	http://www.ncbi.nlm.nih.gov
CUAI	Copper Accumulation index	The ratio of copper in an organism to copper in the soil.	ECOTOX
CUCO	Copper Content	The concentration of copper found in a sample.	ECOTOX
CUCD	Copper to Cadmium ratio	The ratio of copper to cadmium.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CUCR	Copper to Carbon ratio	The ratio of copper to carbon in a sample.	ECOTOX
CUMN	Copper to Manganese Ratio	Ratio of copper to manganese in an organism or organism's tissues.	ECOTOX
CUMO	Copper to molybdenum ratio	Ratio of copper to molybdenum in an organism or organism's tissues.	ECOTOX
CUZN	Copper to Zinc Ratio	Ratio of copper to molybdenum in an organism or organism's tissues.	ECOTOX
CTR1	Copper Transporter 1	Copper Transporter 1 is a high-affinity copper transporter protein of the plasma membrane.	http://www.ncbi.nlm.nih.gov
CPRP	Coproporphyrin	A porphyrin occurring as several isomers; the III isomer, an intermediate in heme biosynthesis, is excreted in the feces and urine in hereditary coproporphyria and variegate porphyria; the I isomer, a side product, is excreted in the feces and urine in congenital erythropoietic porphyria.	Dorland's Medical Dictionary for Health Consumers, 2007
CIII	Coproporphyrinogen III	An intermediate in the heme biosynthesis from uroporphyrinogen-III pathway.	http://www.ymdb.ca/compounds/YMDB00084
CMCA	Coumaric acids	Hydroxycinnamic acid and its derivatives. Act as activators of the indoleacetic acid oxidizing system, thereby producing a decrease in the endogenous level of bound indoleacetic acid in plants.	http://www.ncbi.nlm.nih.gov
CRPT	C-reactive protein	C-reactive protein (CRP) is produced by the liver. The level of CRP rises when there is inflammation throughout the body.	http://www.nlm.nih.gov/medlineplus/ency/article/003356.htm
CRTN	Creatine	A compound which is made by the body and is used to store energy in the form of phosphate molecules.	www.biology-online.org/dictionary/Creatine
CREC	Creatine compounds	The total amount of creatine compounds found in a sample	ECOTOX
CTPR	Creatine to phosphocreatine ratio	The ratio of creatine to phosphocreatine.	ECOTOX
CREA	Creatinine	A nitrogenous compound formed as the end product of CREATINE metabolism. It is formed in the muscle in relatively small amounts, passes into the blood and is excreted in the urine. A laboratory test for the creatinine level in the blood may be used as a measurement of kidney function.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CC23	Crustacean calcium-binding protein 23	Also called CCBP-23 protein. Possibly acts as a regulatory protein and not as a calcium buffer or transport protein.	expasy.org/uniprot/CCB23_ORC_L1

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
C1AB	Cry1Ab protein	Cry1Ab protein is an insecticidal crystal protein encoded by strains of <i>B. thuringiensis</i> , or crops genetically engineered to express the protein.	http://www.ncbi.nlm.nih.gov and ECOTOX
CBA2	Crystallin, beta A1, like 2	An acidic subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-b/beta-crystallins.htm
CBAB	Crystallin, beta A1b	An acidic subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-b/beta-crystallins.htm
CBB2	Crystallin, beta A2b	An acidic subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-b/beta-crystallins.htm
CBB3	Crystallin, beta B3	A subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-b/beta-crystallins.htm
CGM6	Crystallin, gamma M6	A subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-g/gamma-crystallins.html
CGXL	Crystallin, gamma MX, like 1	A subunit of beta-crystallins that provides refractive power and translucency to the lens in vertebrates.	https://www.online-medical-dictionary.org/definitions-g/gamma-crystallins.html
CX10	C-X-C motif chemokine 10	A chemokine secreted from cells stimulated with type I and II IFNs and LPS, is a chemoattractant for activated T cells. Also: IFN-gamma-inducible protein 10 (IP-10), and CXCL10.	http://www.ncbi.nlm.nih.gov/pubmed/11907072

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CGMP	Cyclic guanylic acid, cGMP	Cyclic guanosine monophosphate (cGMP) is a cyclic nucleotide derived from guanosine triphosphate (GTP). cGMP acts as a second messenger much like cyclic AMP. Its most likely mechanism of action is activation of intracellular protein kinases in response to the binding of membrane-impermeable peptide hormones to the external cell surface. Also called: guanosine monophosphate - a nucleotide consisting of guanine, ribose or deoxyribose, and a phosphate group. It is a constituent of DNA or RNA.	Francis SH, Corbin JD (August 1999). "Cyclic nucleotide-dependent protein kinases: intracellular receptors for cAMP and cGMP action". Crit Rev Clin Lab Sci 36 (4): 275–328 and http://dictionary.reference.com/browse/guanylic+acid
CYTN	Cysteine	An amino acid found in many proteins in the body, including keratin. It is a metabolic precursor of cystine and an important source of sulfur for various body functions.	Mosby's Medical Dictionary, 8th edition, 2009,
CPNI	Cysteine proteinase inhibitors	Exogenous and endogenous compounds which inhibit cysteine proteinases.	www.biology-online.org/dictionary/Cysteine_proteinase_inhibitors
CYSI	Cystine	A naturally occurring amino acid, the chief sulfur-containing component of the protein molecule. It is sometimes found in the urine and in the kidneys in the form of minute hexagonal crystals, frequently forming cystine calculus in the bladder	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CYSN	Cytidine	A nucleoside containing cytosine.	http://www.merriam-webster.com/medical/cytidine
CYTC	Cytochrome c	Cytochromes of the c type that are found in eukaryotic mitochondria. They serve as redox intermediates that accept electrons from mitochondrial electron transport complex III and transfer them to mitochondrial electron transport complex IV.	http://www.ncbi.nlm.nih.gov
CP2K	Cytochrome P2K (CYP 2K)	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is effected by the reversible valence change of the central iron atom of the heme prosthetic group; P2K = pigment 2K	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CP3K	Cytochrome P3K (CYP 3K)	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is effected by the reversible valence change of the central iron atom of the heme prosthetic group; P3K = pigment 3K.	ECOTOX
DDEC	DDE concentration	The concentration of DDE in tissue	ECOTOX
DB19	DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 19 (DBP5 homolog, yeast)	A protein involved in ATP catabolic process.	http://zfin.org/cgi-bin/webdriver?M1val=aa-markergoview.apg&OID=ZDB-GENE-020419-30
DABT	Dehydroascorbate	Any salt or ester of dehydroascorbic acid.	www.lexic.us/definition-of/dehydroascorbate
DASC	Dehydroascorbic acid	C6H6O6 A relatively inactive acid resulting from elimination of two hydrogen atoms from ascorbic acid when the latter is oxidized by air or other agents; has potential ascorbic acid activity.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003
DAAS	Dehydroascorbic acid and Ascorbic Acid	The amount of Dehydroascorbic acid and Ascorbic Acid in a sample	ECOTOX
DAAA	Dehydroascorbic acid to Ascorbic Acid ratio	The ratio of Dehydroascorbic acid to Ascorbic Acid in a sample	ECOTOX
DHRT	Dehydroretinol (Vitamin A2)	Vitamin A2, the form, C ₂₀ H ₂₈ O, of vitamin A found in the retina and liver of freshwater fishes and certain invertebrates and amphibians; it differs from retinol (vitamin A1) in having one more conjugated double bond and has approximately one-third the biological activity of retinol. Called also retinol2.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
DALA	delta-Aminolevulinic acid	The delta-aminolevulinic acid (pronounce) synthase (ALA synthase) reaction occurs in the mitochondria. The product of the reaction, ALA, diffuses into the cytoplasm, where the next several steps of heme synthesis occur.	http://medlib.med.utah.edu/NetBiochem/hi31.htm
DHMG	Deoxyhemoglobin	Hemoglobin not combined with oxygen, formed when oxyhemoglobin releases its oxygen to the tissues.	Dorland's Medical Dictionary for Health Consumers. 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DOVL	Deoxynivalenol	Deoxynivalenol, also known as Vomitoxin, is a type B trichothecene, an epoxy-sesquiterpeneoid. This micotoxin may contaminate food or feed grains, induce emesis and inhibit protein synthesis.	http://en.wikipedia.org/wiki/Vomitoxin and http://www.ncbi.nlm.nih.gov
DSMN	Desmosine	Special amino acid, derived from four lysine residues, and found only in elastin. Allows elastin to stretch reversibly in all directions.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
DMOS	Desmosterol	An intermediate in the synthesis of cholesterol.	https://pubchem.ncbi.nlm.nih.gov/compound/desmosterol#section=Top
DDXN	Diadinoxanthin	Diadinoxanthin, 5,6-Epoxy-7',8'-didehydro-5,6-dihydro-carotene-3,3-diol, is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki/Diadinoxanthin
DAPP	Diaminopropane	Diaminopropane may refer to either of two isomeric chemical compounds: 1,2-diaminopropane or 1,3-diaminopropane.	http://en.wikipedia.org/wiki/Diaminopropane
DTXN	Diatoxanthin	Diatoxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki/Diatoxanthin
DDRP	Didehydroretinyl palmitate	A vitamin.	ECOTOX
DISC	Diethylsuccinate Hydrolysis	No definition available.	
DGDG	Digalactosyl Diglyceride (Glycolipid)	A plant lipid.	http://generon.co.uk/index.php?route=product/product&product_id=355
DGCR	Diglyceride	A glyceride containing two fatty acid molecules in ester linkage.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
DHLA	Dihomo-gamma-Linolenic Acid	Dihomo-gamma-Linolenic Acid (C20:3n-6), also all cis-8,11,14-eicosatetraenoic acid, is a poly unsaturated fatty acid.	ECOTOX and http://www.ncbi.nlm.nih.gov

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DRP3	Dihydropyrimidinase-related protein 3	Necessary for signaling by class 3 semaphorins and subsequent remodeling of the cytoskeleton. Plays a role in axon guidance, neuronal growth cone collapse and cell migration. Alternate name: Unc-33-like phosphoprotein 1, Dpysl3	http://www.uniprot.org/uniprot/Q62188
DPR5	Dihydropyrimidinase-related protein 5	A protein that may have a function in neuronal differentiation and/or axon growth. Also: Collapsin response mediator protein 5.	http://www.uniprot.org/uniprot/Q9EQF6
DHAP	Dihydroxyacetone-P	The accumulation of dihydroxyacetone-P leads to an increased ether-linked glycerolipid synthesis. The release of fatty acids and the accumulation of ether-linked lipids may protect tumor cells from immune attack.	www.metabolic-database.com/html/lipogenesis_fatty_acid_accumulation.html
DHPG	Dihydroxyphenylethylene glycol	A noradrenaline metabolite. Also known as: DHPG, DOPEG, 3,4-dihydroxyphenylglycol, (S)-isomer dihydroxyphenylethylene glycol, (+)-isomer dihydroxyphenylethylene glycol, 3,4-dihydroxyphenylethylene glycol.	http://www.ncbi.nlm.nih.gov/mesh?term=dihydroxyphenylethylene%20glycol
DMYE	Dimethylamine	An easily condensable gaseous compound (CH ₃) ₂ NH having a strong ammoniacal odor made by catalytic reaction of methanol with ammonia or methylamine and used chiefly in organic syntheses (as of vulcanization accelerators for rubber).	https://www.merriam-webster.com/dictionary/dimethylamine
DMSP	Dimethylsulfoniopropionate	An organosulfur compound with the formula (CH ₃) ₂ S+CH ₂ CH ₂ COO-. This zwitterionic metabolite can be found in marine phytoplankton, seaweeds, and some species of terrestrial and aquatic vascular plants. It functions as an osmolyte as well as several other physiological and environmental roles have also been identified. Also: DMSP.	http://en.wikipedia.org/wiki/Dimethylsulfoniopropionate
PGF2	Dinoprost	Dinoprost is a naturally occurring prostaglandin that has oxytocic, luteolytic, and abortifacient activities. Due to its vasoconstrictive properties, the compound has a variety of other biological actions. Also: PGF2, Prostaglandin F2alpha, Prostaglandin F2, 9alpha,11beta-PGF2, Estrofan, Enzaprost F	http://www.ncbi.nlm.nih.gov
DPHG	Diphosphatidylglycerol	Diphosphatidylglycerol, also called cardiolipin, is an acidic phospholipid composed of two molecules of phosphatidic acid covalently linked to a molecule of glycerol. They occur primarily in mitochondrial inner membranes and in bacterial plasma membranes. Chemical name: 1,3-bis(sn-3'-phosphatidyl)-sn-glycerol	http://www.ncbi.nlm.nih.gov and http://www.lipidlibrary.co.uk

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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DTBL	Direct Bilirubin (Conjugated)	After the liver adds a glucuronide to the unconjugated bilirubin, it is called conjugated bilirubin, also called direct bilirubin. Conjugated bilirubin is excreted into the hepatic ducts, the common bile duct and then the bowel.	www.websters-online-dictionary.org/definitions/Bilirubin
DCHA	Docosahexaenoic acid	Docosahexaenoic acid (22:6 n-3), also DHA or C22:6, (all cis-4,7,10,13,16,19) omega-3 fatty acid, is a poly unsaturated fatty acid.	ECOTOX
DCPA	Docosapentaenoic acid	Docosapentaenoic acid (22:5 n-3), also DPA; Clupanodonic acid; or C22:5(all cis-7,10,13,16,19) acid, is a poly unsaturated fatty acid.	ECOTOX and http://en.wikipedia.org/wiki/Docosapentaenoic_acid
D6FA	Docosatrienoic acid (C22:3n-6)	Docosatrienoic acid (C22:3n-6) is a poly unsaturated fatty acid.	ECOTOX
D11A	Docosenoic acid (C22:1n-11)	Docosenoic acid (C22:1n-11) is a poly unsaturated fatty acid.	ECOTOX
DMCA	Domoic Acid	Causes amnesic shellfish poisoning (ASP), is an amino acid phycotoxin (algal toxin) found associated with certain algal blooms	http://en.wikipedia.org/wiki/Domoic_acid
DOP1	Dopa	A phenolic amino acid C ₉ H ₁₁ NO ₄ occurring naturally (as in broad beans) or prepared synthetically (as from tyrosine); is used in the treatment of Parkinson's disease—called also dihydroxyphenylalanine.	www.merriam-webster.com/dictionary/dopa
DATP	Dopamine Transporter Protein	The dopamine transporter (also dopamine active transporter, DAT, Dopamine Carriers, Dopamine Plasma Membrane Transporter Proteins, SLC6A3) is a membrane spanning protein that binds the neurotransmitter dopamine and performs reuptake of it from the synapse into a neuron.	http://en.wikipedia.org/wiki/Dopamine_transporter and http://www.nlm.nih.gov/mesh
DRYM	Dry matter	All soluble and insoluble organic substances and inorganic substances present in a sample except for water.	www.florafood.com/common/documents/alidefpar.pdf
DYEN	Dynein	A protein from the microtubules of cilia and flagella, which functions as an ATP-splitting enzyme and is essential to the motility of cilia and flagella.	http://medical-dictionary.thefreedictionary.com/dynein
ECCR	Echinochrome	Any of several red to brown respiratory pigments found in certain sea urchins.	www.merriam-webster.com/dictionary/echinochrome
ECDA	Eicosadienoic acid	Eicosadienoic acid (C20:2 n-6), also C20:2 (cis, cis-11, 14) acid, is a poly unsaturated fatty acid.	ECOTOX and http://en.wikipedia.org/wiki/Eicosadienoic_acid
ECSP	Eicosapentaenoate	A fatty acid.	

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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EIPA	Eicosapentaenoic acid	Eicosapentaenoic acid (EPA or also icosapentaenoic acid) is an omega-3 fatty acid. In physiological literature, it is given the name 20:5(n-3). It also has the trivial name timnodonic acid. It is a polyunsaturated fatty acid (PUFA) that acts as a precursor for prostaglandin-3 (which inhibits platelet aggregation), thromboxane-3, and leukotriene-5 groups (all eicosanoids).	http://en.wikipedia.org/wiki/Eicosapentaenoic_acid
EIDO	Eicosapentaenoic acid and Docosahexaenoic acid	The amount of Eicosapentaenoic acid and Docosahexaenoic acid found in a sample.	ECOTOX
ECSA	Eicosatrienoic acid	8-cis,11-cis,14-cis-Eicosatrienoic acid (dihomo-gamma-linolenic acid or 20:3(n-6)) is the immediate precursor of arachidonic acid, and of a family of eicosanoids (PG1 prostaglandins).	http://lipidlibrary.acs.org/lipids/fa_poly/index.htm
E11A	Eicosenoic acid (C20:1n-11)	Eicosenoic acid (C20:1n-11) is a poly unsaturated fatty acid.	ECOTOX
ECOA	Eicosenoic acid(C20:1 cis11)	Eicosenoic acid (C20:1 cis11), or Gondoic acid, is a mono unsaturated fatty acid.	ECOTOX
ELDA	Elaidic acid	Elaidic acid (C18:1 trans9) is a mono unsaturated fatty acid. Also: trans-oleic acid, trans-9-Octadecenoic acid, 9-octadecenoic acid, Elaidinsaeure.	ECOTOX and https://pubchem.ncbi.nlm.nih.gov/compound/637517
ELST	Elastin	Glycoprotein (70 kD) randomly coiled and cross linked to form elastic fibers that are found in connective tissue. Like collagen, the amino acid composition is unusual with 30% of residues being glycine and with a high proline content. Cross linking depends upon formation of desmosine from four lysine side groups. The mechanical properties of elastin are poorer in old animals.	www.biology-online.org/dictionary/Elastin
EL3P	ELAV like RNA binding protein 3	A member of the ELAVL protein family, ELAV-like 3 is a neural-specific RNA-binding protein which contains three RNP-type RNA recognition motifs. Also: HUC, HUCL, PLE21.	ShowDetailView&TermToSearch=1995">https://www.ncbi.nlm.nih.gov/gene?Db=gene&Cm=d>ShowDetailView&TermToSearch=1995

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ELYT	Electrolytes	Substances in solution in the ionized state, carrying an electrical charge (anions negative, cations positive). Applies to those in the body fluids, where dissociated sodium chloride is the major electrolyte in extracellular fluids (Na^+ and Cl^-), and potassium (K^+), with organic anions, in intracellular fluids. Other physiologically important cations are calcium and magnesium, and the anions bicarbonate and phosphate. Normal electrolyte concentrations are essential for normal cellular function. Movements of ions are crucial in the maintenance of potential differences across cell membranes and, for example, in the generation and transmission of nervous impulses, neuromuscular and synaptic transmission, and all secretory function.	Dictionary of Sport and Exercise Science and Medicine by Churchill Livingstone, 2008
ETFA	Electron transfer flavoprotein subunit alpha	The electron transfer flavoprotein serves as a specific electron acceptor for several dehydrogenases, including five acyl-CoA dehydrogenases, glutaryl-CoA and sarcosine dehydrogenase. It transfers the electrons to the main mitochondrial respiratory chain via ETF-ubiquinone oxidoreductase (ETF dehydrogenase). Also: Electron-transfer-flavoprotein, alpha polypeptide, Electron transfer flavoprotein subunit alpha, mitochondrial.	http://www.uniprot.org/uniprot/P13804
EF1A	Elongation factor-1 alpha	Peptide elongation factor 1 is a multisubunit protein that is responsible for the GTP-dependent binding of aminoacyl-tRNAs to eukaryotic ribosomes. The alpha subunit (EF-1alpha) binds aminoacyl-tRNA and transfers it to the ribosome in a process linked to GTP hydrolysis.	http://www.online-medical-dictionary.org/omd.asp?q=Elongation+Factor+1alpha
EF1B	Elongation factor-1 beta	Peptide elongation factor 1 is a multisubunit protein that is responsible for the GTP-dependent binding of aminoacyl-tRNAs to eukaryotic ribosomes. The beta is involved in exchanging GDP for GTP.	http://www.online-medical-dictionary.org/definitions-e/elongation-factor-1.html
EDPS	Endoplasmin	Molecular chaperone that functions in the processing and transport of secreted proteins. When associated with CNPY3, required for proper folding of Toll-like receptors. Functions in endoplasmic reticulum associated degradation (ERAD). Also: Glucose-regulated protein 94, 94 kDa glucose-regulated protein, GRP-94, Grp94, Heat shock protein 90 kDa beta member 1, HSP90B1.	http://www.uniprot.org/uniprot/P41148
ENDP	Endorphin	One of the three major groups of endogenous opioid peptides.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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ETXN	Endotoxin	Toxins closely associated with the living cytoplasm or cell wall of certain microorganisms, which do not readily diffuse into the culture medium, but are released upon lysis of the cells.	http://www.ncbi.nlm.nih.gov
NRGC	Energy Compound	No definition available.	
NKPH	Enkephalin	Either of two peptides with opiate and analgesic activity that occur naturally in the brain and have a marked affinity for opiate receptors.	http://www.m-w.com/
ENKP	Enkephalins	Natural opiate pentapeptides isolated originally from pig brain. Leu enkephalin (YGGFL) and Met enkephalin (YGGFM) bind particularly strongly to μ type opiate receptors.	www.biology-online.org/dictionary/Enkephalins
EZIN	Enzyme inhibitors	Compounds or agents that combine with an enzyme in such a manner as to prevent the normal substrate-enzyme combination and the catalytic reaction.	www.biology-online.org/dictionary/Enzyme_inhibitors
EPDM	Ependymin	A protein that might have a function during axon regeneration. It is also thought to play a role in neural plasticity.	http://www.uniprot.org/uniprot/P17561
ETCO	epsilon-Tocopherol concentration	One of ten forms of vitamin E.	Traber, MG. "Chapter 15: vitamin E". In Bowman BA and Russell RM. Current Knowledge in Nutrition I (9 ed.). Washington DC, USA: ILSI. ISBN 978-1-57881-199-1.
ERGL	Ergosterol	Ergosterol is a steroid of interest both because its biosynthesis in fungi is a target of antifungal agents, notably azoles, and because when it is present in skin of animals, ultraviolet rays break a bond to result in ergocalciferol.	http://www.ncbi.nlm.nih.gov
ERUC	Erucic Acid	A 22-carbon unsaturated fatty acid present in the seeds of nasturtium (Indian cress) and of several Cruciferae species (rape, mustard, and wallflower); thought to be toxic to cardiac muscle. Also: 22:1(n-9)	Farlex Partner Medical Dictionary, 2012 and https://en.wikipedia.org/wiki/Polyunsaturated_fatty_acid

ECOTOX Code Appendix

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ETSR	Erythrocyte sedimentation rate	A test that measures the rate at which red blood cells settle through a column of liquid. A non-specific index of inflammation.	www.biology-online.org/dictionary/Esr
ECFC	Esterified cholesterol free cholesterol ratio	The ratio of esterified cholesterol to free cholesterol found in an organism or tissue sample	ECOTOX
ETST	Esters of Sterins	A fractional component of blood lipids	ECOREF#72824
ESRP	Estrogen receptor protein	An estrogen receptor is a protein molecule found inside those cells that are targets for estrogen action. Estrogen receptors contain a specific site to which only estrogens (or closely related molecules) can bind. Also known as: ER-alpha, Estradiol receptor, Nuclear receptor subfamily 3 group A member 1.	http://www.uniprot.org/uniprot/P03372 and http://www.cancer.gov/cancertopics/understandingcancer/estrogenreceptors/page3
EANL	Ethanol	A clear, colorless liquid rapidly absorbed from the gastrointestinal tract and distributed throughout the body. It has bactericidal activity and is used often as a topical disinfectant. Also: ethyl alcohol, methylcarbinol.	https://www.online-medical-dictionary.org/definitions-e/ethanol.html
ETHM	Ethanolamine	A viscous, hygroscopic amino alcohol with an ammoniacal odor. It is widely distributed in biological tissue and is a component of lecithin. It is used as a surfactant, fluorimetric reagent, and to remove CO ₂ and H ₂ S from natural gas and other gases.	http://www.ncbi.nlm.nih.gov/mesh/68019856
EICN	Ethyl isocyanide	Bound ethyl isocyanide serves as a structural model for the transition state of the NO-induced oxidation reaction.	phillips-lab.biochem.wisc.edu
ETHL	Ethylene	A colorless flammable gas, CH ₂ dbondCH ₂ , with a slightly sweet odor and taste; formerly used as an inhalation anesthetic.	Dorland's Medical Dictionary for Health Consumers, 2007
EUCA	Eucalyptol	A liquid C ₁₀ H ₁₈ O with an odor of camphor that occurs in many essential oils (as of eucalyptus). Also: 1,8-cineol, 1,8-cineole, cajeputol, 1,8-epoxy-p-menthane, 1,8-oxido-p-menthane, eucalyptole, 1,3,3-trimethyl-2-oxabicyclo[2.2.2]octane, cineol, cineole.	http://www.merriam-webster.com/dictionary/eucalyptol and http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=2758

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EF11	Eukaryotic translation elongation factor 1 alpha 1, like 2	A subunit of transcription factors whose primary function is to regulate the rate in which RNA is transcribed.	https://www.online-medical-dictionary.org/definitions/t/transcriptional-elongation-factors.html
EF12	Eukaryotic translation elongation factor 1 alpha 1a	A subunit of transcription factors whose primary function is to regulate the rate in which RNA is transcribed.	https://www.online-medical-dictionary.org/definitions/t/transcriptional-elongation-factors.html
FACP	F-actin-capping protein subunit beta	F-actin-capping proteins bind in a Ca ²⁺ -independent manner to the fast growing ends of actin filaments (barbed end) thereby blocking the exchange of subunits at these ends.	https://www.uniprot.org/uniprot/P14315
F2IP	F2-Isoprostanes	F2-Isoprostanes are a class of Isoprostanes derived from the free radical oxidation of arachidonic acid through non-enzymatic oxidation of cell membrane lipids.	http://www.ncbi.nlm.nih.gov
FUBM	Far upstream element-binding protein 1	Regulates MYC expression by binding to a single-stranded far-upstream element (FUSE) upstream of the MYC promoter. May act both as activator and repressor of transcription. Also: FUSE binding protein 1.	https://www.uniprot.org/uniprot/Q96AE4
FASL	Fas Ligand	A transmembrane protein belonging to the tumor necrosis factor superfamily that was originally discovered on cells of the lymphoid-myeloid lineage, including activated T-Lymphocytes and natural killer cells. It plays an important role in immune homeostasis and cell-mediated toxicity by binding to the Fas receptor and triggering apoptosis.	http://www.reference.md/files/D03/mD053222.html
FAME	Fatty Acid Methyl Ester	A type of fatty acid ester that can be produced by an alkali-catalyzed reaction between fats or fatty acids and methanol. It can be used as a tool for microbial source tracking (MST). The molecules in biodiesel are primarily FAMEs.	http://en.wikipedia.org/wiki/Fatty_acid_methyl_estер
FATL	Fatty acid, total	Any of the group of a long chain of hydrocarbon derived from the breakdown of fats (through a process called hydrolysis). It has a single carboxylic group and aliphatic tail.	www.biology-online.org/dictionary/Fatty_acid
FATS	Fatty acids	Fatty acids can saturated, monounsaturated and polyunsaturated.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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FFTA	Fatty Acids, Free or Nonesterified	A nonesterified fatty acid, released by the hydrolysis of triglycerides within adipose tissue. Free fatty acids can be used as an immediate source of energy by many organs and can be converted by the liver into ketone bodies.	Mosby's Medical Dictionary, 8th edition, 2009
FBXP	F-box only protein 50	A protein that promotes cell proliferation. Also: Nonspecific cytotoxic cell receptor protein 1, NCC receptor protein 1 homolog, NCCRP1, FBXO50.	http://www.uniprot.org/uniprot/Q6ZVX7
FSPP	Female specific proteins	Proteins that only appear in female hemolymph or tissues during oocyte maturation.	http://biotech.korea.ac.kr/member/kimhr/17.pdf
FENR	Fenretinide (4-Hydroxy-retinoic acid)	An orally-active synthetic phenylretinamide analogue of retinol (vitamin A) with potential antineoplastic and chemopreventive activities. Fenretinide binds to and activates retinoic acid receptors (RARs), thereby inducing cell differentiation and apoptosis in some tumor cell types. This agent also inhibits tumor growth by modulating angiogenesis-associated growth factors and their receptors and exhibits retinoid receptor-independent apoptotic properties.	http://www.cancer.gov/drugdictionary?cdrid=3952
FRTN	Ferritin	Ferritins are Iron-containing proteins that are widely distributed in animals, plants, and microorganisms. Their major function is to store iron in a nontoxic bioavailable form. Each ferritin molecule consists of ferric iron in a hollow protein shell (apoferritins) made of 24 subunits of various sequences depending on the species and tissue types.	http://www.ncbi.nlm.nih.gov
FRLA	Ferulic acid	Ferulic acid is an organic compound that is an abundant phenolic phytochemical found in plant cell walls. It is a derivative of trans-cinnamic acid. As a component of lignin, ferulic acid is a precursor in the manufacture of other aromatic compounds.	http://en.wikipedia.org
FIBR	Fiber	Coarse, indigestible plant matter, consisting primarily of polysaccharides such as cellulose, that when eaten stimulates intestinal peristalsis.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
FBRG	Fibrinogen	Soluble plasma protein (340 kD, 46 nm long), composed of 6 peptide chains.	www.biology-online.org/dictionary/Fibrinogen
FBRN	Fibroin	Fibrous proteins secreted by insects and spiders. Generally, the term refers to silkworm fibroin secreted by the silk gland cells of silkworms, <i>Bombyx mori</i> . Spider fibroins are called spidroins or dragline silk fibroins.	http://www.online-medical-dictionary.org/definitions/f/fibroin.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FBNT	Fibronectin	An adhesive glycoprotein: one form circulates in plasma and acts as an opsonin; another is a cell-surface protein that mediates cellular adhesive interactions.	Dorland's Medical Dictionary for Health Consumers, 2007
FLVN	Flavin	Any of a group of water-soluble yellow pigments widely distributed in animals and plants, including riboflavin and yellow enzymes.	Dorland's Medical Dictionary for Health Consumers, 2007
FLAV	Flavonoid	Any of a group of aromatic compounds that have two substituted benzene rings connected by a chain of three carbon atoms and an oxygen bridge and that include many common pigments.	http://www.merriam-webster.com/medlineplus/Flavonoid
FLRS	Fluorescence	Property of emitting light while exposed to light, the emitted light having a wavelength only slightly longer than that of the light absorbed	Used for algae or other organisms that naturally fluoresce, may be used to measure chlorophyll or population growth rate. For example, if it is specifically stated that fluorescence is used to measure chlorophyll A, code the measurement as CHLA.
FLCO	Fluoride concentration	The concentration of fluoride found in sample.	ECOTOX
FLCA	Folic acid	A member of the vitamin B family that stimulates the hematopoietic system. It is present in the liver and kidney and is found in mushrooms, spinach, yeast, green leaves, and grasses. Also: Vitamin M, Pteroylglutamic Acid, Folate, Folvite, Folacin	http://www.ncbi.nlm.nih.gov/
FADH	Formaldehyde	Formaldehyde is the chemical compound with the formula H ₂ CO. It is the simplest aldehyde-- an organic compound containing a terminal carbonyl group: it consists of exactly one carbonyl. Small amounts of formaldehyde are produced as a metabolic byproduct in most organisms.	http://en.wikipedia.org/wiki

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FRMT	Formate	Derivative of formic acids. Included under this heading are a broad variety of acid forms, salts, esters, and amides that are formed with a single carbon carboxy group.	https://www.online-medical-dictionary.org/definitions-f/formates.html
F2F1	FPSII to FPSI ratio	The ratio of photosystem II to photosystem I fluorescence.	ECOTOX
FAAN	Free amino acid Nitrogen ratio	The ratio of Free Amino acid to nitrogen in a sample.	ECOTOX
FACR	Free amino acid to soluble carbohydrate ratio	The ratio of Free amino acid to soluble carbohydrate found in a sample.	ECOTOX
FRCT	Fructose	A 6 carbon sugar (hexose) abundant in plants. Fructose has its reducing group (carbonyl) at C2 and thus is a ketose, in contrast to glucose that has its carbonyl at C1 and thus an aldose. Sucrose, common table sugar, is the non-reducing disaccharide formed by an alpha linkage from C1 of glucose to C2 of fructose (latter in furanose form). Fructose is a component of polysaccharides such as insulin, levan.	www.biology-online.org/dictionary/Fructose
FXTN	Fucoxanthin	Fucoxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov
FUMR	Fumarate	A dicarboxylic acid intermediate in the tricarboxylic acid cycle. Can be derived from aspartate, phenylalanine and tyrosine for input to the krebs cycle.	https://www.biology-online.org/dictionary/Fumarate
FUB1	Fumonisin B1	Fumonisine B1 is an inhibitor of ceramide synthase. Fumonisine B1 is the most prevalent member of a family of toxins produced by several species of Fusarium moulds which occur mainly in maize.	http://en.wikipedia.org/wiki/Fumonisin_B1
FUMO	Fumonisins	a family of toxins produced by several species of Fusarium moulds which occur mainly in maize	http://en.wikipedia.org/wiki/Fumonisin_B1
FRCM	Furanocoumarin	Furanocoumarins, or furocoumarins, are a class of organic chemical compounds produced by a variety of plants. They are biosynthesized partly through the phenylpropanoid pathway and the mevalonate pathway, which is biosynthesized by a coupling of dimethylallyl pyrophosphate (DMAPP) and 7-hydroxycoumarin (umbelliferone).	http://en.wikipedia.org/wiki/Furanocoumarin
GDAD	Gadoleic acid	Gadoleic acid is an unsaturated fatty acid. It is a prominent component of some fish oils including cod liver oil. Also: 20:1(n-9).	https://en.wikipedia.org/wiki/Gadoleic_acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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GLTL	Galactolipid	A glycolipid that yields galactose on hydrolysis.	http://www.fasthealth.com/dictionary/g/galactolipid.php
GLCA	Gallic acid	A colorless or slightly yellow crystalline compound obtained from nutgalls. It is used in photography, pharmaceuticals, and as an analytical reagent. Also known as 3,4,5-Trihydroxybenzoic Acid.	http://www.ncbi.nlm.nih.gov
G1GL	Gamma-1 globulin	A class of globulins identified by its position after serum protein electrophoresis.	https://en.wikipedia.org/wiki/Gamma_globulin
G2GL	Gamma-2 globulin	A class of globulins identified by its position after serum protein electrophoresis.	https://en.wikipedia.org/wiki/Gamma_globulin
GAMB	gamma-Aminobutyrate	A gamma-amino acid anion resulting from the deprotonation of the carboxy group of gamma-aminobutyric acid. Also: 4-Aminobutyrate, 4-Aminobutylate, γ -aminobutanoate.	http://www.ebi.ac.uk/chebi/search.do?chebId=CHEBI:30566
GABA	gamma-Aminobutyric acid	An amino acid C4H9NO2 that is a neurotransmitter that induces inhibition of postsynaptic neurons—abbreviation GABA	www.merriam-webster.com/medical/gamma-aminobutyric%20acid
GMCT	Gamma-Carotene	A cyclic carotene obtained by the cyclisation of lycopene. Carotenoids are isoprenoid molecules that are widespread in nature and are typically seen as pigments in fruits, flowers, birds and crustacea.	https://pubchem.ncbi.nlm.nih.gov/compound/gamma-carotene#section=Top
GBTR	gamma-Globulin to Transferrin ratio	The ratio of gamma-Globulin to Transferrin in a sample.	ECOTOX
GGLB	gamma-Globulins	Any of a group of globular proteins that are generally insoluble in water and present in blood, eggs, milk, and as a reserve protein in seeds. Blood serum globulins comprise four types: α 1-, α 2-, and β -globulins, which serve as carrier proteins; and γ -globulins (gamma globulins), which include the immunoglobulins responsible for immune responses.	"globulin." A Dictionary of Biology. 2004. Encyclopedia.com. 7 Jul. 2014 < http://www.encyclopedia.com >.
GGLU	gamma-Glutamylcysteine	gamma-Glutamylcysteine is a precursor of glutathione. It is formed by gamma-glutamylcysteine synthetase and used by glutathione synthetase to form glutathione.	http://www.uscnk.com/directory/Gamma-Glutamylcysteine(gGLU)-3756.htm

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GLAF	gamma-Linolenic acid	gamma-Linolenic acid (C18:3n-6), also C18:3 (all cis-6,9,12) acid or gamoleic acid, is a poly unsaturated fatty acid.	ECOTOX
GSYC	gamma-Synuclein	A protein that plays a role in neurofilament network integrity. May be involved in modulating axonal architecture during development and in the adult. May also function in modulating the keratin network in skin. Also: Synuclein gamma b, Persyn, Sensory neuron synuclein.	http://www.uniprot.org/uniprot/Q63544
GTCO	gamma-Tocopherol concentration	A natural tocopherol with less antioxidant activity than alpha-tocopherol. It exhibits antioxidant activity by virtue of the phenolic hydrogen on the 2H-1-benzopyran-6-ol nucleus. As in beta-tocopherol, it also has three methyl groups on the 6-chromanol nucleus but at different sites.	http://de.dict.md/definition/Tocopherol
GNGL	Ganglioside	Any of a group of glycolipids that are found especially in the plasma membrane of cells of the gray matter and have sialic acid, hexoses, and hexosamines in the carbohydrate part and ceramide as the lipid.	www.merriam-webster.com/medical/ganglioside
GD1A	Ganglioside GD1a	Ganglioside antibodies are associated with diverse peripheral neuropathies. GD1a antibodies are associated with different variants of Guillain-Barre syndrome (GBS) particularly acute motor axonal neuropathy.	http://www.aruplab.com/guides/ug/tests/0051033.jsp
GD1B	Ganglioside GD1b	Ganglioside antibodies are associated with diverse peripheral neuropathies. GD1b antibodies are predominantly found in sensory ataxic neuropathy syndrome. Anti-GQ1b antibodies are seen in more than 80% of patients with Miller-Fisher syndrome and may be elevated in GBS patients with ophthalmoplegia	www.aruplab.com/guides/ug/tests/0051033.jsp
GGM1	Ganglioside GM1	Ganglioside antibodies are associated with diverse peripheral neuropathies. Elevated antibody levels to ganglioside-monosialic acid (GM1) and the neutral glycolipid, asialo-GM1 are associated with motor or sensorimotor neuropathies, particularly multifocal motor neuropathy. Anti-GM1 may occur as IgM (polyclonal or monoclonal) or IgG antibodies. These antibodies may also be found in patients with diverse connective tissue diseases as well as normal individuals.	www.aruplab.com/guides/ug/tests/0051033.jsp

ECOTOX Code Appendix

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GGT1	Ganglioside GT1	Gangliosid is a glycosphingolipid found in the brain and other nervous system tissues. Gangliosides are members of a group of galactose-containing cerebrosides with a basic composition of ceramide-glucose-galactose-N-acetyl neuraminic acid. Accumulation of gangliosides caused by an inborn error of metabolism results in gangliosidosis or Tay-Sachs disease.	Mosby's Medical Dictionary, 8th edition, 2009
GCBN	Gap charge balance	A measurement used for determining blood gases. Because of electrochemical balance the concentrations of serum cations and anions are the same. However, in the routine measurement of electrolytes, more anions are unmeasured than are cations; this leads to an expected "anion gap." As typically calculated, the anion gap is based on only three electrolytes: sodium, chloride and bicarbonate (or serum CO ₂).	http://www.mtsinai.org/pulmonary/noninvasive/gaps.htm
GTPC	Gentiopicrin	A bitter crystalline glucoside C ₁₆ H ₂₀ O ₉ obtained from gentians and especially from gentian root. Also: Gentiopicroside.	http://www.merriam-webster.com/medical/gentiopicrin and http://www.chemindustry.com/chemicals/01156881.html
GESM	Geosmin	An organic compound with a distinct earthy flavor and aroma, and is responsible for the earthy taste of beets and a contributor to the strong scent (petrichor) that occurs in the air when rain falls after a dry spell of weather or when soil is disturbed. It is produced by a variety of microorganisms. Chemically, it is a bicyclic alcohol with formula C ₁₂ H ₂₂ O, a derivative of decalin	http://encyclopedia.thefreedictionary.com/Geosmin
GERN	Geraniol	An olefinic terpene alcohol that is the principal constituent of oil of rose and oil of palmarosa; also found in many other volatile oils (for example, citronella and lemon grass). An isomer of linalool; an oily liquid with sweet rose odor used in perfumery that is also used as an insect attractant.	Farlex Partner Medical Dictionary, 2012
GERA	Geranyl Acetate	Geranyl acetate contains not less than 90 percent of total esters, calculated as C ₁₂ H ₂₀ O ₂ . Geranyl acetate is found in the oils of <i>Daucus carota L.</i> , <i>Eucalyptus macarthurii</i> Deane, and other oils. It is obtained from geraniol by ecetylation. It is a colourless liquid, having a pleasant flowery odour. Chemical name:3,7-Dimethyl-2 trans,6-octadienyl acetate	www.inchem.org/documents/jecfa/jecmono/v44aje19.htm

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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GG1P	GG12661 protein	Protein involved in actin filament bundle assembly, acting crosslink formation, and calcium ion binding.	ECOTOX
GINS	Ginsenosides	Ginsenosides or panaxosides are a class of steroid glycosides, and triterpene saponins, found exclusively in the plant genus Panax (ginseng).	http://en.wikipedia.org/wiki/Ginsenoside
GPRO	Glial fibrillary acidic protein	(GFAP) This protein is a member of the intermediate filament family of proteins. Intermediate filaments form networks that provide support and strength to cells. Several molecules of glial fibrillary acidic protein bind together to form the type of intermediate filament found in astroglial cells. Astroglial cells support and nourish cells in the brain and spinal cord. If brain or spinal cord cells are injured through trauma or disease, astroglial cells react by rapidly producing more glial fibrillary acidic protein.	http://ghr.nlm.nih.gov/gene/GFAP
GLOB	Globulin	A simple globular protein which cannot be dissolved in pure water but which can be dissolved if a salt is added to the water.	www.biology-online.org/dictionary/Globulin
GLPS	Glucagon-Like Peptides	Peptides derived from proglucagon which is also the precursor of pancreatic glucagon. Despite expression of proglucagon in multiple tissues, the major production site of glucagon-like peptides (glps) is the intestinal L cells. Glps include glucagon-like peptide 1, glucagon-like peptide 2, and the various truncated forms. Synonym: Enteroglucagon.	http://www.ncbi.nlm.nih.gov
GLUC	Glucose	A simple monosaccharide sugar that serves as the main source of energy and as an important metabolic substrate for most living things. Its chemical formula is: C ₆ H ₁₂ O ₆ . One of the products of photosynthesis in plants and other photosynthetic organisms. In plants, glucose molecules are stored as repeating units of sugar (e.g. starch). Serves as an important metabolic intermediate of cellular respiration. In animals, an excess of glucose is stored as glycogen.	www.biology-online.org/dictionary/Glucose
GTP1	Glucose Transporter Type 1	Glucose Transporter Type 1 is a ubiquitously expressed glucose transporter protein that is important for constitutive, basal glucose transport. It is predominately expressed in endothelial cells and erythrocytes at the blood-brain barrier and is responsible for glucose entry into the brain. Also: Solute Carrier Family 2, Facilitated Glucose Transporter, Member 1 Protein, GLUT1 Protein, SLC2A1 Protein, Erythrocyte Glucose Transporter	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

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GLCE	Glucosinolate	Substituted thioglucosides. They are found in rapeseed (<i>Brassica campestris</i>) products and related cruciferae. They are metabolized to a variety of toxic products which are most likely the cause of hepatocytic necrosis in animals and humans.	http://www.online-medical-dictionary.org/definitions/g/glucosinolates.html
GCAC	Glucuronic Acid	A sugar acid formed by the oxidation of the C-6 carbon of GLUCOSE. In addition to being a key intermediate metabolite of the uronic acid pathway, glucuronic acid also plays a role in the detoxification of certain drugs and toxins by conjugating with them to form Glucuronides. Also: D-GLCA, D-Glucuronic acid, Glycuronic acid, Glucosiduronic Acid, (2S,3S,4S,5R,6S)-3,4,5,6-tetrahydroxyoxane-2-carboxylic acid D-Glucuronic acid, D-gluco-Hexulonic acid, D-glucuronate.	http://www.chemicalbook.com/CASEN_6556-12-3.htm and http://www.ncbi.nlm.nih.gov/mesh/68020723
GLTT	Glutamate	A salt of glutamic acid. In addition to being one of the 20 major amino acids incorporated into the peptide chains of proteins, it is a major excitatory amino acid of the central nervous system.	Mosby's Medical Dictionary, 8th edition, 2009
GTMA	Glutamic acid	A crystalline amino acid C5H9NO4 that is widely distributed in plant and animal proteins and that acts throughout the central nervous system especially in the form of a salt or ester as a neurotransmitter which excites postsynaptic neurons—abbreviation Glu.	www.merriam-webster.com/medical/glutamic%20acid
GMIN	Glutamine	A nonessential amino acid found in the juices of many plants and in many proteins in the body. It functions as an amino donor for many reactions. It is also a nontoxic transport for ammonia because it is readily hydrolyzed to glutamic acid and free ammonia, the latter excreted in the urine.	Mosby's Medical Dictionary, 8th edition, 2009
GTAS	Glutamine and asparagine	Glutamine: An amino acid. Monoamide of glutamic acid, important carrier of urinary ammonia and is broken down in the kidney by the enzyme glutaminase. Asparagine: A white crystalline amino acid found in many plant seeds.	McGraw-Hill Scientific Dictionary
GLGL	Glutamine to glutamate ratio	The ratio of Glutamine to glutamate in a sample.	ECOTOX
GLTH	Glutathione (reduced glutathione)	The tripeptide _ glutamylcysteinylglycine. It contains an unusual peptide linkage between the carboxyl group of the glutamate side chain and the amine group of cysteine. The concentration of glutathione in animal cells is 5mM and its sulphhydryl group is kept largely in the reduced state. This allows it to act as a sulphhydryl buffer, reducing any disulphide bonds formed within cytoplasmic proteins to cysteines. Also known as Reduced glutathione	www.biology-online.org/dictionary/Glutathione

ECOTOX Code Appendix

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GSSG	Glutathione disulfide (oxidized glutathione)	Glutathione (GSSG) is a disulfide derived from two glutathione molecules. In living cells, glutathione disulfide is reduced into two molecules of glutathione with reducing equivalents from the coenzyme NADPH. This reaction is catalyzed by the enzyme glutathione reductase.	http://en.wikipedia.org/wiki/Glutathione_disulfide
GGGH	Glutathione disulfide to glutathione ratio (oxidized to reduced)	The ratio of glutathione disulfide to glutathione. Also known as Oxidized glutathione to reduced glutathione ratio	ECOTOX
GTTO	Glutathione, total	The measure of total glutathione levels (reduced glutathione and glutathione disulfide) in a sample.	ECOTOX
GLTE	Gluten	The mixture of proteins, including gliadins and glutelins, found in wheat grains, which are not soluble in water. Any of the prolamins found in cereal grains, especially the prolamins in wheat, rye, barley, and possibly oats.	The American Heritage Dictionary of the English Language, Fourth Edition, 2000
GCLL	Glyceollin	Glyceollins are a family of prenylated pterocarpan found in ineffective types of nodule in soybean in response to symbiotic infection. They are phytoalexins with an antiestrogenic activity.	http://en.wikipedia.org/wiki/Glyceollin
GYAD	Glyceric acid	A trionic acid that consists of propionic acid substituted at positions 2 and 3 by hydroxy groups. It has a role as a fundamental metabolite. It derives from a propionic acid. It is a conjugate acid of a glycerate. Also: 2,3-Dihydroxypropanoic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/752#section=Top
GYCL	Glycerol content	a trihydroxy sugar alcohol that is the backbone of many lipids and an important intermediate in carbohydrate and lipid metabolism. Pharmaceutical preparations are called glycerin.	Dorland's Medical Dictionary for Health Consumers, 2007
GCPP	Glycerophosphocholine	An important nutrient present in all body cells; but primarily in liver, brain and nerve tissue. It is a metabolic precursor of phospholipids.	http://www.lipoid.com/en/node/38
GLCN	Glycine	The simplest amino acid. It is a common residue in proteins, especially collagen and elastin and is not optically active. It is also a major inhibitory neurotransmitter in spinal cord and brainstem of vertebrate central nervous system.	www.biology-online.org/dictionary/Glycine
GBTN	Glycine betaine	Glycine betaine, or N,N,N-trimethylglycine, was named after its discovery in sugar beets (<i>Beta vulgaris</i>) in the 19th century. It is a small N-trimethylated amino acid, existing in zwitterionic form at neutral pH.	http://en.wikipedia.org/wiki

ECOTOX Code Appendix

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GLYA	Glycoalkaloid	Glycoalkaloids are a family of poisons commonly found in the plant species <i>Solanum dulcamara</i> (nightshade). There are several glycoalkaloids (alkaloids + sugars) that are potentially toxic.	http://en.wikipedia.org/wiki
GLYC	Glycogen	A branched polymer of glucose that is mainly produced in liver and muscle cells, and functions as secondary long-term energy storage in animal cells. It is an analogue of starch in plants, only it is less branched. Under the microscope, glycogen has a characteristic asterisk or star appearance.	www.biology-online.org/dictionary/Glycogen
GCAD	Glycolic acid	The smallest alpha-hydroxy acid (AHA). This colourless, odourless, and hygroscopic crystalline solid is highly soluble in water. Due to its excellent capability to penetrate skin, glycolic acid is often used in skin care products, most often as a chemical peel. Also: Hydroxyacetic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/glycolic_acid#section=Top
GLYP	Glycoprotein Composition	Proteins with covalently attached sugar units, either bonded via the OH group of serine or threonine O glycosylated) or through the amide NH ₂ of asparagine (N glycosylated). Includes most secreted proteins and proteins exposed at the outer surface of the plasma membrane	www.biology-online.org/dictionary/Glycoprotein
GRHP	Gonadotropin releasing hormone to protein content ratio	Ratio of Gonadotropin releasing hormone to protein content	ECOTOX
GAX4	Gonyautoxin 4	Gonyautoxin 4 is a compound produced by <i>Gonyaulax</i> dinoflagellates and may then be consumed by mollusks, fishes, etc. This substance is a member of the saxitoxin group of neurotoxins that cause respiratory paralysis and other effects in mammals, known as paralytic shellfish poisoning.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
GSPL	Gossypol	Gossypol is a dimeric sesquiterpene found in cottonseed. Gossypol is a polyphenolic aldehyde that permeates cells and acts as an inhibitor for several dehydrogenase enzymes.	http://en.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
GRMN	Gramine	Gramine (also called donaxine) is a naturally occurring indole alkaloid present in several plant species. Gramine may play a defensive role in these plants, since it is toxic to many organisms.	http://en.wikipedia.org/wiki

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes
CSF3	Granulocyte Colony-Stimulating Factor (CSF3)	Granulocyte Colony-Stimulating Factor is a glycoprotein of MW 25 kDa containing internal disulfide bonds. It induces the survival, proliferation, and differentiation of neutrophilic granulocyte precursor cells and functionally activates mature blood neutrophils. Among the family of colony-stimulating factors, G-CSF is the most potent inducer of terminal differentiation to granulocytes and macrophages of leukemic myeloid cell lines. Also: CSF3, Colony Stimulating Factor 3	http://www.ncbi.nlm.nih.gov
G43P	Growth associated protein 43	This protein is associated with nerve growth. It is a major component of the motile "growth cones" that form the tips of elongating axons. Plays a role in axonal and dendritic filopodia induction. Also: Neuromodulin, Neural phosphoprotein B-50.	https://www.uniprot.org/uniprot/P17677
GNSN	Guanosine	A nucleoside C10H13N5O5 composed of guanine and ribose.	http://www.merriam-webster.com/dictionary/guanosine
G5DP	Guanosine 5'-diphosphate	A nucleotide derivative of guanine. It is involved in numerous intracellular cell signalling and energy transfer processes. Acronym: GDP	http://www.sigmaldrich.com/content/dam/sigma-aldrich/docs/Sigma/Product_Information_Sheet/2/g7127pis.pdf
G5TP	Guanosine 5'-triphosphate	GTP functions as a carrier of phosphates and pyrophosphates involved in channeling chemical energy into specific biosynthetic pathways. GTP activates the signal transducing G proteins which are involved in various cellular processes including proliferation, differentiation, and activation of several intracellular kinase cascades. Proliferation and apoptosis are regulated in part by the hydrolysis of GTP by small GTPases Ras and Rho. Another type of small GTPase, Rab, plays a role in the docking and fusion of vesicles and may also be involved in vesicle formation. In addition to its role in signal transduction, GTP also serves as an energy-rich precursor of mononucleotide units in the enzymatic biosynthesis of DNA and RNA.	http://www.sigmaldrich.com/catalog/product/sigma/g8877?lang=en&region=US

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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H2AX	H2A histone family member X	A histone H2A variant that constitutes 2–25% of mammalian histone H2A depending on the organism and cell type. Like most other histone proteins, H2AX is composed of a central globular domain, flanked by N-terminal and C-terminal tails which possess sites for a variety of post-translational modifications such as acetylation, biotinylation, phosphorylation, methylation, and ubiquitination. H2AX is structurally similar to other H2A species except for the presence of a unique COOH terminal tail, containing a serine four residues from the C terminus (omega-4). Also: H2AX.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3094848/
HFAB	Heart fatty acid binding protein	Thought to play a role in the intracellular transport of long-chain fatty acids and their acyl-CoA esters. Also: Fatty acid-binding protein 3, Heart-type fatty acid-binding protein.	https://www.uniprot.org/uniprot/P05413
HS71	Heat shock cognate protein 71	A 646 amino acid heat shock cognate protein functioning as a molecular chaperone, facilitating the folding of other cellular proteins. It plays an important role in cells by transiently associating with nascent polypeptides to facilitate correct folding. IT is a ubiquitously expressed protein and rapidly translocates from the cytoplasm to the nucleus in response to heat shock. Also: HSPA8, HSC71, HSPA10, and LPS-associated protein 1, LAP1.	https://www.rndsystems.com/products/human-mouse-rat-hspa8-hsc71-antibody_af4148
HSPS	Heat Shock Protein	Families of proteins conserved through prokaryotic and eukaryotic cells and bacteria in response to hyperthermia and other environmental stresses, although some are constitutively expressed. They increase thermal tolerance and perform functions essential to cell survival under these conditions. Acronym: HSP	www.biology-online.org/dictionary/Heat-shock_protein
H108	Heat shock protein 108	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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HP16	Heat shock protein 16	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HS16	Heat Shock Protein 16.2	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP20	Heat shock protein 20	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP26	Heat Shock Protein 26	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP30	Heat shock protein 30	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HP32	Heat shock protein 32	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HSP4	Heat Shock Protein 4	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP40	Heat shock protein 40	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP42	Heat shock protein 42	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP52	Heat shock protein 52	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HSP6	Heat Shock Protein 6	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP60	Heat Shock Protein 60	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP69	Heat Shock protein 69	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP70	Heat Shock Protein 70	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP71	Heat shock protein 71	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HP72	Heat shock protein 72	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP73	Heat shock protein 73	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HP75	Heat shock protein 75	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HS78	Heat shock protein 78	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HS09	Heat shock protein 9	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HP90	Heat shock protein 90	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HC37	Heat shock protein 90 co-chaperone Cdc37	Co-chaperone that binds to numerous kinases and promotes their interaction with the Hsp90 complex, resulting in stabilization and promotion of their activity. Also: Cell division cycle 37 homolog, Hsp90 co-chaperone Cdc37, Hsp90 chaperone protein kinase-targeting subunit, CDC37.	http://www.uniprot.org/uniprot/Q8X1E6
HP96	Heat shock protein 96	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
H727	Heat shock proteins 72 and 77	Any of a group of proteins that are produced especially in cells subjected to stressful conditions (as high temperature), that serve to ensure proper protein folding, and that are held to comprise a class of molecular chaperones. HSPs constitute a large family of proteins that are often classified based on their molecular weight.	http://www.ncbi.nlm.nih.gov/pubmed/18432918 and http://www.merriam-webster.com/dictionary/heat-shock%20protein
HPSS	Heat Shock Proteins, small	Member of a ubiquitous protein group found in all life forms, which arise after various stressors (for example, heat, cold, deprivation of an essential chemical). Its function is to help lessen the harmful effects of such stressors.	Farlex Partner Medical Dictionary, 2012
HMGT	Hemagglutinin	A substance that causes hemagglutination (i.e. the agglutination of red blood cells). Hemagglutinins may be in the form of antibodies, viral capsid proteins, or certain plant lectins (e.g. PHA).	www.biology-online.org/dictionary/Hemagglutinin

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HMCT	Hematocrit (Anemia)	The volume percentage of erythrocytes in whole blood; also, the apparatus or procedure used in its determination.	Dorland's Medical Dictionary for Health Consumers, 2007
<HEMT>	Hematological Parameters	No definition available.	
HEME	Heme Content	Heme - the pigmented iron-containing nonprotein part of the hemoglobin molecule. There are four heme groups in a hemoglobin molecule, each consisting of a cyclic structure of four pyrrole residues, called protoporphyrin, and an atom of iron in the center. Heme binds and carries oxygen in the red blood cells, releasing it to tissues that give off excess amounts of CO ₂ .	Mosby's Medical Dictionary, 8th edition, 2009
HMCY	Hemocyanin	Blue, oxygen transporting, copper containing protein found in the blood of molluscs and crustacea.	www.biology-online.org/dictionary/Hemocyanin
HMGL	Hemoglobin	Four subunit globular oxygen carrying protein of the erythrocytes of vertebrates and some invertebrates. Hemoglobin (Hgb) molecules are found in all red blood cells. They bind oxygen in the lungs, carry the oxygen throughout the body, and release it to the body's cells and tissues.	www.biology-online.org/dictionary/Hemoglobin
HSB1	Hemoglobin subunit beta-1-like	A protein subunit of hemoglobin.	https://www.online-medical-dictionary.org/definitions-h/hemoglobin-subunits.html
HMPR	Hemoglobin to protein ratio	Hemoglobin to protein ratio in a sample	ECOTOX
HMLS	Hemolysin	An agent or a substance, such as an antibody or a bacterial toxin that causes the destruction of red blood cells, thereby liberating hemoglobin. Also called erythrocytolysin, erythrolysin.	The American Heritage Stedman's Medical Dictionary
HPXN	Hemopexin	A glycoprotein that binds heme preventing its excretion in urine and that is part of the beta-globulin fraction of human serum.	www.merriam-webster.com/medical/hemopexin
HMSN	Hemosiderin	Hemosiderin or haemosiderin is an iron-storage complex. It is always found within cells (as opposed to circulating in blood) and appears to be a complex of ferritin, denatured ferritin and other material. The iron within deposits of hemosiderin is very poorly available to supply iron when needed.	http://en.wikipedia.org/wiki/Hemosiderin

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes
HXDC	Hexadecenoate	Palmitate, also called n-hexadecanoate, is the dissociated and observed form of Palmitic Acid at physiological pH	http://en.wikipedia.org/wiki
HXBT	Hexobarbital	A barbiturate C ₁₂ H ₁₆ N ₂ O ₃ used as a sedative and hypnotic and in the form of its soluble sodium salt C ₁₂ H ₁₅ N ₂ NaO ₃ as an intravenous anesthetic of short duration.	www.merriam-webster.com/medical/hexobarbital
HEXS	Hexose	Sugar, a monosaccharide with six carbon atoms. Hexoses include Fructose, Fucose, Galactose, Glucose, Mannose, Rhamnose, and Sorbose	www.wikipedia.org/wiki and http://www.ncbi.nlm.nih.gov
HDLC	High density lipoprotein cholesterol	The serum cholesterol carried on high-density lipoproteins, approximately 20 to 30 per cent of the total.	Dorland's Medical Dictionary for Health Consumers, 2007
HDCH	High density lipoprotein cholesterol:Total cholesterol	The ratio between high density lipoprotein cholesterol and total cholesterol concentrations in a sample.	ECOTOX
HDLD	High density lipoprotein to low density lipoprotein ratio	The ratio of high density lipoprotein to low density lipoprotein.	ECOTOX
HSTM	Histamine	An amine, C ₅ H ₉ N ₃ , produced by decarboxylation of histidine, found in all body tissues. It induces capillary dilatation, which increases capillary permeability and lowers blood pressure; contraction of most smooth muscle tissue; increased gastric acid secretion; and acceleration of the heart rate. It is also a mediator of immediate hypersensitivity.	Dorland's Medical Dictionary for Health Consumers, 2007
HIST	Histidine	An amino acid with an imidazole side chain with a pKa of 6-7. Acts as a proton donor or acceptor and has high potential reactivity and diversity of chemical function. Forms part of the catalytic site of many enzymes. An essential amino acid found in proteins that is important for the growth and repair of tissue	www.biology-online.org/dictionary/Histidine
HITY	Histidine to tyrosine ratio	Ratio of histidine to tyrosine in an organism or organism's tissues.	
HH2A	Histone H2A	Small chromosomal proteins (approx 12-20 kD) possessing an open, unfolded structure and attached to the DNA in cell nuclei by ionic linkages.	https://www.online-medical-dictionary.org/definitions-h/histones.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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HCTN	Homocysteine	Homocysteine is a thiol-containing amino acid formed by a demethylation of methionine.	http://www.ncbi.nlm.nih.gov
HVLA	Homovanillic acid	An acid that is produced by normal metabolism of dopamine and may be elevated in the urine in association with tumors of the adrenal gland.	Mosby's Medical Dictionary, 8th edition, 2009
HMDP	Homovanillic acid to Dopamine Ratio	The ratio of Homovanillic acid to Dopamine found in a sample	ECOTOX
HYLA	Hyaluronic Acid	A natural high-viscosity mucopolysaccharide with alternating beta (1-3) glucuronide and beta (1-4) glucosaminidic bonds. It is found in the umbilical cord, in vitreous body and in synovial fluid. A high urinary level is found in progeria	http://www.ncbi.nlm.nih.gov
HDCB	Hydrocarbons	Organic compounds composed exclusively of carbon and hydrogen where no carbon atoms join to form a ring structure.	www.biology-online.org/dictionary/Hydrocarbons
HCNC	Hydrogen cyanide	The concentration of Hydrogen cyanide found in sample. Hydrogen cyanide is a poisonous usually gaseous compound HCN that has the odor of bitter almonds.	ECOTOX and http://www.merriam-webster.com/medical/hydrogen%20cyanide
H2O2	Hydrogen Peroxide	A colorless, heavy, strongly oxidizing liquid, H2O2, capable of reacting explosively with combustibles and used principally in aqueous solution as a mild antiseptic, a bleaching agent, an oxidizing agent, and a laboratory reagent.	The American Heritage® Dictionary of the English Language, Fourth Edition copyright ©2000
HYDC	Hydroxide content	Any chemical compound containing one or more groups, each comprising one atom each of oxygen and hydrogen bonded together and functioning as the negatively charged ion OH-. The positively charged portion of the compound usually is the ion of a metal (e.g., sodium, magnesium, or aluminum), although it may be an organic group (e.g., guanidinium or tetramethylammonium). Also: Hydroxyl content.	http://www.britannica.com/science/hydroxide
HBZA	Hydroxybenzoic acids	C ₇ H ₆ O ₃ . Any one of three crystalline derivatives of benzoic acid: ortho, meta, and para forms; the ester of the para compound is used as a bacteriostatic agent.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003

ECOTOX Code Appendix

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HPLN	Hydroxyproline	Specific proline residues on the amino side of a glycine residue in collagen become hydroxylated at C4, before the polypeptides become helical, by the activity of prolyl hydroxylase. This enzyme has a ferrous ion at the active site and a reducing agent such as ascorbate is necessary to maintain the iron in the ferrous state. The presence of hydroxyproline is essential to produce stable triple helical tropocollagen, hence the problems caused by ascorbate deficiency in scurvy. This unusual amino acid is also present in considerable amounts in the major glycoprotein of primary plant cell walls.	Dictionary of Cell and Molecular Biology
HYOX	Hymenoxon	A toxic lactone isolated from Bitterweed (<i>Hymenoxys odorata</i>).	ECOTOX 25099
HGRP	Hyperosmotic glycine rich protein	Plasma membrane protein of unknown function, predicted to be palmitoylated; has similarity to hydrophilins, which are hydrophilic, glycine-rich proteins involved in the adaptive response to hyperosmotic conditions.	http://www.yeastrc.org/pdr/viewProtein.do?id=528616
HPXE	Hypoxanthine	A purine and a reaction intermediate in the metabolism of adenosine and in the formation of nucleic acids by the salvage pathway.	https://www.online-medical-dictionary.org/definitions-h/hypoxanthine.html
HIFT	Hypoxia inducible factor-1 alpha-Tubulin ratio	Ratio of Hypoxia inducible factor (HIF-1-alpha) to alpha-Tubulin in sample.	ECOTOX
IDZL	Imidazole	An antimetabolite related to histidine. Also: 1H-Imidazole, Glyoxaline, Glyoxalin.	http://www.merriam-webster.com/dictionary/imidazole and https://pubchem.ncbi.nlm.nih.gov/compound/imidazole#section=Top

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
IBIL	Indirect Bilirubin (Free)	Indirect bilirubin - the lipid-soluble form of bilirubin that circulates in loose association with the plasma proteins or the fraction of bilirubin that does not conjugate with glucuronic acid in hepatic cells. Also called unconjugated bilirubin.	Dorland's Medical Dictionary for Health Consumers, 2007 and Medical Dictionary for the Health Professions and Nursing, 2012
IDAA	Indole Acetic Acid	Indole-3-acetic acid, also known as IAA and Indoleacetic Acid, is a member of the group of phytohormones called auxins. IAA is generally considered to be the most important native auxin.	http://en.wikipedia.org/wiki/Indole-3-acetic_acid
IDBA	Indolebutyric acid	A plasma and urinary tryptophan-related metabolite related to metabolic and skin diseases. Also: 3-Indolebutyric acid, Indole-3-butyric acid, Indole-3-butanoic acid/	https://pubchem.ncbi.nlm.nih.gov/compound/Indole-3-butyric_acid#section=Top
IKBA	Inhibitory kappa B alpha	A regulatory protein that inhibits NF-kappa-B by complexing with and trapping it in the cytoplasm. May be involved in regulation of transcriptional responses to NF-kappa-B, including cell adhesion, immune and proinflammatory responses, apoptosis, differentiation and growth. Also: IkB-alpha.	http://www.phosphosite.org/proteinAction.action?id=990
INSN	Inosine	A purine nucleoside that has hypoxanthine linked by the N9 nitrogen to the C1 carbon of ribose. It is an intermediate in the degradation of purines and purine nucleosides to uric acid and in pathways of purine salvage. It also occurs in the anticodon of certain transfer RNA molecules. Also: 9-beta-D-Ribofuranosylhypoxanthine, beta-Inosine, Hypoxanthine D-riboside, Hypoxanthine nucleoside, Hypoxanthine ribonucleoside, Hypoxanthine riboside, Hypoxanthosine, Inosinum.	Dorland, 28th ed, 1994 and http://chem.sis.nlm.nih.gov/chemdbplus/unii/5A614L51CT
IN1P	Inositol 1-phosphate	Inositol phosphates are a group of mono- to polyphosphorylated inositols. They have important messaging functions in the cells. The measurement of Inositol 1-phosphate concentration in a sample.	http://en.wikipedia.org/wiki/Inositol_phosphate

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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ITFG	Interferon-gamma	Interferon-gamma, or type II interferon, is a cytokine that is the major interferon produced by mitogenically or antigenically stimulated lymphocytes. It is structurally different from type I interferon and its major activity is immunoregulation. It has been implicated in the expression of class II histocompatibility antigens in cells that do not normally produce them, leading to autoimmune diseases.	http://www.ncbi.nlm.nih.gov
IL17	Interleukin 17	Interleukin-17 (IL-17, or IL-17A) is the founding member of a group of cytokines called the IL-17 family. IL-17A is a proinflammatory cytokine produced primarily by T-lymphocytes or their precursors. Several subtypes of interleukin-17 have been identified, each of which is a product of a unique gene. Also: IL17A, CTLA8	http://www.ncbi.nlm.nih.gov and www.wikipedia.org/wiki
IL1B	Interleukin-1 beta	A soluble protein (17 kD: 152 amino acids) secreted by monocytes, macrophages or accessory cells involved in the activation of both T-lymphocytes and B lymphocytes and potentiates their response to antigens or mitogens. Its biological effects include the ability to replace macrophage requirements for T-cell activation, as well as affecting a wide range of other cell types. At least two IL-1 genes are active and alpha and beta forms of IL-1 are recognized. It is released early in an immune system response by monocytes and macrophages. It stimulates T-cell proliferation and protein synthesis. Another effect of IL-1 is that it causes fever.	www.biology-online.org/dictionary/Interleukin-1
IL10	Interleukin-10	Interleukin-10 is a cytokine produced by a variety of cell types, including T-lymphocytes; monocytes; dendritic cells; and epithelial cells that exerts a variety of effects on immunoregulation and inflammation. Interleukin-10 combines with itself to form a homodimeric molecule that is the biologically active form of the protein. Also: IL-10, Cytokine Synthesis Inhibitory Factor, CSIF	http://www.ncbi.nlm.nih.gov
IL12	Interleukin-12	Interleukin-12 is a heterodimeric cytokine that plays a role in innate and adaptive immune responses. Interleukin-12 is a 70 kDa protein that is composed of covalently linked 40 kDa and 35 kDa subunits. It is produced by dendritic cells; macrophages and a variety of other immune cells and plays a role in the stimulation of interferon-gamma production by T-lymphocytes and natural killer cells. Also: IL-12 p70	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

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IP40	Interleukin-12 subunit p40	Interleukin-12 subunit p40 is a cytokine subunit that is a component of both interleukin-12 and interleukin-23. It binds to the interleukin-12 subunit p35 via a disulfide bond to form interleukin-12 and to interleukin-23 subunit p19 to form interleukin-23. Also: Interleukin-12b, IL-12(p40)	http://www.ncbi.nlm.nih.gov
IL1A	Interleukin-1alpha	A soluble factor produced by monocytes; macrophages, and other cells which activates T-lymphocytes and potentiates their response to mitogens or antigens. Interleukin-1 alpha is an interleukin-1 subtype that occurs as a membrane-bound pro-protein form that is cleaved by proteases to form a secreted mature form. Unlike Interleukin-1beta both membrane-bound and secreted forms of interleukin-1alpha are biologically active. Also: IL-1 alpha	http://www.ncbi.nlm.nih.gov
ITL2	Interleukin-2	A hormone-like substance released by stimulated t lymphocytes, causes activation and differentiation of other t lymphocytes independently of antigen; a type of interleukin, a chemical messenger, a substance that can improve the body's response to disease. It stimulates the growth of certain disease-fighting blood cells in the immune system. It is secreted by Th1 cd4 cells to stimulate CD8 cytotoxic t-1yrnphocytes. Interleukin 2 also increases the proliferation and maturation of the cd4 cells themselves. During hiv infection, interleukin-2 production gradually declines. use of interleukin 2 therapy is under study as a way to raise cd4 cell counts and restore immune function. Acronym: il-2	www.biology-online.org/dictionary/Interleukin-2
IL2B	Interleukin-2 receptor beta	Receptor for interleukin-2. This beta subunit is involved in receptor mediated endocytosis and transduces the mitogenic signals of IL2.	http://www.uniprot.org/uniprot/P14784
ILK3	Interleukin-3	Interleukin-3 is a multilineage cell growth factor secreted by lymphocytes; epithelial cells; and astrocytes which stimulates clonal proliferation and differentiation of various types of blood and tissue cells. Also: IL3	http://www.ncbi.nlm.nih.gov
ILK4	Interleukin-4	Interleukin-4 is a soluble factor produced by activated T-lymphocytes that induces the expression of MHC class II genes and FC receptors on B-lymphocytes and causes their proliferation and differentiation. It also acts on T-lymphocytes, mast cells, and several other hematopoietic lineage cells.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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ILK6	Interleukin-6	An interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine. In humans, it is encoded by the IL6 gene. IL-6 is secreted by T cells and macrophages to stimulate immune response, e.g. during infection and after trauma, especially burns or other tissue damage leading to inflammation. IL-6 also plays a role in fighting infection.	http://en.wikipedia.org/wiki/Interleukin_6
IL8B	Interleukin-8 receptor beta	Receptor for interleukin-8 which is a powerful neutrophil chemotactic factor. Binding of IL-8 to the receptor causes activation of neutrophils. This response is mediated via a G-protein that activates a phosphatidylinositol-calcium second messenger system. Binds to IL-8 with high affinity. Also binds with high affinity to CXCL3, GRO/MGSA and NAP-2.	http://www.uniprot.org/uniprot/P25025
ICON	Iodine concentration	The concentration of iodine found in a sample.	ECOTOX
IRGL	Iridoid glycosides	A subclass of iridoid compounds that include a glycoside moiety, usually found at the C-1 position.	https://www.online-medical-dictionary.org/definitions-i/iridoid-glycosides.html
FEAI	Iron Accumulation index	The ratio of iron in an organism to iron in the soil.	ECOTOX
FECO	Iron Content	The concentration of iron found in a sample.	ECOTOX
FEMN	Iron to Manganese Ratio	The ratio of iron to manganese in a sample.	ECOTOX
FEZN	Iron to zinc ratio	The ratio of iron to zinc in a sample.	ECOTOX
FNNN	Iron-nitrosyl plus N-nitroso compounds	The amount of Iron-nitrosyl compounds plus N-nitroso compounds found in a sample.	ECOTOX
ISDM	Isodesmosine	2-(4-amino-4-carboxybutyl)-1-(5-amino-5-carboxypentyl)-3,5-bis(3-amino-3-carboxypropyl)pyridinium. A rare amino acid found in elastin, formed by condensation of four molecules of lysine into a pyridinium ring.	www.encyclo.co.uk/define/isodesmosine

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
IDMN	Isodesmosine + Desmonine	<p>Isodesmosine: 2-(4-amino-4-carboxybutyl)-1-(5-amino-5-carboxypentyl)-3,5-bis(3-amino-3-carboxypropyl)pyridinium. A rare amino acid found in elastin, formed by condensation of four molecules of lysine into a pyridinium ring. ...</p> <p>Chemical name: Pyridinium</p> <p>A desmosine cross-link is formed from three allysyl side chains plus one unaltered lysyl side chain from the same or neighbouring polypeptides.</p> <p>It is found in elastin. Desmosine causes a yellow color. This desmosine is responsible for the rubber properties of elastin.</p>	wwwENCYCLO.co.uk/define/isodesmosine and http://en.wikipedia.org/wiki/Desmosine
IFAD	Isoferulic acid	A ferulic acid consisting of trans-cinnamic acid bearing methoxy and hydroxy substituents at positions 4 and 3 respectively on the phenyl ring. It has a role as a metabolite, a biomarker and an antioxidant. Also: Hesperetic acid, 3-Hydroxy-4-methoxycinnamic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/736186#section=Top
ISFV	Isoflavone	A colorless, crystalline, bioactive ketone C15H10O2. Any of various usually hydroxyl derivatives of isoflavone that are plant compounds possessing antioxidant and estrogenic activity in the body. Also: Isoflavones.	https://www.merriam-webster.com/dictionary/isoflavone
IHDA	Isoheptadecanoic acid	15-methylhexadecanoic acid, or isoheptadecanoic acid (C17:0 iso), is a saturated fatty acid.	ECOTOX
ILEU	Isoleucine	An amino acid that occurs in most dietary proteins and is essential for proper growth in infants and for nitrogen balance in adults. Also spelled isoleucine.	http://medical-dictionary.thefreedictionary.com/isoleucine
IMNT	Iso-menthone	Exists as two stereoisomerisms, menthone and ISO Menthone in many essential oils in particular in oils from <i>Mentha</i> species. The isolation is carried out by fractional, distillation.	http://hindustanmint.tradeindia.com/iso-menthone-fraction-of-de-mentholised-oil--387628.html
IODA	Iso-octadecanoic acid	Iso-octadecanoic acid (C18:0 iso) is a saturated fatty acid.	ECOTOX
IOEC	Ion-exchange capacity	Measure of the ability of an insoluble material to undergo displacement of ions previously attached and loosely incorporated into its structure by oppositely charged ions present in the surrounding solution. Also: Ion exchange capacity, includes cation and anion exchange.	https://www.britannica.com/science/ion-exchange-capacity

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes
IPLM	Isopalmitic acid	14-Methylpentadecanoic acid, isopalmitic acid (C16:0 iso) is a saturated fatty acid.	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
IPDA	Isopentadecanoic acid	13-methyltetradecanoic acid, isopentadecanoic acid (C15:0 iso) is a saturated fatty acid.	http://en.wikipedia.org/wiki/ and http://pubchem.ncbi.nlm.nih.gov
ITEX	Isotope exchange	A chemical reaction in which the reactant and product chemical species are chemically identical but have different isotopic composition. In such a reaction the isotope distribution tends towards equilibrium (as expressed by fractionation factors) as a result of transfers of isotopically different atoms or groups.	https://goldbook.iupac.org/html/I/I03328.html
JAK2	Janus kinase 2	A protein tyrosine kinase involved in a specific subset of cytokine receptor signaling pathways. It has been found to be constitutively associated with the prolactin receptor and is required for responses to gamma interferon. Also: JAK2.	https://www.ncbi.nlm.nih.gov/geo/3717
JSMA	Jasmonic acid	The major function of JA and its various metabolites is regulating plant responses to abiotic and biotic stresses as well as plant growth and development. Regulated plant growth and development processes include growth inhibition, senescence, tendril coiling, flower development and leaf abscission. JA is also responsible for tuber formation in potatoes, yams, and onions. It has an important role in response to wounding of plants and systemic acquired resistance. When plants are attacked by insects, they respond by releasing JA, which activates the expression of protease inhibitors, among many other anti-herbivore defense compounds. Also: 7-epi-jasmonic acid, jasmonate.	http://en.wikipedia.org/wiki/Jasmonic_acid and http://www.reference.md/files/C011/mC011006.html
KTNE	Ketone	A byproduct of fat metabolism. An overabundance of ketones in the bloodstream is seen in a severe metabolic derangement known as diabetic ketoacidosis.	www.biology-online.org/dictionary/Ketone
LAAC	Lac	Resin-like substance secreted by certain lac insects; used in, for example, varnishes and sealing wax.	http://www.memidex.com/lac+animal-product
LACT	Lactate	A salt or ester of lactic acid. Lactate is a product of fermentation and is produced during cellular respiration as glucose is broken down.	The American Heritage Science Dictionary, 2005
LCPY	Lactate Pyruvate Ratio	The ratio of lactate to pyruvate found in a sample	ECOTOX

ECOTOX Code Appendix

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LCTA	Lactic Acid	A colorless or yellowish, syrupy, water-soluble liquid, which is a byproduct of anaerobic glucose metabolism. An intermediate product of carbohydrate metabolism (anaerobic metabolism), derived chiefly from muscle cells and red blood cells.	www.biology-online.org/dictionary/Lactic_acid
LCTS	Lactose	The major sugar in human and bovine milk.	www.biology-online.org/dictionary/Lactose
ASPO	L-alpha-Aspartyl-L-proline	A dipeptide composed of aspartate and proline. It is an incomplete breakdown product of protein digestion or protein catabolism. Also: Aspartyl-L-proline, Aspartylproline, Aspartyl-proline, 1-L-alpha-aspartyl-L-Proline, L-a-Aspartyl-L-proline.	http://www.hmdb.ca/metabolites/HMDB28761#biological-properties , http://pubchem.ncbi.nlm.nih.gov/summary/summary.cgi?cid=170612 and http://www.chemspider.com/Chemical-Structure.149163.html
LANO	Lanosterol	A triterpene that derives from the chair-boat-chair-boat folding of 2,3-oxidosqualene. It is metabolized to Cholesterol and Cucurbitacins.	http://www.ncbi.nlm.nih.gov/mesh/68007810
LASC	L-ascorbic acid	Synonym-ascorbic acid (ASCA). Vitamin C. A water-soluble vitamin found in many fruits and vegetables.	Dorlands Dictionary
LA2S	L-Ascorbyl-2-sulfate	Ascorbic acid 2-sulfate: A six carbon compound related to glucose. It is found naturally in citrus fruits and many vegetables. Ascorbic acid is an essential nutrient in human diets, and necessary to maintain connective tissue and bone. Its biologically active form, vitamin C, functions as a reducing agent and coenzyme in several metabolic pathways. Vitamin C is considered an antioxidant. Other names Vitamin C; L Ascorbic Acid; Ascorbate, Sodium; Ascorbate, Ferrous; Acid, L-Ascorbic; Acid, Ascorbic; Sodium Ascorbate; Magnorbin; Magnesium Ascorbicum; L-Ascorbic Acid; Hybrin; Ferrous Ascorbate; Ascorbic Acid, Monosodium Salt.	www.reference.md/files/C001/mC001956.html
LAAD	L-Aspartic acid	The L form of aspartic acid, a non-essential amino acid in humans. Aspartic acid has an overall negative charge and plays an important role in the synthesis of other amino acids and in the citric acid and urea cycles. Also: L Aspartic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/5960#section=Top

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LTME	L-Glutamine	The L form of glutamine, a non-essential amino acid present abundantly throughout the body and is involved in many metabolic processes. It is synthesized from glutamic acid and ammonia. It is the principal carrier of nitrogen in the body and is an important energy source for many cells. Also: L Glutamine.	https://pubchem.ncbi.nlm.nih.gov/compound/5961#section=Top
LICN	L-Isoleucine	The L form of isoleucine, an essential branched-chain aliphatic amino acid found in many proteins. It is important in hemoglobin synthesis and regulation of blood sugar and energy levels. Also: L isoleucine, Isoeucine, L isomer.	https://pubchem.ncbi.nlm.nih.gov/compound/6306#section=Top
LLCN	L-Leucine	The L form of leucine, an essential branched-chain amino acid important for hemoglobin formation. Also: L Leucine, Leucine, L isomer.	https://pubchem.ncbi.nlm.nih.gov/compound/6106
LPLN	L-Proline	The L form of proline, a cyclic nonessential amino acid in humans (synthesized from glutamic acid and other amino acids). It is a constituent of many proteins and is found in high concentrations in collagen. Also: L proline.	https://pubchem.ncbi.nlm.nih.gov/compound/145742#section=Top
LEAD	L-Threonic acid	The L form of threonic acid, a sugar acid. Sugar acids are compounds containing a saccharide unit which bears a carboxylic acid group. L-threonic Acid is considered to be soluble (in water) and acidic. Also: L Threonic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/5460407#section=Top
LTNE	L-Threonine	The L form of threonine, an essential amino acid occurring naturally in the L-form, which is the active form. It is found in eggs, milk, gelatin, and other proteins. Also: L Threonine.	https://pubchem.ncbi.nlm.nih.gov/compound/6288#section=Top
LTPN	L-Tryptophan	The L form of Tryptophan, an essential amino acid that is the precursor of both serotonin and melatonin. Also: L Tryptophan.	https://pubchem.ncbi.nlm.nih.gov/compound/6305#section=Top
LVLN	L-Valine	The L form of valine, a branched-chain essential amino acid that has stimulant activity. It promotes muscle growth and tissue repair. It is a precursor in the penicillin biosynthetic pathway. Also: L valine.	https://pubchem.ncbi.nlm.nih.gov/compound/6287#section=Top
LAUA	Lauric acid	Lauric acid, dodecanoic acid (C12:0), a crystalline fatty acid occurring as glycerides in natural fats and oils, especially coconut oil and palm-kernel oil.	http://wordnetweb.princeton.edu/ and http://en.wikipedia.org/wiki/
PBAI	Lead Accumulation index	The ratio of lead in an organism to lead in the soil.	ECOTOX
PBCO	Lead Content	The content of Lead found in an organism or tissue.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PBIC	Lead Iodine content	The content of Lead Iodine found in an organism or tissue, including radiolabeled ions.	ECOTOX
PBPR	Lead Phosphorus ratio	The ratio of lead to phosphorus in an organism or tissue.	ECOTOX
LGHE	Leghemoglobin	A red iron-containing protein, similar in a number of properties to the hemoglobin of blood, that forms in the root nodules of actively nitrogen-fixing leguminous plants of the genus Leguminosae. Leghemoglobin is a product of the symbiosis of two organisms: it consists of a heme synthesized by nodule bacteria and a globin formed by the cells of a higher plant. Leghemoglobin is destroyed when the nodules lose their capacity for symbiotic nitrogen fixation. Like other hemoproteins, leghemoglobin regulates the oxygen regime in the nodule.	http://encyclopedia2.thefreedictionary.com/Leghemoglobin
LEUC	Leucine	The most abundant amino acid found in proteins. Confers hydrophobicity and has a structural rather than a chemical role. A white crystalline amino acid occurring in proteins that is essential for nutrition; obtained by the hydrolysis of most dietary proteins.	www.biology-online.org/dictionary/Leucine
LCCT	Leucocrit	The leucocrit value expresses the leucocyte volume in relation to the total volume of blood. The leucocrit value is determined in heparinized microcapillaries simultaneously with the determination of the haematocrit value.	www.fao.org/docrep/field/003/AC160E/AC160E09.htm
LTB4	Leukotriene B4	Leukotriene B4, or LTB4, is the major metabolite in neutrophil polymorphonuclear leukocytes. It stimulates polymorphonuclear cell function (degranulation, formation of oxygen-centered free radicals, arachidonic acid release, and metabolism).	http://www.ncbi.nlm.nih.gov
LIGN	Lignin	Organic substance which act as a binder for the cellulose fibres in wood and certain plants and adds strength and stiffness to the cell walls.	www.biology-online.org/dictionary/Lignin
LIAC	Lignoceric acid	A crystalline fatty acid C ₂₄ H ₄₈ O ₂ that is found especially in wood tar (as from beechwood) and in the form of esters in many fats, fatty oils, and waxes and is derived from kerasin. (24:0). Also C ₂₄ :0.	http://www.merriam-webster.com/medical/lignoceric%20acid
LIMO	Limonene	A hydrocarbon; liquid terpene with a lemon odor; found in lemons and oranges and other essential oils; a chiral molecule. Contains d-limonene used in food manufacturing and some medicines.	www.websters-online-dictionary.org/definitions/limonene

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LINA	Linalool	A colorless, fragrant liquid, C ₁₀ H ₁₈ O, distilled from the oils of rosewood, bergamot, and other plants and trees and used in perfume manufacture.	www.thefreedictionary.com/linalool
LELA	Linoelaidic acid	Linoelaidic acid (C18:2 trans9,trans12) is a poly unsaturated fatty acid.	ECOTOX
LNLT	Linoleate	A salt (soap), ester, or anionic form of linoleic acid	http://medical-dictionary.thefreedictionary.com/linoleate
LINO	Linoleic Acid	A principal fatty acid in plants and considered essential in animal nutrition; used in medicine, feeds, paints, and margarine. Also: C18:2omega6, 18:2(n-6).	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, (2003)
LNLN	Linolenic acid	A liquid unsaturated fatty acid C ₁₈ H ₃₀ O ₂ found especially in drying oils (as linseed oil) and essential for the nutrition of some animals.	www.merriam-webster.com/dictionary/linolenic%20acid
LNLA	Linolenic acid, all cis	Linolenic acid (C18:3n-3), also C18:3 (all cis-9,12,15) acid or alpha-Linolenic acid, is a poly unsaturated fatty acid.	ECOTOX
LNEI	Linolenic and Eicosenoic Acid	Linolenic acid - One of the principle unsaturated fatty acids in plants and essential fatty acids in plants and an essential fatty acid in animal nutrition. Eicosenoic acid - a saturated fatty acid; a constituent of butter.	
LIPD	Lipid	Any of a group of organic compounds, including the fats, oils, waxes, sterols, and triglycerides, that are insoluble in water but soluble in common organic solvents, are oily to the touch, and together with carbohydrates and proteins constitute the principal structural material of living cells.	http://dictionary.reference.com/browse/lipid
<LIPT> goes to LIPD	Lipid Content, Total	No definition available.	
LPHX	Lipid hydroperoxide	A peroxol that is the primary oxygenated product of a polyunsaturated fatty acid.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:61051

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LDPO	Lipid Peroxides	Peroxides produced in the presence of a free radical by the oxidation of unsaturated fatty acids in the cell in the presence of molecular oxygen. The formation of lipid peroxides results in the destruction of the original lipid leading to the loss of integrity of the membranes. They therefore cause a variety of toxic effects <i>in vivo</i> and their formation is considered a pathological process in biological systems. Their formation can be inhibited by antioxidants, such as vitamin e, structural separation or low oxygen tension.	www.biology-online.org/dictionary/Lipid_peroxides
LPSA	Lipid Soluble Antioxidants	Lipid-soluble antioxidants protect cell membranes from lipid peroxidation. These compounds may be synthesized in the body or obtained from the diet.	http://en.wikipedia.org/wiki/Antioxidant
LPCR	Lipid to cytoplasm ratio	The ratio of lipids to cytoplasm in a sample.	ECOTOX
LCAR	Lipid:Chlorophyll A ratio	Ratio of Lipid to Chlorophyll A in a sample.	ECOTOX
LDNT	Lipids, Neutral	Neutral lipids (e.g., cholesteryl esters, triglycerides, and fatty acids) Neutral lipids can be surrounded by a hydrophilic shell composed of phospholipids or serum lipoproteins, they can be encompassed by detergents and phospholipids (intestinal micelles), or they can be bound to amphipathic proteins (transfer proteins).	www.pnas.org/content/85/20/7438.full.pdf
LDPL	Lipids, Polar	In an aqueous system, the polar heads of lipids align towards the polar, aqueous environment, while the hydrophobic tails minimize their contact with water and tend to cluster together, forming a vesicle; depending on the concentration of the lipid, this biophysical interaction may result in the formation of micelles, liposomes, or lipid bilayers. Micelles and bilayers form in the polar medium by a process known as the hydrophobic effect.	http://en.wikipedia.org/wiki/Lipid
LPDS	Lipocalin-type prostaglandin D synthase-like protein	A protein involved in lipid metabolism. Also: prostaglandin D2 synthase b.	http://www.uniprot.org/uniprot/Q8QGV4 and http://zfin.org/actin/marker/view/ZDB-GENE-030131-8436

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LPFS	Lipofuscin	Any of the minute, yellow-brown, lipogenic pigment granules that accumulate in the cytoplasm of senile animal and human cells. Lipofuscins are lipogenic pigments found chiefly in the smooth muscle cells, heart muscle cells, macrophages, parenchyma cells, interstitial cells, nerve cells, and ganglion cells. Their presence is associated with lysosomal degradation of the cell membrane.	www.biology-online.org/dictionary/Lipofuscin
LIPA	Lipoic Acid	An octanoic acid bridged with two sulfurs so that it is sometimes also called a pentanoic acid in some naming schemes. It is biosynthesized by cleavage of Linoleic acid and is a coenzyme of oxoglutarate dehydrogenase. Also: lipoate, Heparlipon, R-(+)-alpha-Lipoic acid, (+)-alpha-Lipoic acid, and (R)-(+)-1,2-Dithiolane-3-pentanoic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/thioctic_acid
LPPX	Lipoperoxide	Pathophysiology A peroxide—an O-O containing free radicals—which has peroxidized the carbon atoms close to the double bonds in an unsaturated fatty acid.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
LPPT	Lipoproteins	A complex of lipids and apolipoproteins, the form in which lipids are transported in the blood.	Dorland's Medical Dictionary for Health Consumers, 2007
LICO	Lithium content	The concentration of lithium found in a sample.	
LDLP	Low density lipoprotein	Lipoprotein substances (combination of a fat and a protein) which acts as a carrier for cholesterol and fats in the bloodstream. High levels of low density lipoprotein are considered a positive risk factor for the development of coronary artery disease. Less than 130 mg/dl is desirable, 130 to 159 mg/dl is borderline high, over 160 is considered high. Acronym: LDL	www.biology-online.org/dictionary/Low_density_lipoprotein
LDHD	Low density lipoprotein to high density lipoprotein ratio	The ratio of low density lipoprotein to high density lipoprotein.	ECOTOX
LVDL	Low density lipoprotein to very low density lipoprotein ratio (LDL/VLDL)	The ratio of low density lipoprotein to very low density lipoprotein ratio (LDL/VLDL).	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LMCN	Lumican	A small leucine-rich proteoglycan that contains 10 tandem leucine repeats and four N-linked sites within the leucine repeat region that may be substituted with keratan sulfate.	https://www.online-medical-dictionary.org/definitions/I/lumican.html
LUTE	Lutein	A lipochrome from the corpus luteum, fat cells, and egg yolk.	Dorland's Medical Dictionary for Health Consumers, 2007
LUZE	Lutein and Zeaxanthin content	The content of both lutein, a lipochrome, and zeaxanthin, a common carotenoid alcohol, measured in a sample.	ECOTOX
LUZC	Lutein and Zeaxanthin to Chlorophyll A ratio	The ratio of Lutein and Zeaxanthin to Chlorophyll A.	ECOTOX
LUOX	Luteoxanthin	An epoxycarotenol that consists of 5,6,5',8'-tetrahydro-β,β-carotene-3,3'-diol having epoxy groups at the 5,6- and 5',8'-positions.	http://www.ebi.ac.uk/chebi/search.do?chebId=CHEBI:35334
LYCP	Lycopene	A red crystalline substance, C ₄₀ H ₅₆ , that is the main pigment of certain fruits, as the tomato and paprika, and is a precursor to carotene in plant biosynthesis.	http://www.dictionary.com/browse/lycopene
LYSI	Lysine	Scientific name: 2,6-diaminohexanoic acid. An essential amino acid found in dairy and meat products, wheat germ, and brewer's yeast.	Jonas: Mosby's Dictionary of Complementary and Alternative Medicine. (c) 2005,
LPPC	Lysophosphatidylcholine	Lysophosphatidylcholines, also called lysolecithins, are a class of chemical compounds which are derived from phosphatidylcholines. They result from partial hydrolysis of phosphatidylcholines which removes one of the fatty acid groups.	http://en.wikipedia.org/wiki
LPPE	Lysophosphatidylethanolamine	Lysophosphatidylethanolamine is a specific inhibitor of phospholipase D, a key enzyme in the degradation of membrane phospholipids during the early stages of plant senescence. By this action, it retards the senescence of leaves, flowers, and post-harvest fruits.	http://lipidlibrary.aocs.org/Lipids/page/index.htm#lpe
LPPG	Lysophosphatidylglycerol	Lysophosphatidylglycerol, with a fatty acid in position sn-1 only, has been reported to have some biological properties in animal tissues <i>in vitro</i> , but it is not known whether these are relevant <i>in vivo</i> .	http://lipidlibrary.aocs.org/Lipids/page/index.htm

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MGCO	Magnesium content	A chemical element, its salts are essential in nutrition, being required for the activity of many enzymes, especially those concerned with oxidative phosphorylation.	Dorland's Medical Dictionary for Health Consumers, 2007
MGAL	Magnesium to aluminum ratio	The ratio of the amount of magnesium to aluminum in an organism or organism's parts.	ECOTOX
MGNR	Magnesium to Nitrogen ratio	Magnesium to nitrogen ratio in a sample.	ECOTOX
MPIX	Magnesium-protoporphyrin IX	A chlorophyll biosynthesis intermediate.	ECOREF#15787 7
MLAT	Malate	A salt or ester of malic acid	www.merriam-webster.com/dictionary/malate
MLCD	Malic acid	A 2-hydroxydicarboxylic acid that is succinic acid in which one of the hydrogens attached to a carbon is replaced by a hydroxy group. It has a role as a food acidity regulator and a fundamental metabolite. Also: DL-malic acid, 2-Hydroxybutanedioic acid, 2-Hydroxysuccinic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/525#section=Top
MLNT	Malonate	Derivative of malonic acid (the structural formula CH2(COOH)2), including its salts and esters.	https://www.online-medical-dictionary.org/definitions-m/molonates.html
MLDH	Malondialdehyde	An organic compound with the formula CH2(CHO)2. This reactive species occurs naturally and is a marker for oxidative stress; is generated from reactive oxygen species (ROS), and as such is assayed in vivo as a bio-marker of oxidative stress. Malondialdehyde is reactive and potentially mutagenic has shown to be found in heated edible oils such as sunflower and palm oils.	http://en.wikipedia.org/wiki/Malondialdehyde
MTSE	Maltose	A dextrodisaccharide from malt and starch. It is used as a sweetening agent and fermentable intermediate in brewing. Also: beta-maltose, maltobiose, D-maltose.	https://pubchem.ncbi.nlm.nih.gov/compound/6255
MNAI	Manganese Accumulation index	The ratio of manganese in an organism to manganese in the soil.	
MNCO	Manganese Content	A chemical element, its salts occur in the body tissue in very small amounts and activate liver arginase and other enzymes.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MNNR	Manganese Nitrogen ratio	The ratio of manganese to nitrogen in a sample.	ECOTOX
MNFE	Manganese to iron ratio	Ratio of manganese to iron in an organism or organism's tissues.	ECOTOX
MANT	Mannitol	A white, crystalline, water-soluble, slightly sweet alcohol that is used as a dietary supplement and dietetic sweetener and in medical tests of kidney function. Mannitol occurs naturally as an important food storage and transportation molecule in brown algae like kelp.	The American Heritage Science Dictionary, 2005
MRNN	Marennine	Among microalgae, the marine diatom <i>Haslea ostrearia</i> has the distinctive feature of synthesizing and releasing, into the surrounding environment, a blue-green polyphenolic pigment called marennine. The oyster-breeding industry commonly makes use of this natural phenomenon for the greening of oysters. Marennine exists in two different forms, the intracellular and extracellular forms. Both forms of marennine inhibit the development of marine bacteria	www.biomedsearch.com/searchlist.html?query_tx_t=Marennine&s.x=14&s.y=12
MARG	Margaric acid	Margaric acid (C17:0), or heptadecanoic acid, is a saturated fatty acid.	ECOTOX
MEAD	Mead Acid	Mead Acid (C20:3n-9), also all cis-5,8,11-eicosatrienoic acid, is a poly unsaturated fatty acid.	ECOTOX
MCHG	Mean Corpuscular Hemoglobin	(MCH) the average hemoglobin content of an erythrocyte.	Dorland's Medical Dictionary for Health Consumers, 2007
MCHC	Mean Corpuscular Hemoglobin Concentration	An estimation of the concentration of hemoglobin in grams per 100 mL of packed red blood cells, derived from the ratio of the hemoglobin to the hematocrit.	Mosby's Medical Dictionary, 8th edition, 2009
MCPV	Mean Corpuscular Volume	The average volume of red blood cells in erythrocyte indices, calculated from the hematocrit and the red blood cell count.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
MPVL	Mean platelet volume	Mean platelet volume measures the average amount (volume) of platelets. It is used along with platelet count to diagnose some diseases. If the platelet count is normal, the mean platelet volume can still be too high or too low.	http://www.webmd.com/a-to-z-guides/complete-blood-count-cbc

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MLNN	Melanin	Melanin is a class of compounds found in plants, animals, and protists, where it serves predominantly as a pigment. The class of pigments are derivatives of the amino acid tyrosine.	http://en.wikipedia.org/wiki
MPRB	Membrane progesterone receptor beta	Membrane progestin receptor beta (MPRb) is a steroid membrane receptor and binds progesterone. MPRb may be involved in oocyte maturation. MPRb is an integral membrane protein and is expressed in brain and testis. It belongs to the ADIPOR family.	http://www.abcam.com/progestin-receptor-beta-antibody-ab46534.html
MTHL	Menthol	An alcohol from various mint oils or produced synthetically;	Dorland's Medical Dictionary for Health Consumers, 2007
MNTH	Menthone	A liquid ketone C10H18O that occurs in a levorotatory form esp. in peppermint oil and pennyroyal oil and that can be made synthetically by oxidation of menthol.	www.merriam-webster.com/dictionary/menthone
MNAC	Menthyl Acetate	A natural monoterpane which contributes to the smell and flavor of peppermint. It is the acetate ester of menthol. Menthyl acetate constitutes 3-5% of the volatile oil of mentha piperita.	http://en.wikipedia.org/wiki/Menthyl_acetate
HGCO	Mercury concentration	The concentration of mercury found in a sample.	ECOTOX
MSET	meso-Erythritol	A precursor to the important tanning agent L-erythrulose and an aliphatic poly-alcohol used in the chemical analysis of the reactivity of various radicals and radical anions. Also: 1,2,3,4-Butanetetrol, meso-1,2,3,4-Tetrahydroxybutane, i-Erythritol.	https://www.sigmaaldrich.com/catalog/product/sigma/e7500?lang=en&region=US
MTLM	Metabolome	The dynamic collection of metabolites which represent a cell's or organism's net metabolic response to current conditions. Also: Metabolic profile.	https://www.online-medical-dictionary.org/definitions-m/metabolome.html
MTLT	Metal Content, Total	Total metal content in a sample.	ECOTOX
MTLN	Metallothionein	A family of low-molecular-weight, cysteine-rich proteins present in various tissues, which bind functional (e.g., copper, selenium, zinc) and toxic (e.g., arsenic, cadmium, mercury, silver) metal ions. Metallothionein production is stimulated by heavy metals (e.g., cadmium and mercury) and is involved in transport, storage, and regulation of "natural" metal ions.	Segen's Medical Dictionary, 2012

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MTCD	Metallothionein to Cadmium ratio	The ratio of Metallothionein to Cadmium measured in a sample	ECOTOX
MCUR	Metallothionein to Copper ratio	The ratio of Metallothionein to Copper measured in a sample	ECOTOX
MGLB	Methemoglobin	Hemoglobin in the oxidized state. Also ferrihemoglobin.	http://www.ncbi.nlm.nih.gov
METH	Methionine	A naturally occurring, essential amino acid that furnishes both methyl groups and sulfur necessary for normal metabolism. Labeled with carbon 11, it is used in positron emission tomography for detection of neoplasms.	Dorland's Medical Dictionary for Health Consumers, 2007
MJNA	Methyl jasmonate	Methyl jasmonate (MJ, MeJA), a methyl ester of jasmonic acid (JA) is a plant growth regulator. It is a fragrant volatile compound isolated from the flowers of Jasminum grandiflorum. It has been reported to play an important role in the plant's response to pathogens and wound. Also: methyl jasmonic acid, 3-Oxo-2-(2-pentenyl)cyclopentaneacetic acid, methyl ester, and Methyl 3-oxo-2-(2-pentenyl)cyclopentaneacetate.	http://www.sigmaaldrich.com/catalog/product/aldrich/392707?lang=en&region=US
MLLA	Methyl linolenate	Methyl linolenate, a polyunsaturated fatty acid (PUFA), is used in studies on the mechanisms and prevention of oxidation/peroxidation of unsaturated fatty acids. Methyl linolenate is being studied as a possible skin whitening agent with anti-melanogenesis activity. Also: Linolenic acid methyl ester, Methyl cis,cis,cis-9,12,15-octadecatrienoate.	http://www.sigmaaldrich.com/catalog/product/sigma/l2626?lang=en&region=US
MDCH	Methyl-4,7,10,13,16,19-Docosahexanate	No definition available.	
MSLC	Methylselenocysteine content	The concentration of Methylselenocysteine, also known as Selenium-methyl-selenocysteine (Se-methyl-selenocysteine), found in a sample.	ECOTOX
MGPN	Mg-2,4-divinyl pheophophyrin a5 monomethyl ester	Mg-2,4-divinyl pheophophyrin a5 monomethyl ester is a protochlorophyllide pigment.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MCYS	Microcystin	Microcystins are cyclic nonribosomal peptides produced by cyanobacteria. They are cyanotoxins and can be very toxic for plants and animals including humans. Microcystins consist of several uncommon non-proteinogenic amino acids. Microcystin-containing (algae) 'blooms' are a problem worldwide. Once ingested, microcystin travels to the liver, though some remains in the blood stream and may contaminate tissue.	http://en.wikipedia.org/wiki/Microcystin
MCPR	Microsomal Proteins	Proteins found in microsomes.	ECOTOX
MP3B	Microtubule-associated protein 1 light chain 3 beta	Ubiquitin-like modifier involved in formation of autophagosomal vacuoles (autophagosomes). Plays a role in mitophagy which contributes to regulate mitochondrial quantity and quality by eliminating the mitochondria to a basal level to fulfill cellular energy requirements and preventing excess ROS production.	http://www.uniprot.org/uniprot/Q9GZQ8
MCON	Mineral content	Mineral content.	ECOTOX
MRXC	Mirex concentration	The amount of the chemical Mirex found in an organism, tissue or response site	ECOTOX
MOCO	Molybdenum Content	An essential trace element required for the function of certain enzymes (e.g., xanthine oxidase); it is present in legumes, whole grains, cereals, dark green vegetables, legumes, liver and meats.	Segen's Medical Dictionary, 2012
MGDG	Monogalactosyl Diglyceride (Glycolipid) Content	A group of glycolipids in which the sugar group is galactose. They are distinguished from glycosphingolipids in lacking nitrogen. They constitute the majority of membrane lipids in plants	www.reference.md/files/C426/mC426675.html
MGCR	Monoglyceride	More correctly known as a monoacylglycerol, is a glyceride consisting of one fatty acid chain covalently bonded to a glycerol molecule through an ester linkage; can be formed by both industrial chemical and biological processes; commonly added to commercial food products in small quantities.	http://en.wikipedia.org/wiki/Monoglyceride
MFPF	Monosaturated fatty acid to Polysaturated fatty acid ratio	The ratio of Monosaturated fatty acid to Polysaturated fatty acid found in a sample.	ECOTOX
MOTP	Monoterpenes	Any of a class of terpenes C ₁₀ H ₁₆ containing two isoprene units per molecule.	http://www.merriam-webster.com/dictionary/monoterpene
MUFA	Monounsaturated Fatty Acids	Monounsaturated Fatty Acids are fatty acids in which the carbon chain contains one double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MYLN	Myelin	A lipoproteinaceous substance constituting the sheaths of various nerve fibers throughout the body and enveloping the axis of myelinated nerves. It is largely composed of phospholipids and protein, which gives the fibers a white, creamy color	Mosby's Medical Dictionary, 8th edition, 2009
MINO	myo-Inositol	myo-Inositol plays an important role as the structural basis for a number of secondary messengers in eukaryotic cells. An inositol having myo- configuration.	http://www.ebi.ac.uk/chebi/search.do?chebId=CHEBI:17268 and https://en.wikipedia.org/wiki/Inositol
MHVC	Myosin heavy chain	The larger subunits of myosins. The heavy chains have a molecular weight of about 230 kDa and each heavy chain is usually associated with a dissimilar pair of myosin light chains.	http://www.online-medical-dictionary.org/definitions-m/myosin-heavy-chain.html
MYTL	Myosin tail	The tail region, which provides the anchoring point that maintains the position of the heavy chain, of myosin, a translocating protein.	http://www.online-medical-dictionary.org/definitions-m/myosins.html
MLP3	Myosin, light polypeptide 3, skeletal muscle	A subunit of myosin that binds near the head groups of myosin heavy chains.	http://www.online-medical-dictionary.org/definitions-m/myosin-light-chains.html
MYRA	Myristic acid	One of the less common fatty acyl residues of phospholipids in biological membranes but is found as an N terminal modification of a large number of membrane associated proteins and some cytoplasmic proteins; a saturated fatty acid occurring naturally in animal and vegetable fats; also called tetradecanoic acid, C14:0	www encyclo.co.uk/define/Myristic%20acid
MYSL	Myristoleic acid	Myristoleic acid (C14:1 cis9) is a mono unsaturated fatty acid.	ECOTOX
HNMS	N[3H-methyl] scopolamine	Scopolamine: a poisonous alkaloid C17H21NO4 similar to atropine that is found in various solanaceous plants and is used for its anticholinergic effects (as preventing nausea in motion sickness and inducing mydriasis) —called also hyoscine	www.merriam-webster.com/dictionary/scopolamine

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RNDP	NADPH to NADP Ratio	Ratio of NADPH to NADP. NADPH is the reduced form of NADP+, and NADP+ is the oxidized form of NADPH (Nicotinamide adenine dinucleotide phosphate).	http://en.wikipedia.org/wiki/ECOTOX
NACA	Nascent polypeptide associated complex subunit alpha	Component of the nascent polypeptide-associated complex (NAC), a dynamic component of the ribosomal exit tunnel, protecting the emerging polypeptides from interaction with other cytoplasmic proteins to ensure appropriate nascent protein targeting.	https://www.uniprot.org/uniprot/P38879
NAPE	N-Acetylaspartate	N-acetylaspartate is an amino acid derivative, formed by the acetylation of l-aspartic acid. Also: NAA, N acetylaspartate, N-acetylaspartic acid.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2833730/
NACE	N-Acetylcysteine	The N-acetyl derivative of cysteine. It is used as a mucolytic agent to reduce the viscosity of mucous secretions. Also: Acemuc, Acetabs, N Acetylcysteine.	https://www.onlinedictionary.com/definitions-a/acetylcysteine.html
NBUA	N-Butyric acid	One of two isomeric fatty acids C4H8O2; the straight-chain acid of unpleasant odor normally found in perspiration and rancid butter. Also Butanoic acid, or normal butyric acid	http://www.wikipedia.org/wiki/N-butanoic_acid
NPTN	Neopterin	A pteridine derivative present in body fluids; elevated levels result from immune system activation, malignant disease, allograft rejection, and viral infections. (From Stedman, 26th ed) Neopterin also serves as a precursor in the biosynthesis of Biopterin.	https://www.onlinedictionary.com/definitions-n/neopterin.html
NXNT	Neoxanthin	Carotenoid pigments involved in photosynthesis. Neoxanthin is one of the main carotenoids in chloroplasts of higher plants and algae. Alternate spelling: neoxanthine	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=TOX&term=neoxanthin and ECOTOX
NRMA	Neuraminic acid	Sometimes known as sialic acid, but strictly one of a family of sialic acids (which includes also N glycolyl neuraminic acid and O substituted derivatives). It is a 9 carbon sugar formed by adding to mannose three carbons from pyruvate. Occurs in the subset of glycolipids known as gangliosides and in glycoproteins. The presence of its carboxyl group on glycolipids and glycoproteins is responsible for much of the negative charge on animal cell surfaces.	www.biology-online.org/dictionary/Sialic_acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NCME	Niacinamide	An important compound functioning as a component of the coenzyme NAD. Its primary significance is in the prevention and/or cure of blacktongue and pellagra. Most animals cannot manufacture this compound in amounts sufficient to prevent nutritional deficiency and it therefore must be supplemented through dietary intake. Also: 3 Pyridinecarboxamide, 3-Pyridinecarboxamide, Enduramide, Nicobion, Papulex, Vitamin B3, Vitamin PP.	https://www.online-medical-dictionary.org/definitions-n/niacinamide.html
NICO	Nickel Content	The concentration of nickel found in a sample.	ECOTOX
NIFE	Nickel to nitrogen ratio	Ratio of nickel to nitrogen in an organism or organism's tissues.	
<NADP>	Nicotinamide-adenine Dinucleotide Phosphate, Reduced	(nicotinamide) NADP - a coenzyme compound of ribosylnicotinamide 5'-phosphate, serves as an electron carrier in a number of reactions.	
NTME	Nicotinamide	A pyridinecarboxamide that is pyridine in which the hydrogen at position 3 is replaced by a carboxamide group.	https://www.ebi.ac.uk/chebi/search.do?chebaid=CHEBI:17154
INCT	Nicotine	A plant alkaloid from tobacco, blocks transmission at nicotinic synapses. An alkaloid poison that occurs in tobacco; used in medicine and as an insecticide. An alkaloid substance found in tobacco.	www.biology-online.org/dictionary/Nicotine
NPSS	Ninhydrin-positive Substances	No definition available.	
NO3C	Nitrate concentration (NO ₃ -)	The concentration of Nitrate (NO ₃ -) in a sample.	ECOTOX
NOCO	Nitric Oxide concentration	This compound is produced from L arginine by the enzyme nitric oxide synthase. Acts as a potent vasorelaxant via elevation of intracellular cGMP in vascular smooth muscle. Synthesis of nitric oxide is not confined to endothelium, isoforms of nitric oxide synthase are also found in brain, neutrophils and platelets. Synonym: endothelium derived relaxation factor.	www.biology-online.org/dictionary/Nitric_oxide
NO2C	Nitrite concentration (NO ₂ -)	The concentration of Nitrite (NO ₂ -) in a sample.	ECOTOX
NCAR	Nitrogen Calcium ratio	The ratio of nitrogen to calcium in a sample.	ECOTOX
NCON	Nitrogen content	The concentration of nitrogen found in a sample.	ECOTOX
NMGR	Nitrogen Magnesium ratio	The ratio of nitrogen to magnesium in a sample.	ECOTOX
NPRT	Nitrogen Phosphorus Ratio	The ratio of nitrogen to phosphorus in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NKRT	Nitrogen Potassium ratio	The ratio of nitrogen to potassium in a sample.	ECOTOX
NSRA	Nitrogen to sulfur ratio	The ratio of nitrogen to sulfur in a sample.	ECOTOX
NOHB	Nitrosyl hemoglobin	A protein in which the NO group replaces CO in hemoglobin A.	http://www.ncbi.nlm.nih.gov/mesh/67008657
NODA	Nonadecanoic acid	Nonadecanoic acid (C19:0) is a saturated fatty acid.	ECOTOX
NMIF	Non-methylene-interrupted fatty acids	Polyunsaturated fatty acids without methylene interrupted double bonds.	ECOTOX and http://lipidlibrary.aocs.org/Lipids/fa_poly/file.pdf
NPHQ	Non-photochemical quenching	A mechanism employed by plants and algae to protect themselves from the adverse effects of high light intensity. It involves the quenching of singlet excited state chlorophylls via enhanced internal conversion to the ground state (non-radiative decay), thus harmlessly dissipating excess excitation energy as heat through molecular vibrations.	https://en.wikipedia.org/wiki/Non-photochemical_quenching
QPHP	Non-photochemical quenching pigments to light harvesting pigments ratio	The ratio of Non-photochemical quenching pigments to light harvesting pigments.	ECOTOX
NPSH	Nonprotein Sulfhydryl	Sulfhydryl: the univalent radical group, SH, present in many biologically active molecules such as coenzymes and certain proteins. Also: Non-protein thiols, Nonprotein thiols.	http://dictionary.reference.com/browse/sulfhydryl
NSUG	Non-reducing sugars	A sugar that cannot donate electrons to other molecules and therefore cannot act as a reducing agent. Sucrose is the most common nonreducing sugar. The linkage between the glucose and fructose units in sucrose, which involves aldehyde and ketone groups, is responsible for the inability of sucrose to act as a reducing sugar.	www.encyclopedia.com/doc/1O6-nonreducingsugar.html
NC47	NSFL1 cofactor p47	A protein that reduces the ATPase activity of VCP. Necessary for the fragmentation of Golgi stacks during mitosis and for VCP-mediated reassembly of Golgi stacks after mitosis. May play a role in VCP-mediated formation of transitional endoplasmic reticulum (tER)Also: NSFL1 (p97) cofactor (p47), p97 cofactor p47.	http://www.uniprot.org/uniprot/Q9CZ44
NCB2	N-terminal EF-hand calcium-binding protein 2	A calcium binding protein. Also: Novel protein similar to vertebrate EF hand calcium binding protein 2, Neuronal calcium-binding protein 2, Synaptotagmin-interacting protein 2.	http://www.uniprot.org/uniprot/Q7Z6G3

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NRF2	Nuclear Factor E2 Related Factor 2	A basic-Leucine Zipper Transcription Factor that was originally described as a transcriptional regulator controlling expression of the beta-Globin Gene. It may regulate the expression of a wide variety of Genes that play a Role in protecting Cells from oxidative damage. Also:Nrf2.	http://www.online-medical-dictionary.org/definitions/n/nuclear-factor-e2-related-factor-2.html
NFKB	Nuclear factor-kappa B	Protein complex that controls transcription of DNA, cytokine production and cell survival. NF-κB is found in almost all animal cell types and is involved in cellular responses to stimuli such as stress. Also: nuclear factor kappa-light-chain-enhancer of activated B cells.	https://en.wikipedia.org/wiki/NF-%CE%BAB
NUAC	Nucleic Acids	Any of the group of complex compounds consisting of linear chains of monomeric nucleotides whereby each monomeric unit is composed of phosphoric acid, sugar and nitrogenous base, and involved in the preservation, replication, and expression of hereditary information in every living cell. The chains of nucleotides in a nucleic acid are linked by 3', 5' phosphodiester linkages. Nucleic acids may be in the form of DNA or RNA molecules containing the genetic information important for all cellular functions and heredity.	www.biology-online.org/dictionary/Nucleic_acid
NUTP	Nucleoside Triphosphate	(NTP) is a molecule containing a nucleoside bound to three phosphates. Nucleotide derivatives are necessary for life, as they are building blocks of nucleic acids and have thousands of other roles in cell metabolism and regulation. NTPs generally provide energy and phosphate group for phosphorylations.	http://en.wikipedia.org/wiki/Nucleoside_triphosphate
NTPH	Nucleotide triphosphate (Total) to hemoglobin ratio	Ratio of total nucleotide triphosphate to hemoglobin in a sample.	ECOTOX
NUTR	Nutrient Status Change	No definition available.	
OHGL	O2 Specific Bond to Hemoglobin	No definition available.	
OAGP	O-acetyl-glycoprotein	A conjugated protein-carbohydrate compound. Also: O-AcGP.	https://pubchem.ncbi.nlm.nih.gov/compound/439212
ODCN	Octadecanoate	A free fatty acid	ECOREF #77855
OCTA	Octadecenoic acid (C18:1n-7)	Octadecenoic acid, both cis and trans isomers, (C18:1n-7) is a mono unsaturated fatty acid.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
OCTS	Octadecenoic acids	Octadecenoic acids, various isomers of the mono unsaturated fatty acid.	ECOTOX
OCPN	Octopamine	Octopamine is an alpha-adrenergic sympathomimetic amine, biosynthesized from tyramine in the CNS and platelets and also in invertebrate nervous systems. It is used to treat hypotension and as a cardiotonic. The natural D(-) form is more potent than the L(+) form in producing cardiovascular adrenergic responses. It is also a neurotransmitter in some invertebrates.	https://pubchem.ncbi.nlm.nih.gov/compound/octopamine#section=Top
OSDB	Oestradiol (Estradiol) breakdown products	Amount of polar metabolites formed in nmoles/g microsomal fraction from the breakdown of estradiol.	ECOTOX
EPNP	O-Ethyl-O-p-nitrophenylbenzenethionophosphate	The amount of O-Ethyl-O-p-nitrophenylbenzenethionophosphate contained within a response site.	ECOTOX
OLCO	Oil Content	The amount of oil contained within a response site	ECOTOX
OLYD	Oil Yield	Oil Yield refers to the amount of oil that can be derived from an oilseed or from algae. It is usually represented as a percent.	www.oilgae.com/ref/glos/oil_yield.html
OLEC	Oleic Acid	Yellowish, unsaturated fatty acid with lard-like aroma; the main component of olive and cooking oils; used in soaps, ointments, cosmetics, and ore beneficiation. Also: 18:1(n-9), 18:1 cis-9, C18:1omega9.	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, (2003)
O3FA	Omega 3 Fatty Acid	Omega 3 Fatty Acids are unsaturated fatty acids which have the first unsaturated bond in the third position from the omega carbon.	http://www.ncbi.nlm.nih.gov
O3O6	Omega 3 Fatty Acids to Omega 6 Fatty Acids ratio	Ratio of Omega 3 Fatty Acids to Omega 6 Fatty Acids in a sample.	ECOTOX
O6FA	Omega 6 Fatty Acids	Omega 6 Fatty Acids are unsaturated fatty acids which have the first unsaturated bond in the sixth position from the omega carbon.	http://www.ncbi.nlm.nih.gov
O6O3	Omega 6 Fatty Acids to Omega 3 Fatty Acids ratio	Ratio of Omega 6 Fatty Acids to Omega 3 Fatty Acids in a sample.	ECOTOX
OACD	Organic acids	Organic acid: an organic compound with acidic properties. The most common organic acids are the carboxylic acids, whose acidity is associated with their carboxyl group –COOH. In biological systems, organic compounds containing these groups are generally referred to as organic acids.	http://en.wikipedia.org/wiki/Organic_acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ORNI	Ornithine	An amino acid obtained from arginine by splitting of urea; it is an intermediate in urea biosynthesis.	Dorland's Medical Dictionary for Health Consumers, 2007
OSCN	Osteocalcin	Osteocalcin is a Vitamin K-dependent calcium-binding protein synthesized by osteoblasts and found primarily in bones. Serum osteocalcin measurements provide a noninvasive specific marker of bone metabolism. The protein contains three residues of the amino acid gamma-carboxyglutamic acid (Gla), which, in the presence of calcium, promotes binding to hydroxyapatite and subsequent accumulation in bone matrix.	http://www.ncbi.nlm.nih.gov
OXAC	Oxalic acid	A colourless, crystalline, toxic organic compound belonging to the family of carboxylic acids, commonly found in plants, also called Ethanedioic Acid.	http://www.britannica.com/EBchecked/topic/436389/oxalic-acid
OXAE	Oxaloacetate	A four-carbon molecule found in the mitochondrion that condenses with acetyl CoA to form citrate in the first reaction of the Krebs cycle. Also: alpha-ketoacid oxalacetate.	http://resonanceresearch.org/oxalacetate.htm
OXSI	Oxidative Status Index	Total oxidant status to total antioxidant capacity ratio. Also: Oxidative stress index.	ECOREF #177227
OCON	Oxygen Content	The concentration of oxygen found in a sample.	ECOTOX
ONRA	Oxygen to nitrogen ratio	The ratio of oxygen to nitrogen in a sample.	ECOTOX
OXHC	Oxyhemocyanin	A blue pigment formed by the combination of hemocyanin with oxygen in the ratio of one molecule of oxygen to two atoms of copper in the hemocyanin.	www.merriam-webster.com/dictionary/oxyhemocyanin
OHCP	Oxyhemocyanin to protein ratio	Ratio of oxyhemocyanin to protein in a sample.	ECOTOX
PCLV	Packed Cell Volume	The percentage of the volume of whole, unclotted blood occupied by the erythrocytes. Abbreviated PCV.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
PALM	Palmitic Acid	A fatty acid derived from spermaceti; used to make metal palmitates and in soaps, waterproofing, and lubricating oils. Also: Hexadecanoic Acid, cetyllic acid, C16:0	http://pubchem.ncbi.nlm.nih.gov

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PALL	Palmitoleic Acid	A crystalline unsaturated fatty acid C16H30O2 occurring in the form of glycerides especially in marine animal oils (as of cod, seals, and whales) and yielding palmitic acid on hydrogenation. Also: 16:1(n-7), C16:1 trans-9, C16:1n7, palmitelaidic acid, palmitoleate.	www.merriam-webster.com/dict/palmitoleic%20acid and http://pubchem.ncbi.nlm.nih.gov/compound/palmitoleic_acid#section=EC-Number
AMNH	P-amino Hippurate	A salt, conjugate base, or ester of aminohippuric acid; the sodium salt is used to measure effective renal plasma flow and to determine the functional capacity of the tubular excretory mechanism.	Dorland's Medical Dictionary for Health Consumers, 2007
PABA	p-Aminobenzoic acid	A part of the folic acid molecule. Also known as: 4-Amino-benzoic Acid, 4-Amino-Benzoesaeure, p-Amino-benzoesaeure, PABA, vitamin BX, Anticanitic vitamin, p-Carboxyaniline, p-Carboxyphenylamine, 1-Amino-4-carboxybenzene, Kyselina p-Aminobenzoova, Aniline-4-carboxylic acid.	http://chemicalland21.com/specifychem/finechem/p-AMINOBENZOIC%20ACID.htm
PTNA	Pantothenic acid	Pantothenic acid is a butyryl-beta-alanine that can also be viewed as pantoic acid complexed with beta alanine. It is incorporated into coenzyme A and protects cells against peroxidative damage by increasing the level of glutathione. Also: Vitamin B5	http://www.ncbi.nlm.nih.gov
PARN	Parinaric acid	A crystalline highly unsaturated fatty acid CH ₃ CH ₂ (CH=CH)4(CH ₂) ₇ COOH obtained esp. from seed fats of trees of the genus Parinarium. 18:4 undifferentiated fatty acid.	http://www.fda.gov/fnic/foodcomp/Data/SR17/sr17_doc.pdf and http://www.merriam-webster.com/dictionary/parinaric%20acid
PRXT	Paroxetine	A selective serotonin uptake inhibitor used as the hydrochloride salt to treat depression and obsessive-compulsive, panic, and social anxiety disorders.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PTLN	Patulin	Patulin, or 4-Hydroxy-4H-furo(3,2-c)pyran-2(6H)-one, is a mycotoxin produced by several species of <i>Aspergillus</i> and <i>Penicillium</i> . It is found in unfermented apple and grape juice and field crops. It has antibiotic properties and has been shown to be carcinogenic and mutagenic and causes chromosome damage in biological systems.	http://www.ncbi.nlm.nih.gov
PCBC	PCB concentration	The amount of the chemical(s) Polychlorinated biphenol(s) found in an organism, tissue or response site.	ECOTOX
PCMA	p-Coumaric acid	A phenolic acid. Also: 4-Hydroxycinnamic acid, p-Hydroxycinnamic acid, 4-Coumaric acid, trans-p-Coumaric acid, Para-Coumaric acid, p-Cumaric acid.	http://pubchem.ncbi.nlm.nih.gov/compound/p-coumaric_acid
PETN	Pectin	Any of various water-soluble substances that bind adjacent cell walls in plant tissues.	http://www.merriam-webster.com/dictionary/pectin
PDCN	Pentadecanoate	A free fatty acid	ECOREF #77855
PDCA	Pentadecanoic acid	Pentadecanoic acid, pentadecylic acid (C15:0) is a saturated fatty acid.	http://en.wikipedia.org/wiki/
PFOS	Perfluorooctane sulfonate	The concentration of Perfluorooctane sulfonate found in a sample. Perfluorooctane sulfonate (PFOS) is a perfluoralkyl sulfonate that is commonly used as a simple salt (such as potassium, sodium or ammonium) or is incorporated into larger polymers.	www.epa.gov/opptintr/existingchemicals/pubs/pfcs_action_plan123_0_09.pdf
PFOA	Perfluorooctanoic acid	The concentration of Perfluorooctanoic acid found in a sample. Perfluorooctanoic acid (PFOA) is a perfluoralkyl carboxylate that is produced synthetically as a salt. Ammonium salt is the most widely produced form.	www.epa.gov/opptintr/existingchemicals/pubs/pfcs_action_plan123_0_09.pdf
POLD	Peroxidizable lipids	Lipids that are able to be peroxidized.	ECOTOX
PHPH	pH	Hydrogen ion concentration	www.biology-online.org/dictionary/Ph
PPYT	Phaeophytin	A breakdown product of chlorophyll	www.dep.state.fl.us/labs/biology/microbio.htm

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PNLA	Phenolic acids	Acids containing or derived from phenol.	The American Heritage Medical Dictionary, 2007, 2004 by Houghton Mifflin Company. http://medical-dictionary.thefreedictionary.com/phenolic
PNYL	Phenols concentration	The concentration of Phenols found in a sample. Phenols, sometimes called phenolics, are a class of chemical compounds consisting of a hydroxyl group (-O H) attached to an aromatic hydrocarbon group. The simplest of the class is phenol (C ₆ H ₅ OH).	http://en.wikipedia.org/wiki/Phenols and ECOTOX
PHEN	Phenylalanine	One of the amino acids which the body cannot manufacture itself, but must acquire from food. It is abundant in meats and cheese. Phenylalanine is a precursor of tyrosine and together they lead to the formation of thyroxine or thyroid hormone and of adrenaline and noradrenaline which is converted into a neurotransmitter, a brain chemical which transmits nerve impulses.	www.biology-online.org/dictionary/Phenylalanine
PBCA	Pheophytin a to Chlorophyll a ratio	The ratio of Pheophytin a to Chlorophyll a. Also: The ratio of Phaeophytin a to Chlorophyll a.	ECOTOX
PBCB	Pheophytin b to Chlorophyll b ratio	The ratio of Pheophytin b to Chlorophyll b ratio. Also: The ratio of Phaeophytin b to Chlorophyll b.	ECOTOX
PTNN	Phlorotannin	Phlorotannins are a class of polyphenolic compounds (tannins) derived from phloroglucinol (1,3,5-trihydroxybenzene). Phlorotannins can be found in brown seaweeds.	http://www.ncbi.nlm.nih.gov and ECOTOX
PSPH	Phosphagen	Any of several organic phosphate compounds (as phosphocreatine or phosphoarginine) occurring especially in muscle and releasing energy on hydrolysis of the phosphate	www.merriam-webster.com/medical/phosphagen
PPHT	Phosphate	A salt of phosphoric acid. As a biological molecule, it is composed of phosphorus and oxygen and plays a major role in biological processes of many organisms, e.g. as chemical component of nucleic acids (DNA and RNA), nucleotides (ATP), plasma membrane (phospholipids), etc.	www.biology-online.org/dictionary/Phosphate
PHSP	Phosphatide Phosphorus	Phospholipid with phosphorus.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PHPA	Phosphatidic acid	Phosphatidic acid is a major constituent of cell membranes and acts as a biosynthetic precursor for the formation of all acylglycerol lipids in the cell.	http://en.wikipedia.org/wiki
PHSC	Phosphatidyl Choline (Phospholipid) Content	A phospholipid comprising choline linked to phosphatidic acid; it is a major component of cell membranes and is localized preferentially in the outer surface of the plasma membrane.	Dorland's Medical Dictionary for Health Consumers, 2007
PHSE	Phosphatidyl Ethanolamine (Phospholipid) Content	A phospholipid containing ethanolamine that is a major constituent of cell membranes and is localized preferentially in the inner surface of the plasma membrane. Abbreviated PE.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
PHSG	Phosphatidyl Glycerol (Phospholipid) Content	A phospholipid that can be seen in amniotic fluid, pulmonary effluent and semen.	http://connection.ebscohost.com/c/reference-entries/62156446/phosphatidyl-glycerol
PHSI	Phosphatidyl Inositol (Phospholipid)	A phosphatidic acid combined with inositol found in biomembranes and a precursor to certain cellular signals. Sometimes referred to as inositide. Synonym(s): phosphoinositide, Phosphatidylinositol.	Farlex Partner Medical Dictionary, 2012
PPDS	Phosphatidylserine	A phospholipid containing serine that is an important constituent of cell membranes and is localized preferentially in the inner surface of the plasma membrane.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition. 2003
PARG	Phosphoarginine	A compound (in particular, a phosphagen) of L-arginine with phosphoric acid containing the phosphoamide bond; a source of energy in the contraction of muscle in invertebrates, corresponding to phosphocreatine in the muscles of vertebrates. Synonym(s): arginine phosphate	Farlex Partner Medical Dictionary, 2012

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PSPC	Phosphocholine	The biological role played by a material entity when bound by a receptor of the adaptive immune system. An intermediate in the synthesis of phosphatidylcholine in tissues. Also: Choline phosphate, N-Triethyl-2-aminoethylphosphonate, O-Phosphocholine, Phosphocholine, Phosphorylcholine.	http://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:18132 and https://en.wikipedia.org/wiki/Phosphocholine
PHCR	Phosphocreatine	A compound of creatine and phosphoric acid occurring in muscle, being the most important storage form of high-energy phosphate, the energy source in muscle contraction. Also: Creatine phosphate.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and https://en.wikipedia.org/wiki/Phosphocreatine
PCRA	Phosphocreatine to creatine	The ratio of Phosphocreatine to creatine	ECOTOX
PCRE	Phosphocreatinine	A high energy reservoir for ATP formation.	http://web.stcloudstate.edu/lseerama/Assets/Biochemistry480/MetabGen.pdf
PDST	Phosphodiester	An oligonucleotide with an oxygen atom linking consecutive nucleotides.	www.merriam-webster.com/medical/phosphodiester
PSPY	Phosphoenol pyruvate	A high energy derivative of pyruvate occurring as an intermediate in the Embden-Meyerhof pathway of glucose metabolism, in gluconeogenesis, and in the biosynthesis of some amino acids.	Dorland's Medical Dictionary for Health Consumers, 2007
PPEA	Phosphoethanolamine	A key intermediate in the formation of cephalins; formed in liver and brain by phosphorylation of ethanolamine.	Farlex Partner Medical Dictionary, 2012
PLTR	Phospholipid to Triglyceride ratio	The ratio of phospholipid to triglyceride in a sample.	ECOTOX
PPPN	Phosphoprotein	Any of various proteins (as casein) that contain combined phosphoric acid.	http://www.merriam-webster.com/medlineplus/phosphoprotein
PCON	Phosphorus Content	The concentration of phosphorus found in a sample.	ECOTOX
PNRT	Phosphorus Nitrogen ratio	The ratio of phosphorus to nitrogen in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PORT	Phosphorus oxygen ratio	The ratio of phosphorus to oxygen in a sample.	ECOTOX
PFER	Phosphorus to Iron Ratio	The ratio of phosphorus to iron in a sample.	ECOTOX
PZNR	Phosphorus to Zinc ratio	Ratio of phosphorus to zinc in an organism or organism's tissues.	ECOTOX
PPPT	Phosphorylation of proteins	The addition of a phosphate group to an organic molecule. Phosphorylation is important for many processes in living cells. ATP is formed during cell respiration from ADP by phosphorylation, as in the mitochondria of eukaryotic cells (oxidative phosphorylation) and the chloroplasts of plant cells (photosynthetic phosphorylation). Phosphorylation also regulates the activity of proteins, such as enzymes, which are often activated by the addition of a phosphate group and deactivated by its removal (called dephosphorylation).	www.thefreecyclopedia.com/phosphorylation
PSPI	Phosphatidylserine and phosphatidylinositol	Derivatives of phosphatidic acids that are parts of biomembranes.	ECOTOX
PHSS	Phosphatidylserine	Derivatives of phosphatidic acids in which the phosphoric acid is bound in ester linkage to a serine moiety. Also Serine Phosphoglyceride	http://www.ncbi.nlm.nih.gov
PHOQ	Photochemical quenching	Quenching of chlorophyll fluorescence by oxidised Q, the electron acceptor of photosystem 2; includes qQ-quenching.	https://link.springer.com/article/10.1007/BF00018269
PHCB	Phycobiliproteins	Phycobiliproteins are light harvesting protein complexes found in phycobilisomes.	http://www.ncbi.nlm.nih.gov
PHYC	Phycocyanin	Blue pigment in algae. A blue photosynthetic pigment found in some bacteria and algae which absorbs light in the 618nm range.	www.biology-online.org/dictionary/Phycocyanin
PCCR	Phycocyanin to chlorophyll a ratio	The ratio of phycocyanin to chlorophyll a in a sample.	ECOTOX
PCCB	Phycocyanobilin	A blue phycobilin, i.e., a tetrapyrrole chromophore found in cyanobacteria and in the chloroplasts of red algae, glaucophytes, and some cryptomonads.	http://en.wikipedia.org/wiki/Phycocyanobilin
PHCO	Phycoerythrin	Phycoerythrin is the metal-free red phycobilin pigment in a conjugated chromoprotein of red algae. It functions as a light-absorbing substance together with chlorophylls.	http://www.ncbi.nlm.nih.gov
PECA	Phycoerythrin to chlorophyll a ratio	The ratio of phycoerythrin to chlorophyll a in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PHXA	p-Hydroxybenzaldehyde	A phenolic acid derivative. Also: 4-Hydroxybenzaldehyde, 4-Formylphenol, p-Formylphenol, p-Oxybenzaldehyde.	http://pubchem.ncbi.nlm.nih.gov/compound/4-hydroxybenzaldehyde
PHBA	p-Hydroxybenzoic acid	A phenolic acid. Also 4-Hydroxybenzoic acid, 4-Carboxyphenol, p-Salicylic acid.	http://pubchem.ncbi.nlm.nih.gov/compound/4-hydroxybenzoic_acid
PYAX	Phytoalexin	A chemical produced by a host plant that inhibits the growth of a pathogenic fungus.	http://botanydictionary.org/phytoalexin.html
PHTC	Phytocelatin	Oligomers of glutathione, produced by the enzyme phytocelatin synthase. They are found in plants, fungi, nematodes and all groups of algae including cyanobacteria. Phytocelatins act as chelators, and are important for heavy metal detoxification.	http://en.wikipedia.org/wiki/Phytocelatin
PHTN	Phytoene	Phytoene is a precursor to carotenoids. Two molecules of the 20 carbon geranylgeranyl pyrophosphate are condensed in a tail-to-tail configuration to give the forty carbon phytoene, the first committed step in carotenoid biosynthesis.	http://en.wikipedia.org/wiki
PHBC	Phytoene to beta-carotene ratio	The ratio of phytoene to beta-carotene found in a sample.	ECOTOX
PYTF	Phytofluene	A polyene hydrocarbon C ₄₀ H ₆₄ occurring with carotenoids in plants.	https://www.merriam-webster.com/dictionary/phytoflue
PIAC	Pinolenic acid	Pinolenic acid (often misspelled as Pinoleic acid) is a fatty acid contained in the Korean Pine nut and the seeds of other conifers (Taxaceae). (18:3n-6)	http://en.wikipedia.org/wiki/Pinolenic_acid
PCAD	Pipecolic acid	A piperidinemonocarboxylic acid in which the carboxy group is located at position C-2. It is a conjugate acid of a pipecolate. Also: 2-piperidinecarboxylic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/849#section=Top
PLSN	Plastin	Actin-bundling protein in the absence of calcium.	https://www.uniprot.org/uniprot/Q3V0K9
PSCY	Plastocyanin	A copper-containing plant protein that is a fundamental link in the electron transport chain of green plants during the photosynthetic conversion of light energy by photophosphorylation into the potential energy of chemical bonds.	www.reference.md/files/D010/mD010970.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PLAT	Platelets	The smallest cells in the blood. They are formed in the red bone marrow, and some are stored in the spleen. Platelets are disk-shaped, contain no hemoglobin, and are essential for the coagulation of blood and in maintenance of hemostasis. Normally between 200,000 and 300,000 platelets are found in 1 mL of blood. Also called thrombocyte.	Mosby's Medical Dictionary, 8th edition, 2009
PNAS	p-Nitroanisol	The amount of p-Nitroanisol contained within a response site.	ECOTOX
PLAM	Polyamine	An organic compound having two or more primary amino groups (-NH ₂). This class of compounds includes many substances that play important roles in both eukaryotic and prokaryotic cells, such as putrescine, cadaverine, spermidine, and spermine.	http://en.wikipedia.org/wiki/Polyamine
PBHB	Poly-beta-hydroxybutyrate	Poly β-hydroxybutyrate (PHB) is an energy and carbon storage material accumulated in response to the limitation of an essential nutrient.	www.springerlink.com/content/j2n601h23v74t5k6/
PEGE	Polyethylene Glycol (Peg) Efflux	No definition available.	
PLSC	Polysaccharide	A carbohydrate polymer that is formed from three or more molecules of simple carbohydrates. Examples of polysaccharides are dextrin, starch, glycogen, cellulose, gums, and inulin.	Mosby's Medical Dictionary, 8th edition, 2009
PUSF	Polyunsaturated fatty acid to Saturated fatty acid ratio	The ratio of Polyunsaturated fatty acid to Saturated fatty acid.	ECOTOX
PUFA	Polyunsaturated Fatty Acids	Polyunsaturated Fatty Acids are fatty acids in which the carbon chain contains two or more double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov
PORP	Porphyrin	Any of various heterocyclic compounds, derived from pyrrole, that occur universally in protoplasm, contain a central metal atom, and provide the foundation structure for hemoglobin, chlorophyll, and certain enzymes.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
KCDR	Potassium Cadmium Ratio	The ratio of potassium to cadmium in a sample.	ECOTOX
KCON	Potassium Content	The concentration of potassium found in a sample.	ECOTOX
KCUR	Potassium Copper Ratio	The ratio of potassium to copper in a sample.	ECOTOX
KNO3	Potassium nitrate	Potassium nitrate content in a sample.	ECOTOX
KNRT	Potassium Nitrogen ratio	The ratio of potassium to nitrogen in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
KNAR	Potassium Sodium Ratio	The ratio of potassium to sodium in a sample.	ECOTOX
PRAS	Prasinoxanthin	An algal pigment. (Note: If the measurement is on a single organism it is coded under BCM. If the measurement is on a group of organisms it is coded under POP.)	ECOTOX
PALB	Prealbumin	A protein component of plasma having a molecular weight of about 55,000 and containing 1.3% carbohydrate; estimated plasma concentration is 0.3 g per 100 mL. Also: transthyretin.	http://medical-dictionary.thefreedictionary.com/prealbumin
PCPA	Procarboxypeptidase A	Physiologically inactive substances that can be converted to active enzymes, specific precursor form is referred to as a procarboxypeptidase A. In the case of pancreatic carboxypeptidase A, the inactive zymogen form, pro-carboxypeptidase A, is converted to its active form - carboxypeptidase A - by the enzyme enteropeptidase. This mechanism ensures that the cells wherein procarboxypeptidase A is produced are not themselves digested.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
PCPB	Procarboxypeptidase B	Physiologically inactive substances that can be converted to active enzymes, specific precursor form is referred to as a procarboxypeptidase B. In the case of pancreatic carboxypeptidase B, the inactive zymogen form, pro-carboxypeptidase B, is converted to its active form - carboxypeptidase A - by the enzyme enteropeptidase. This mechanism ensures that the cells wherein procarboxypeptidase A is produced are not themselves digested.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
PCD6	Programmed cell death 6-interacting protein	A protein that may play a role in the regulation of both apoptosis and cell proliferation. It is involved in concentration and sorting of cargo proteins of the multivesicular body (MVB) for incorporation into intraluminal vesicles (ILVs) that are generated by invagination and scission from the limiting membrane of the endosome. Also: ALG-2-interacting protein 1.	http://www.uniprot.org/uniprot/Q9QZA2
PRLN	Proline	A cyclic, nonessential amino acid occurring in proteins; it is a major constituent of collagen.	Dorland's Medical Dictionary for Health Consumers, 2007
PAAR	Proline to total amino acid ratio	The ratio of proline to total amino acid in a sample.	ECOTOX
PMP2	proMMP2	The inactive zymogen, or proenzyme, of MMP2 (matrix metalloproteinase 2)	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PMP9	proMMP9	The inactive zymogen, or proenzyme, of MMP9 (matrix metalloproteinase 9)	ECOTOX
PDAD	Propanedioic acid	A dicarboxylic acid with structure CH ₂ (COOH)2. The ionised form of malonic acid, as well as its esters and salts, are known as malonates. Also: Malonic acid, Dicarboxymethane, Carboxyacetic acid, Methanedicarboxylic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/867#section=Top
PADH	Propionaldehyde	Propionaldehyde is the organic compound with the formula CH ₃ CH ₂ CHO. It is the only 3-carbon aldehyde and is a structural isomer of acetone. It is a colourless liquid with a slightly irritating, fruity odour. It is present as a lipid metabolite in tissues.	http://en.wikipedia.org/wiki/Propionaldehyde and ECOREF#73878
PGE2	Prostaglandin E2	One of a group of naturally occurring, chemically related fatty acids that stimulate contractility of the uterine and other smooth muscle and have the ability to lower blood pressure, regulate acid secretion of the stomach, regulate body temperature and platelet aggregation, and control inflammation and vascular permeability; they also affect the action of certain hormones. Nine primary types are labeled A through I, the degree of saturation of the side chain of each being designated by subscripts 1, 2, and 3. The types of prostaglandins are abbreviated PGE2, PGF2 _a , and so on.	Dorland's Medical Dictionary for Health Consumers, 2007
PTSM	Proteasome	Proteolytic complexes that degrade cytosolic and nuclear proteins. Implicated in aTP dependent ubiquitin protein complex degradation and in antigen processing in antigen presenting cells.	www.biology-online.org/dictionary/Proteasome
PROB	Protein binding	The process in which substances, either endogenous or exogenous, bind to proteins, peptides, enzymes, protein precursors, or allied compounds. Specific protein-binding measures are often used as assays in diagnostic assessments.	www.biology-online.org/dictionary/Protein_binding
PRSH	Protein bound sulfhydryl	Sulfhydryl: The radical -SH; contained in glutathione, cysteine, coenzyme A, lipoamide (all in the reduced state), and in mercaptans (R-SH). Synonym: thiol.	www.biology-online.org/dictionary/Sulfhydryl
CNP1	Protein Canopy-1	Involved in the maintenance of the midbrain-hindbrain boundary (MHB) organizer. Contributes to a positive-feedback loop of FGF signaling in the MHB, enabling the MHB to exert its role as an organizer for the tectal and cerebellar development. Also: Protein D121, cnpy1, d121.	http://www.uniprot.org/uniprot/Q2L6L1
PCAR	Protein carbonyls	Markers of oxidative stress measured as 2,4-dinitrophenylhydrazine incorporated into protein	ECOREF #81028

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PRCO	Protein Content	Protein: any of a group of complex organic compounds containing carbon, hydrogen, oxygen, nitrogen, and sulfur. Proteins, the principal constituents of the protoplasm of all cells, are of high molecular weight and consist of α -amino acids joined by peptide linkages. Twenty different amino acids are commonly found in proteins, each protein having a unique, genetically defined amino acid sequence that determines its specific shape and function. Their roles include enzymatic catalysis, transport and storage, coordinated motion, nerve impulse generation and transmission, control of growth and differentiation, immunity, and mechanical support.	Dorland's Medical Dictionary for Health Consumers, 2007
PDJ1	Protein DJ-1	A protein that protects cells against oxidative stress and cell death. Also: Parkinson disease protein 7 homolog.	http://www.uniprot.org/uniprot/Q99LX0
PRKB	Protein kinase B	Among the signalling proteins that respond to a large variety of signals, protein kinase B (PKB, also known as Akt) appears to be a central player in regulation of metabolism, cell survival, motility, transcription and cell-cycle progression.	http://jcs.biologists.org/content/118/24/5675
TPAL	Protein to albumin ratio	The ratio of protein to albumin.	ECOTOX
PRPO	Protein to Polysaccharide ratio	The ratio of protein to polysaccharide found in a sample.	ECOTOX
PROI	Protein, insoluble	Any of a group of complex organic compounds which contain carbon, hydrogen, oxygen, nitrogen and usually sulphur, the characteristic element being nitrogen and which are widely distributed in plants and animals. In this case: Insoluble proteins	http://cancerweb.ncl.ac.uk/omd/
PRTL	Protein, Total	Total amount of protein in a sample	ECOTOX
PRTM	Prothrombin	A plasma protein that is the inactive precursor of thrombin. It is converted to thrombin by a prothrombin activator complex consisting of factor Xa, factor V, phospholipid, and calcium ions. Deficiency of prothrombin leads to hypoprothrombinemia. Also known as: Factor II, Blood Coagulation Factor II, Differentiation Reversal Factor, Factor Differentiation Reversal.	http://www.ncbi.nlm.nih.gov/mesh/68011516
PCCA	Protocatechuic acid	A crystalline acid C7H6O4 produced from various resins and found in combination in many plant products	www.merriam-webster.com/medical/protocatechuate%20acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PCAH	Protocatechuiic aldehyde	A phenolic acid derivative. Also: Protocatechualdehyde, Rancinamycin IV, 3,4-Dihydroxybenzaldehyde, 3,4-dihydroxybenzaldehyde.	http://pubchem.ncbi.nlm.nih.gov/compound/3_4-Dihydroxybenzaldehyde
PTCP	Protochlorophyllide	An immediate precursor of chlorophyll a, which lacks the phytol side-chain of chlorophyll.	http://en.wikipedia.org/wiki/Protoclorophyllide
PRTO	Protoporphyrin	A kind of porphyrin that combines with iron and protein to form various important organic molecules, including catalase, hemoglobin, and myoglobin.	Mosby's Medical Dictionary, 8th edition, 2009
PPIX	Protoporphyrin IX	An important precursor to biologically essential prosthetic groups such as heme, cytochrome c, and chlorophylls.	http://en.wikipedia.org/wiki/Protoporphyrin_IX
PHCN	Pseudohypericin	Pseudohypericin is an analogue of hypericin and is also a principal constituent of Hypericum (Saint John's wort).	ECOTOX and http://en.wikipedia.org/wiki/
PLAC	Pulp:Acid	Pulp to acid ratio.	ECOTOX
PUTR	Putrescine	An amine associated with putrifying tissue. Associates strongly with dNA. Has been suggested as a growth factor for mammalian cells in culture.	www.biology-online.org/dictionary/Putrescine
PSSN	Putrescine to Spermidine ratio	The ratio of putrescine to spermidine.	ECOTOX
PSSS	Putrescine to Spermidine plus Spermine ratio	The ratio of putrescine to spermidine and spermine combined.	ECOTOX
PYRT	Pyrethrin	Either of two oily liquid esters: C21H28O3 and C22H28O5 having insecticidal properties and occurring especially in the flowers of pyrethrum.	www.merriam-webster.com/dictionary/pyrethrin
PYRV	Pyruvate	A salt, ester, or anion of pyruvic acid. Pyruvate is the end product of glycolysis and may be metabolized to lactate or to acetyl CoA.	Dorland's Medical Dictionary for Health Consumers, 2007
QNAD	Quinic acid	An acid found in cinchona bark and elsewhere in plants. Also: Chinic acid, Kinic acid.	https://pubchem.ncbi.nlm.nih.gov/compound/6508#section=Top

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
QUIN	Quinone	Any of various usually yellow, orange, or red quinonoid compounds including several that are biologically important as coenzymes, hydrogen acceptors, or vitamins	http://www.merriam-webster.com/medlineplus/Quinone
LALN	Ratio of linoleic to linolenic fatty acids	Ratio of linoleic to linolenic fatty acids	ECOTOX
SUFA	Ratio of saturated to unsaturated fatty acids	Ratio of saturated to unsaturated fatty acids	ECOTOX
ROXS	Reactive oxygen species	A type of unstable molecule that contains oxygen and that easily reacts with other molecules in a cell. A build up of reactive oxygen species in cells may cause damage to DNA, RNA, and proteins, and may cause cell death. Reactive oxygen species are free radicals. Also called oxygen radical.	www.cancer.gov/dictionary?cdrid=687227
RDWD	Red cell distribution width	Red cell distribution width (RDW) is a measurement of the variability of red blood cell size. Higher numbers indicate greater variation in size. Part of a Complete Blood Count.	http://www.medicines.com/script/main/art.asp?articlekey=9996
GSGS	Reduced Glutathione to Glutathione disulfide	The ratio of reduced Glutathione to Glutathione disulfide	ECOTOX
RGTG	Reduced glutathione to total glutathione ratio	The ratio of reduced glutathione to total glutathione (reduced plus oxidized) found in a sample.	ECOTOX
RLPA	Reduced Lipoic Acid	A thio-fatty acid that is reduced form of lipoic acid. A potent antioxidant shown to directly destroy superoxide, hydroperoxy and hydroxyl radicals; also has neuroprotective and anti-tumour effects. Also: Dihydrolipoic acid.	http://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:18047
RSUG	Reducing sugars	A sugar that serves as a reducing agent due to its free aldehyde or ketone functional groups in its molecular structure. Examples are glucose, fructose, glyceraldehydes, lactose, arabinose and maltose, except for sucrose. Benedict's reaction is used to determine the presence of a reducing sugar, i.e. when a mixture contains sugar it will turn green/orange/red after this test – an indication that the reducing sugar is present in the mixture.	www.biology-online.org/dictionary/Reducing_sugar
RIDX	Refractive Index	The ratio of the velocity of light in a vacuum to the velocity in some medium. Refractive index generally increases with the atomic number of the constituent atoms.	www.biology-online.org/dictionary/Refractive_index

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RBVL	Relative Blood Volume (Volume/100g Body Weight)	Sum of red cell volume and plasma volume in relation to body weight.	ECOTOX
RTNL	Retinal	The aldehyde of retinol, derived from absorbed dietary carotenoids or esters of retinol and having vitamin A activity. In the retina, retinal combines with opsins to form visual pigments. The two isomers 11-cis retinal and all-trans retinal are interconverted in the visual cycle. Also: Retinaldehyde, Vitamin A aldehyde.	Dorland's Medical Dictionary for Health Consumers. 2007
RBP1	Retinaldehyde binding protein 1b	A water-soluble protein which is found only in retina and pineal gland.	http://www.omim.org/entry/180090?search=%2A%20180090%20&highlight=180090
RTAC	Retinoic acid	An oxidized derivative of retinol, believed to be the form of vitamin A that plays a role in the development and growth of bone and in the maintenance of normal epithelial structures.	Dorland's Medical Dictionary for Health Consumers. 2007
RTND	Retinoids	Pertaining to any of a group of compounds whose molecules contain 20 carbon atoms structurally related to retinal, retinol, and other substances, some of which exhibit vitamin A activity. Retinoid analogs have been used in the prevention and treatment of various skin cancers and treatment of the digestive and respiratory tracts.	Mosby's Medical Dictionary, 8th edition, 2009
RTAT	Retinol (all trans)	The all trans form of retinol where all of the double bonds are in the trans configuration. Also known as Tretinoïn and is used as chemotherapy for acute promyelocytic leukemia, a subtype of acute myelogenous leukemia.	http://www.chemistryexplained.com/Pr-Ro/Retinol.html and https://en.wikipedia.org/wiki/Retinol

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VITA	Retinol (Vitamin A)	Retinol or any of several fat-soluble compounds with similar biological activity; the vitamin acts in numerous capacities, particularly in the functioning of the retina, the growth and differentiation of epithelial tissue, the growth of bone, reproduction, and the immune response. Deficiency causes skin disorders, increased susceptibility to infection, nyctalopia, xerophthalmia and other eye disorders, anorexia, and sterility. As vitamin A it is mostly found in liver, egg yolks, and the fat component of dairy products; its other major dietary source is the provitamin A carotenoids of plants. It is toxic when taken in excess	Dorland's Medical Dictionary for Health Consumers ,2007
RBGD	Retinoyl beta-glucuronide	An unstable metabolite of the vitamin A metabolite retinoic acid.	http://www.pharmacy.ohio-state.edu/homepage/program/medchem/medc_curey.html
VIDD	Retinyl palmitate:Dehydroretinyl palmitate	Ratio of Retinyl palmitate to Dehydroretinyl palmitate found in a sample.	ECOTOX
RGNE	Rho guanine nucleotide exchange factor 25	Signaling protein which functions as master molecular switches by activating Rho GTPases through conversion of guanine nucleotides.	https://www.online-medical-dictionary.org/definitions-r/rho-guanine-nucleotide-exchange-factors.html
RHDP	Rhodopsin	Light sensitive pigment formed from retinal linked through a Schiff's base to opsin: rhodopsin is an integral membrane protein found in the discs of retinal rods and cones, comprising some 40% of the membrane. Vertebrate opsins are proteins of 38 kD	www.biology-online.org/dictionary/Rhodopsin
RIBO	Riboflavin Content	Riboflavin: a B vitamin that prevents skin lesions and weight loss. Otherwise known as vitamin B2, this vitamin is essential for the metabolic processes of all animals.	www.biology-online.org/dictionary/Riboflavin
RBSD	Riboside	A glycoside that yields ribose on hydrolysis	www.merriam-webster.com/medical/riboside

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
R23A	Ribosomal protein L23a	Ribosomal Protein L23a, also known as RPL23A or MDA20, is a 156 amino acid protein that exists as part of the 60S ribosomal subunit and is expressed at high levels in heart, pancreas and skeletal muscle. Localized to the cytoplasm, Ribosomal Protein L23a is thought to be involved in the mediation of growth inhibition, possibly functioning as a target molecule for interferons (IFNs).	http://www.scbt.com/datasheet-130252-ribosomal-protein-l23a-i-20-antibody.html
RP27	Ribosomal protein L27	Ribosomes, the organelles that catalyze protein synthesis, consist of a small 40S subunit and a large 60S subunit. Together these subunits are composed of four RNA species and approximately 80 structurally distinct proteins.	https://www.ncbi.nlm.nih.gov/geo/6155
RBCO	Rubidium Concentration	The level of Rubidium in a sample	ECOTOX
SAHC	S-adenosyl-L-homocysteine	The compound formed by the demethylation of s-adenosyl-L-methionine.	www.biology-online.org/dictionary/S-adenosyl-L-homocysteine
SAME	S-adenosyl-L-methionine	Condensation product of adenosine and L-methionine involving replacement of the -OPO3H2 of adenylic acid by -S-(CH3)CH2CH2CH(NH3+)CO2 of methionine; a sulfonium compound bearing a methyl group that is transferred in transmethylation reactions	www.biology-online.org/dictionary/S-adenosyl-L-methionine
AMAH	S-adenosylmethionine to S-adenosylhomocysteine ratio	Ratio of S-adenosylmethionine to S-adenosylhomocysteine in a sample.	ECOTOX
SLCA	Salicylic acid	A phenolic acid that has bacteriostatic, fungicidal, and keratolytic actions. Also: 2-Hydroxybenzoic acid, o-hydroxybenzoic acid, o-Carboxyphenol, 2-Carboxyphenol, Salonil, and Rutranex.	http://pubchem.ncbi.nlm.nih.gov/compound/salicylic_acid
ACSO	S-alk(en)yl-L-cysteine sulphoxide	S-alk(en)yl-L-cysteine sulphoxides (ACSOs) (flavour precursors), give rise to the characteristic aroma and flavour of garlic. Also Allium.	http://www.garlicworld.co.uk/flavour/page3.html and ECOTOX
SRCE	Sarcosine	A N-alkylglycine that is the N-methyl derivative of glycine. It is an intermediate in the metabolic pathway of glycine.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:15611
SATF	Saturated Fatty Acids	Saturated Fatty Acids are fatty acids that have no double bonds between the carbon atoms of the fatty acid chain and are thus fully saturated with hydrogen atoms.	http://en.wikipedia.org/wiki

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
STLD	Saturated lipid or fat	A fatty acid with all potential hydrogen binding sites filled (totally hydrogenated fat). These hold the highest risk for the development of atherosclerosis.	www.biology-online.org/dictionary/Saturated_fat
SCPN	Scopoletin	A crystalline lactone C10H8O that is found in various solanaceous plants (as members of the genus Scopolia or belladonna).	www.merriam-webster.com/medical/scopoletin
S23M	Sec23 homolog A, coat complex II component	Transports secretory proteins from the endoplasmic reticulum (ER) to the Golgi complex.	http://www.omim.org/entry/610511?search=SEC23&highlight=sec23
<SMET>	Secondary Metabolism	No definition available.	
SLNT	Selenite content	The concentration of Selenite found in a sample.	ECOTOX
SECO	Selenium content	The concentration of selenium found in a sample.	ECOTOX
SEHG	Selenium mercury ratio	The ratio of selenium to mercury in a sample.	ECOTOX
SESR	Selenium to sulfur ratio	The ratio of selenium to sulfur palmitate in a sample.	ECOTOX
SLCY	Selenocysteine content	The concentration of Selenocysteine found in a sample.	ECOTOX
SCSM	Selenocysteine to Selenomethionine ratio	The ratio of Selenocysteine to Selenomethionine to in a sample.	ECOTOX
SLMT	Selenomethionine content	The concentration of Selenomethionine found in a sample.	ECOTOX
SRIN	Sericin	A rich sticky protein secreted by Moths. Generally, the term refers to silkworm silk gum protein secreted in the middle section of silk gland cells of silkworms, <i>Bombyx mori</i> .	http://www.online-medical-dictionary.org/definitions/s-sericin.html
SERI	Serine	A nonessential amino acid found in many proteins in the body (e.g., casein, vitellin). It is synthesized from glycine or threonine and a precursor of the amino acids purine, cysteine, and others. It can be found in urine.	Mosby's Medical Dictionary, 8th edition, 2009
SRTR	Serotonin to Tryptophan ratio	The ratio of Serotonin to Tryptophan in a sample.	ECOTOX

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SERT	Serotonin transporter	Serotonin transporter whose primary function in the central nervous system involves the regulation of serotonergic signaling via transport of serotonin molecules from the synaptic cleft back into the pre-synaptic terminal for re-utilization. Plays a key role in mediating regulation of the availability of serotonin to other receptors of serotonergic systems. Terminates the action of serotonin and recycles it in a sodium-dependent manner. Also: Sodium-dependent serotonin transporter, 5HT transporter, 5-HTT, Solute carrier family 6 member 4, SERT, 5HT Transporter protein.	http://www.uniprot.org/uniprot/Q60857 and http://en.wikipedia.org/wiki/Serotonin_transporter
SERP	Serpin	Any of a group of structurally related proteins that typically are serine protease inhibitors (as antithrombin and antitrypsin) whose inhibiting activity is conferred by an active site in a highly variable and mobile peptide loop and that include some (as ovalbumin and angiotensinogen) which have apparently lost the inhibitory action due to mutation in the course of evolutionary change.	www.merriam-webster.com/medical/serpin
SAPC	Serum amyloid P-component-like	Can interact with DNA and histones and may scavenge nuclear material released from damaged circulating cells.	https://www.uniprot.org/uniprot/P02743
SHKA	Shikimic acid	A cyclohexene carboxylic acid that is cyclohex-1-ene-1-carboxylic acid substituted by hydroxy groups at positions 3, 4 and 5 (the 3R,4S,5R stereoisomer). It is an intermediate metabolite in plants and microorganisms. Also: Shikimate.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:16119
TRC3	Short transient receptor potential channel 3 protein	A protein involved in catalysis of the calcium concentration-regulatable energy-independent passage of cations across a lipid bilayer down a concentration gradient. Also: Receptor-activated cation channel TRP3, Transient receptor protein 3, Trp-related protein 3.	http://www.uniprot.org/uniprot/Q9QZC1 and http://www.informatics.jax.org/marker/MGI:109526
STT5	Signal Transducer and Activator of Transcription protein 5	A signal transducer and activator of transcription that mediates cellular responses to a variety of cytokines. Also: STAT5, STAT5a/b.	http://www.jmmunol.org/content/196/1_Supplement/73.18 and http://www.online-medical-dictionary.org/definitions-s/signal-transducer-and-activator-of-transcription-5.html
SLAC	Silicic acid	Hydrated silicon dioxide that occurs in nature. It is insoluble in water or acids except hydrofluoric acid.	www.biology-online.org/dictionary/Silicic_acid

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SICO	Silicon content	The concentration of silicon found in a sample.	ECOTOX
AGCO	Silver concentration	The concentration of silver found in a sample.	ECOTOX
SPXN	Siphonaxanthin	Siphonaxanthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
SRGA	Siringic acid	Siringic acid is a phenolic acid	ECOREF#71186
SNSC	S-Nitroso compounds	The amount of S-Nitroso compounds found in a sample.	ECOTOX
SG3P	sn-Glycero-3-phosphocholine	A nootropic phospholipid. It is an intermediate in a catabolic pathway of phosphatidylcholine. It is also a precursor in choline biosynthesis.	https://www.scbt.com/scbt/product/sn-glycero-3-phosphocholine-28319-77-9
NACO	Sodium Content	The concentration of sodium found in a sample.	ECOTOX
NAKR	Sodium Potassium Ratio	The ratio of sodium to potassium in a sample.	ECOTOX
NAZN	Sodium Zinc Ratio	The ratio of sodium to zinc in a sample.	ECOTOX
PRSL	Soluble Protein	An older laboratory measurement that represents the portion of crude protein that goes into solution when mixed in a buffered solution. If 30% of the protein goes into solution, by definition, 30% of the crude protein is soluble.	http://www.omafra.gov.on.ca/english/livestock/dairy/facts/08-039.htm
SOSO	Soluble solids	The soluble solids content is the total of all the solids dissolved in the water, including sugar, salts, protein, acids, etc., and the measurement reading is the sum total of these.	http://www.articlesbase.com/science-articles/brix-refractometers-1554453.html
SSUG	Soluble Sugars	Soluble sugars, especially sucrose, glucose, and fructose, play an obviously central role in plant structure and metabolism at the cellular and whole-organism levels. They are involved in the responses to a number of stresses, and they act as nutrient and metabolite signalling molecules that activate specific or hormone-crosstalk transduction pathways, thus resulting in important modifications of gene expression and proteomic patterns. Various metabolic reactions and regulations directly link soluble sugars with the production rates of reactive oxygen species, such as mitochondrial respiration or photosynthesis regulation, and, conversely, with anti-oxidative processes, such as the oxidative pentose-phosphate pathway and carotenoid biosynthesis.	http://jxb.oxfordjournals.org/content/57/3/449.full

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SGRV	Specific gravity	A dimensionless unit defined as the ratio of the density of a substance to the density of water at a specified temperature. It is common to use the density of water at 4 C (39 F) as a reference since water at this point has its highest density.	http://www.engineeringtoolbox.com/density-specific-weight-gravity-d_290.html
SPMD	Spermidine	A polyamine compound, C7H19N3, found in ribosomes and living tissues and having various metabolic functions. It was originally isolated from semen.	The American Heritage® Dictionary of the English Language: Fourth Edition. 2000.
SPER	Spermine	A deliquescent crystalline aliphatic tetramine C10H26N4 found in semen in combination with phosphoric acid, in blood serum and body tissues, and in yeast.	www.merriam-webster.com/medical/spermine
SPHG	Sphingomyelin	Any of a group of crystalline phosphatides that are obtained especially from nerve tissue and that on hydrolysis yield a fatty acid (as lignoceric acid), sphingosine, choline, and phosphoric acid.	www.merriam-webster.com/medical/sphingomyelin www.merriam-webster.com/medical/sphingomyelin
SPIG	Spiggin	A glue protein produced by the kidney of a male stickleback that is used as a cementing substance for the building of a nest.	ECOREF 62582
STRH	Starch Content	A polysaccharide carbohydrate (C ₆ H ₁₀ O ₅) _n consisting of a large number of glucose monosaccharide units joined together by glycosidic bonds found especially in seeds, bulbs, and tubers. Plants use starch as a way to store excess glucose, and thus also use starch as food during mitochondrial oxidative phosphorylation.	www.biology-online.org/dictionary/Starch
STER	Stearic Acid	A saturated 18-carbon fatty acid occurring in most fats and oils, particularly of tropical plants and land animals; used pharmaceutically as a tablet and capsule lubricant and as an emulsifying and solubilizing agent. Also C ₁₈ :0	Land's Medical Dictionary for Health Consumers, 2007
STDN	Stearidonic acid	Stearidonic acid is an omega-3 fatty acid sometimes called moroctic acid. It is biosynthesized from alpha-linolenic acid by the enzyme delta-6-desaturase. Also: 18:4(n-3).	https://en.wikipedia.org/wiki/Stearidonic_acid
STES	Sterol esters	Sterol esters are present in plant tissues, but as relatively minor components other than in waxes. Usually the sterol components of sterol esters are similar to the free sterols, although there may be relatively less of stigmasterol.	http://www.lipid.co.uk/infores/Lipids/sterols/

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
STPP	Sterol to phospholipid ratio	The ratio of sterol to phospholipid ratio in a sample.	ECOTOX
STOL	Sterols	Any steroid-based alcohol having a hydrocarbon (aliphatic) side-chain of 8-10 carbons at the 17-beta position and a hydroxyl group at the 3-beta position (therefore an alcohol).	www.biology-online.org/dictionary/Sterols
SEWE	Steryl esters and wax esters	A component of the lipid content of organisms.	ECOTOX
SVOL	Steviol	The amount of Steviol measured in a sample.	ECOTOX
SRCA	Strontium Calcium ratio	The ratio of strontium to calcium in a sample.	ECOTOX
SRCO	Strontium Content	The concentration of strontium found in a sample.	ECOTOX
PRST	Structure proteins	Proteins with a role in structure and support in tissue and within the cell; the collagens.	www.medilexicon.com/medicaldictionary.php?t=73045
SCCN	Succinate	A salt or ester of succinic acid	Dorland's Medical Dictionary for Health Consumers, 2007
SCAD	Succinic acid	A water-soluble, colorless crystal with an acid taste that is used as a chemical intermediate, in medicine, the manufacture of lacquers, and to make perfume esters. It is also used in foods as a sequestrant, buffer, and a neutralizing agent. Also: Butanedioic acid, Asuccin, Dihydrofumaric acid.	https://pubchem.ncbi.nlm.nih.gov/compound/1110#section=Top
SUCR	Sucrose	A disaccharide of glucose and fructose from sugar cane, sugar beet, or other sources; used as a food and sweetening agent and pharmaceutical aid.	Dorland's Medical Dictionary for Health Consumers, 2007
SUGA	Sugar Content	Any of a class of sweet water-soluble carbohydrates, the monosaccharides and smaller oligosaccharides; often specifically sucrose.	Dorland's Medical Dictionary for Health Consumers, 2007
SGMP	Sugar monophosphates	Initial product of photosynthesis.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SPHS	Sugar phosphates	Sugar phosphates (sugars that have added or substituted phosphate groups) are often used in biological systems to store or transfer energy. They also form the backbone for DNA and RNA (DNA having two sugar molecules, and RNA having just one).	http://encyclopedia.thefreedictionary.com/Sugar+phosphates
SSTS	Sulfane Sulfur	A chemical compound containing a sulfur to sulfur double bond. Also, Thiosulfoxide.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4170951/ and https://en.wikipedia.org/wiki/Thiosulfoxide
SLFT	Sulfate concentration	The concentration of sulfate measured in a sample.	ECOTOX
SFTD	Sulfatides	Cerebroside sulfuric esters containing one or more sulfate groups in the sugar portion of the molecule.	Farlex Partner Medical Dictionary, 2012
SHMG	Sulfhemoglobin	A green pigment formed by the reaction of hemoglobin with a sulfide in the presence of oxygen or hydrogen peroxide.	http://www.merriam-webster.com/medical/sulfhemoglobin
SLFH	Sulfhydryl	The radical -sH; contained in glutathione, cysteine, coenzyme A, lipoamide (all in the reduced state), and in mercaptans (R-SH). Synonym: thiol.	www.biology-online.org/dictionary/Sulfhydryl
SQVD	Sulfoquinovosyl diglyceride	Any compound containing one or more monosaccharide residues bound by a glycosidic linkage to a hydrophobic moiety such as an acylglycerol, a sphingoid, a ceramide (N-acylsphingoid) or a prenyl phosphate.	www.reference.com/files/C013/mC013694.html
SCON	Sulfur Content	The concentration of sulfur found in a sample.	ECOTOX
SSER	Sulfur to Selenium Ratio	The ratio of sulfur to selenium ratio in a sample.	ECOTOX
SPOX	Superoxide	Any compound containing the highly reactive and extremely toxic oxygen radical O ₂ -, a common intermediate in numerous biological oxidations.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SPVN	Supervillin	Forms a high-affinity link between the actin cytoskeleton and the membrane. Is among the first costameric proteins to assemble during myogenesis and it contributes to myogenic membrane structure and differentiation. May be involved in modulation of focal adhesions. Supervillin-mediated down-regulation of focal adhesions involves binding to TRIP6.	https://www.uniprot.org/uniprot/O46385
SYII	Synapsin IIa	An isoform of synapsin 2, a neuronal phosphoprotein that coats synaptic vesicles, binds to the cytoskeleton, and is believed to function in the regulation of neurotransmitter release. Also: Synapsin 2a.	https://www.uniprot.org/uniprot/Q64332
SPTP	Synaptophysin	Synaptophysin is a 38-kd calcium-binding glycoprotein that is present in the presynaptic vesicles of neurons and in the neurosecretory granules of neuroendocrine cells.	http://www.biocare.net/AntibodyView.asp?ID=421
S25A	Synaptosomal-associated protein 25-A	A protein that may play an important role in the synaptic function of specific neuronal systems. Associates with proteins involved in vesicle docking and membrane fusion. Also: Synaptosome-associated protein 25.1.	http://www.uniprot.org/uniprot/Q5TZ66
SYRA	Syringic acid	A phenolic acid. Also: 4-Hydroxy-3,5-dimethoxybenzoic acid, 3,5-Dimethoxy-4-hydroxybenzoic acid, Cedar acid, Gallic acid 3,5-dimethyl ether.	http://pubchem.ncbi.nlm.nih.gov/compound/syringic_acid
T15P	TAF15 RNA polymerase II, TATA box binding protein (TBP)-associated factor	Plays a major role in the activation of eukaryotic genes transcribed by RNA POLYMERASES. It binds specifically to the TATA BOX promoter element, which lies close to the position of plays Plays a major role in the activation of eukaryotic genes transcribed by RNA polymerase. It binds specifically to the TATA box promoter element, whcih lies close to the position of transcription initiation in RNA transcribed by RNA polymerase II.	https://www.online-medical-dictionary.org/definitions-t/tata-box-binding-protein.html
TANN	Tannins	Any of various soluble astringent complex phenolic substances of plant origin used especially in tanning leather and dyeing fabric, manufacturing ink, clarifying wine and beer, and in medicine.	http://www.merriam-webster.com/dictionary/tannins?show=0&t=1306339968
TART	Tartaric acid	Any of several isomers of the dicarboxylic acid HOOC(CHOH)2COOH, occurring especially in grapes. Also called 2,3-Dihydroxybutanedioic acid.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TAUR	Taurine	An oxidized sulfur-containing amine occurring conjugated in the bile, usually as cholytaurine or chenodeoxycholytaurine; it may also be a central nervous system neurotransmitter or neuromodulator.	Dorland's Medical Dictionary for Health Consumers, 2007
TNZA	Tenuazonic acid	Tenuazonic acid is a metabolite found in a strain of the fungus <i>Alternaria tenuis</i> Auct. which functions as an antibiotic with antiviral and antineoplastic properties, and may also act as a mycotoxin.	http://www.ncbi.nlm.nih.gov
TDCN	Tetradecanoate	A free fatty acid	ECOREF #77855
TEAM	Tetraethyl Ammonium	The quaternary ammonium ion (C ₂ H ₅) ₄ N ⁺ containing four ethyl groups; also : a salt of this ion (as the deliquescent crystalline chloride used as a ganglionic blocking agent)—abbreviation TEA	www.merriam-webster.com/medical/tetraethylammonium
TLCO	Thallium content	The concentration of thallium found in a sample.	ECOTOX
LCPR	The ratio of lipid to chlorophyll to protein	The ratio of the amount of lipid to chlorophyll to protein in an organism or organism's parts.	ECOTOX
LPRR	The ratio of lipid to protein	The ratio of the amount of lipid to protein in an organism or organism's parts.	ECOTOX
THIA	Thiamin	A water-soluble B vitamin that is a necessary cofactor in alpha-keto decarboxylation, links glycolysis with the Krebs cycle (tricarboxylic acid cycle, the main source of energy in mammals), and is critical in the production of cyclic guanosine monophosphate.	Segen's Medical Dictionary, 2012
TPPH	Thiamin pyrophosphate	The diphosphoric ester of thiamin, a coenzyme of several (de)carboxylases, transketolases, and α-oxoacid dehydrogenases. Synonym(s): aneurine pyrophosphate, cocarboxylase, diphosphothiamin	Farlex Partner Medical Dictionary, 2012
THBA	Thiobarbituric Acid	A barbituric acid derivative C ₆ H ₄ N ₂ O ₂ S that is used to form a series of thio analogs of the barbiturates.	www.merriam-webster.com/medical/thiobarbituricacid
TBAR	Thiobarbituric Acid Reactive Substances	TBARS - are formed as a byproduct of lipid peroxidation (i.e. as degradation products of fats) which can be detected by the TBARS assay using thiobarbituric acid as a reagent. Because reactive oxygen species (ROS) have extremely short half-lives, they are difficult to measure directly. Instead, what can be measured are several products of the damage produced by oxidative stress, such as TBARS.	http://en.wikipedia.org/wiki/TBARS

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TCNT	Thiocyanate	Thiocyanate (also known as rhodanide) is the anion [SCN] ⁻ . It is both a breakdown product of cyanide and is known to be important in the biosynthesis of hypothiocyanite by a lactoperoxidase.	www.wikipedia.org/wiki
THSF	Thioether	A thioether is a functional group in organic chemistry that has the structure R ₁ -S-R ₂ . Like many other sulfur-containing compounds, volatile thioethers characteristically have foul odors. Also: Sulfides, Sulfur Ethers.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
TRXN	Thioredoxin	Hydrogen-donating proteins that participate in a variety of biochemical reactions including ribonucleotide reduction and reduction of peroxiredoxins. Thioredoxin is oxidized from a dithiol to a disulfide when acting as a reducing cofactor. The disulfide form is then reduced by NADPH in a reaction catalyzed by thioredoxin reductase.	http://www.online-medical-dictionary.org/definitions-t/thioredoxin.html
THCO	Thorium concentration	The concentration of Thorium found in a sample.	ECOTOX
THRE	Threonine	The hydroxylated polar amino acid. A colorless crystalline amino acid found in protein; occurs in the hydrolysates of certain proteins; an essential component of human nutrition. One of 20 amino acids that are commonly found in proteins, this particular amino acid is soluble in water.	www.biology-online.org/dictionary/Threonine
TXB2	Thromboxane B2	Thromboxane B2 is a stable, physiologically active compound formed in vivo from the prostaglandin endoperoxides. It is important in the platelet-release reaction.	http://www.nlm.nih.gov
TYMD	Thymidine	A pyrimidine nucleoside that has thymine bound to a deoxyribose sugar. Thymidine is in fact a deoxyribonucleoside. The prefix deoxy- is often left out since there are no precursors of thymine nucleotides involved in RNA synthesis, only DNA synthesis. Hence, it is sometimes simply called thymidine.	www.biology-online.org/dictionary/Thymidine
TTTV	Thymol turbidity test	Precipitation of abnormal proportions of albumin and globulin from the serum of patients with liver disease by addition of thymol. Although popular in the past it has been superseded by quantitative determination of specific proteins and direct measurement of liver enzymes. Synonyms: Maclagan test, Maclagan thymol turbidity test	www.medilexicon.com/medicaldictionary.php?t=90866

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TRGB	Thyroglobulin	An iodine-containing glycoprotein of high molecular weight, occurring in the colloid of the follicles of the thyroid gland; the iodinated tyrosine moieties of thyroglobulin form the active hormones thyroxine and triiodothyronine.	Dorland's Medical Dictionary for Health Consumers, 2007
THRP	Thyrotropin receptor	Cell surface proteins that bind pituitary thyrotropin (also named thyroid stimulating hormone or TSH) and trigger intracellular changes of the target cells. TSH receptors are present in the nervous system and on target cells in the thyroid gland. Also: Thyroid stimulating hormone receptor.	https://www.onlinemedical-dictionary.org/definitions/r/receptors-thyrotropin.html
SNCO	Tin concentration	The concentration of Tin found in a sample.	ECOTOX
TICO	Titanium content	The concentration of titanium found in a sample.	ECOTOX
TLR2	Toll-like receptor 2 protein	Cooperates with LY96 to mediate the innate immune response to bacterial lipoproteins and other microbial cell wall components. Cooperates with TLR1 or TLR6 to mediate the innate immune response to bacterial lipoproteins or lipopeptides. Also: Toll/interleukin-1 receptor-like protein 4.	http://www.uniprot.org/uniprot/O60603
TLR4	Toll-like receptor 4 protein	Cooperates with LY96 and CD14 to mediate the innate immune response to bacterial lipopolysaccharide (LPS). Acts via MYD88, TIRAP and TRAF6, leading to NF-kappa-B activation, cytokine secretion and the inflammatory response. Also: hToll.	http://www.uniprot.org/uniprot/O02026
<D44T>	Total 4,4 Dimethylsterols	The 4,4-dimethyl- and 4α-methylsterols are part of the biosynthetic pathway, but are only minor if ubiquitous sterol components of plants	http://lipidlibrary.aocs.org/lipids/plant_st/index.htm
<DI4T>	Total 4-dimethysterols	No definition available.	
TAOC	Total antioxidant capacity	The measure of antioxidant capacity of all antioxidants in a biological sample.	http://jcmb.halic.edu.tr/pdf/7-1/BOLUM_1.pdf
TGOG	Total glutathione oxidized glutathione ratio	The ratio of total glutathione (GSH+GSSG) to oxidized glutathione (GSSG) in a sample.	ECOTOX
GLYT	Total Glycolipid Content	A lipid containing carbohydrate groups, usually galactose but also glucose, inositol, or others; the glycolipids include the cerebrosides.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
LAMT	Total lauric acid metabolites	A total of all metabolism products of lauric acid.	ECOREF#67744

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TNSC	Total Non-structural Carbohydrate	Non-structural carbohydrate (NSC) - simple carbohydrates, such as starches and sugars, stored inside the cell that serve as a cellular energy source. Non-structural carbohydrates are rapidly and easily digested by the animal.	www.omafra.gov.on.ca/english/livestock/dairy/facts/08-039.htm
TOCA	Total oxidative capacity	The quantitative determination of peroxides in a biological sample. Also: Total oxidant capacity, TOC.	http://www.biotech-usa.com/spec/BTDM-P-4200.pdf
PHST	Total Phospholipid Content	Phospholipids consist of a glycerol bound to two fatty acids and a phosphate group. They serve as a major structural component of most biological membranes. They form the lipid bilayer in cell membranes of organisms.	www.biology-online.org/dictionary/Phospholipid
TTSL	Total Solids (in milk)	Total solids are determined by weighing milk, drying milk, and weighing dried milk residue. Total solids content of milk is the weight of dried milk residue expressed as percentage of original milk weight.	http://www.fmma-seattle.com/lab/solids.htm
T10O	trans-10-octadecenoic acid	trans-10-octadecenoic acid (C18:1 trans10) is a mono unsaturated fatty acid.	ECOTOX
T12O	trans-12-octadecenoic acid	trans-12-octadecenoic acid (C18:1 trans12) is a mono unsaturated fatty acid.	ECOTOX
T9HC	trans-9 Hexadecanoate	A free fatty acid	ECOREF #77855
TSFN	Transferrin	A protein that carries iron in the bloodstream (80 kD) found in mammalian serum, a beta globulin; binds ferric iron with a Kass of around 21 at pH 7.4, 18.1 at pH 6.6. An important constituent of growth media. Transferrin receptors on the cell surface bind transferrin as part of the transport route of iron into cells.	www.biology-online.org/dictionary/Transferrin
TGB1	Transforming growth factor beta 1	Transforming growth factor beta 1 or TGF-beta1 is a polypeptide member of the transforming growth factor beta superfamily of cytokines. It is a secreted protein that performs many cellular functions, including the control of cell growth, cell proliferation, cell differentiation and apoptosis.	http://en.wikipedia.org
TTRN	Transthyretin	An α-globulin secreted by the liver; it forms a complex with retinol binding protein and binds retinol, transporting it to the peripheral tissues. It may also bind triiodothyronine or thyroxine although these are usually transported by thyroxine-binding globulins.	Dorland's Medical Dictionary

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
THLS	Trehalose	A crystalline disaccharide C12H22O11 that is found in various organisms (as fungi and insects), is about half as sweet as sucrose, and is sometimes used as a sweetener in commercially prepared foods.	www.merriam-webster.com/dictionary/trehalose
TRIB	Tributyrin	A synthetic substrate for lipase assays. Synonym(s): glyceryl tributyrate, tributyrlyglycerol	Farlex Partner Medical Dictionary, 2012
TRIG	Triglycerides (Triacylglycerols)	An energy-rich compound made up of a single molecule of glycerol and three molecules of fatty acid, and serves as a major component of animal and plant oils and fats. Triglycerides are present in both plants and animals. Triglycerides in plants are typically found in plant cell membrane where the fatty acids are mostly unsaturated. In animals, the fatty acid component is largely saturated.	www.biology-online.org/dictionary/Triglyceride
TMAE	Trimethylamine	A tertiary amine that is ammonia in which each hydrogen atom is substituted by an methyl group.	https://www.ebi.ac.uk/chebi/search.do?chebId=CHEBI:18139
TMAO	Trimethylamine oxide	Trimethylamine oxide (TMAO) is a common and compatible osmolyte in tissue that is often credited with counteracting protein-destabilizing forces.	www.cephbase.dal.ca/refdb/pdf/6856.pdf
TRLX	Trolox	A water soluble vitamin E derivative. It is an antioxidant like vitamin E and it is used in biological or biochemical applications to reduce oxidative stress or damage.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3932407/ and https://en.wikipedia.org/wiki/Trolox
TPMS	Tropomyosin	A protein found in the thin filaments of muscle fibers. It inhibits contraction of the muscle unless its position is modified by troponin.	https://www.online-medical-dictionary.org/definitions-t/tropomyosin.html
TP3S	Tropomyosin 3	A protein found in the thin filaments of muscle fibers. It inhibits contraction of the muscle unless its position is modified by troponin.	https://www.online-medical-dictionary.org/definitions-t/tropomyosin.html

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TP4S	Tropomyosin 4b	A protein found in the thin filaments of muscle fibers. It inhibits contraction of the muscle unless its position is modified by troponin.	https://www.online-medical-dictionary.org/definitions/t/tropomyosin.html
TA3C	Tropomyosin alpha-3-chain	Binds to actin filaments in muscle and non-muscle cells. Plays a central role, in association with the troponin complex, in the calcium dependent regulation of vertebrate striated muscle contraction.	https://www.uniprot.org/uniprot/P06753
TA4S	Tropomyosin alpha-4 chain	A protein found in the thin filaments of muscle fibers. It inhibits contraction of the muscle unless its position is modified by troponin.	https://www.online-medical-dictionary.org/definitions/t/tropomyosin.html
TPBC	Tropomyosin beta	A protein found in the thin filaments of muscle fibers. It inhibits contraction of the muscle unless its position is modified by troponin.	https://www.online-medical-dictionary.org/definitions/t/tropomyosin.html
TPNN	Troponin	A complex of three proteins, troponin-C (TnC), troponin-I (TnI), troponin-T (TnT), and present in striated muscle. Together, these proteins function as regulators of muscle contraction.	Medical Dictionary for the Health Professions and Nursing, 2012
TRYS	Trypsinogen	The inactive precursor form of trypsin. Trypsinogen is secreted in pancreatic juice and converted to active trypsin through the action of enterokinase in the intestine. Also called protrypsin	Mosby's Medical Dictionary, 8th edition, 2009
TRYA	Tryptamine	A crystalline substance, C10H12N2, which is formed in plant and animal tissues from tryptophan and is an intermediate in various metabolic processes.	The American Heritage Dictionary of the English Language, Fourth Edition (2000)
TRYP	Tryptophan	A naturally occurring amino acid, existing in proteins and essential for human metabolism. It is a precursor of serotonin. Adequate levels may mitigate pellagra by compensating for deficiencies of niacin.	Dorland's Medical Dictionary for Health Consumers, 2007
TRTY	Tryptophan to tyrosine ratio	The ratio of tryptophan to tyrosine in an organism or organism's tissues.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TERP	T-terpinene	No definition available.	
TA1C	Tubulin alpha-1C chain	Tubulin alpha-1C chain belongs to the tubulin family. Tubulin is the major constituent of microtubules. It binds two moles of GTP, one at an exchangeable site on the beta chain and one at a non-exchangeable site on the alpha-chain. Alternate names: Alpha-tubulin 6, Tubulin alpha-6 chain.	http://www.uniprot.org/uniprot/Q9BQE3
TMFA	Tumor necrosis factor-alpha	A gene on chromosome 6p21.3 that encodes a cytokine, primarily secreted by macrophages, which binds to TNFRSF1A/TNFR1 and TNFRSF1B/TNFRB. TNF can induce cell death of certain tumour cell lines, and it is a potent pyrogen causing fever either directly or by stimulating interleukin-1 secretion. It is implicated in the tumour-related cachexia. It may stimulate cell proliferation and induce cell differentiation.	Segen's Medical Dictionary, 2012
TP53	Tumor protein D53	A protein involved in G2/M transition of mitotic cell cycle, apoptotic DNA fragmentation, positive regulation of JNK cascade and positive regulation of MAP kinase activity. Also: Tumor protein D52-like 1, TPD52L1.	http://www.uniprot.org/uniprot/O54818 and http://useast.ensembl.org/
TCON	Tungsten content	The concentration of tungsten found in a sample.	ECOTOX
TRMN	Tyramine	A primary amino compound obtained by formal decarboxylation of the amino acid tyrosine. Also: 4-(2-aminoethyl)phenol, Tyramin, p-tyramine, p-(2-Aminoethyl)phenol, 4-hydroxyphenethylamine.	https://www.ebi.ac.uk/chebi/search.do?chebid=CHEBI:15760
TYRO	Tyrosine	A naturally occurring, nonessential amino acid present in most proteins; it is a product of phenylalanine metabolism and a precursor of thyroid hormones, catecholamines, and melanin.	Dorland's Medical Dictionary for Health Consumers, 2007
USAR	Unsaturated fatty acid to saturated fatty acids ratio	Ratio of unsaturated fatty acids to saturated fatty acids.	ECOTOX
UFAS	Unsaturated fatty acids	Unsaturated Fatty Acids are fatty acids in which the carbon chain contains one (monounsaturated), two or more (polyunsaturated) double or triple carbon-carbon bonds.	http://www.ncbi.nlm.nih.gov
URAC	Uracil	A pyrimidine base (C4H4N2O2) that is one of the four bases coding genetic information in the polynucleotide chain of RNA.	http://www.merriam-webster.com/
UCON	Uranium concentration	The concentration of Uranium found in a sample.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
UREA	Urea	The chief nitrogenous endproduct of protein metabolism, formed in the liver from amino acids and from ammonia compounds; found in urine, blood, and lymph.	Dorland's Medical Dictionary for Health Consumers, 2007
UREN	Urea nitrogen	The nitrogen associated with the urea in the body.	ECOTOX
UTMR	Urea to Trimethylamine oxide ratio	Ratio of Urea to Trimethylamine oxide	ECOTOX
URIC	Uric Acid	The water-insoluble end product of primate purine metabolism.	Dorland's Medical Dictionary for Health Consumers, 2007
URDN	Uridine	A ribonucleoside composed of a molecule of uracil attached to a ribofuranose moiety via a beta-N1-glycosidic bond.	https://www.ebi.ac.uk/chebi/search.do?chebId=CHEBI:16704
UDPA	Uridine Diphosphate (UDP) Acetylglucosamine	Uridine Diphosphate N-Acetylglucosamine serves as the biological precursor of insect chitin, of muramic acid in bacterial cell walls, and of sialic acids in mammalian glycoproteins.	http://de.dict.md/definition/UDP
UDGS	Uridine diphosphate galactose	A nucleoside diphosphate sugar which can be epimerized into UDPglucose for entry into the mainstream of carbohydrate metabolism. Serves as a source of galactose in the synthesis of lipopolysaccharides, cerebrosides, and lactose. Also: UDP-galactose, uridine diphosphogalactose, uridine pyrophosphogalactose, uridine phosphorylase galactose.	https://www.online-medical-dictionary.org/definitions-u/uridine-diphosphate-galactose.html
UDGE	Uridine diphosphate glucose	A key intermediate in carbohydrate metabolism. Serves as a precursor of glycogen, can be metabolized into UDPgalactose and UDPglucuronic acid which can then be incorporated into polysaccharides as galactose and glucuronic acid. Also serves as a precursor of sucrose lipopolysaccharides, and glycosphingolipids. Also: UDP-glucose, Uridine diphosphoglucose, Uridine phosphorylase glucose.	https://www.online-medical-dictionary.org/definitions-u/uridine-diphosphate-glucose.html
UPRP	Uroporphyrin	Any of several porphyrins produced by oxidation of uroporphyrinogen; one or more are excreted in excess in the urine in several of the porphyrias	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
UIII	Uroporphyrinogen III	The precursor for synthesis of vitamin B12, chlorophyll, and heme, in organisms that produce these compounds.	http://www.rpi.edu/dept/bcbp/mol_biochem/MBWeb/mb2/part1/heme.htm
USNA	Usnic acid	A yellow crystalline substance C18H16O7 that is obtained from various lichens.	http://www.merriam-webster.com/medical/usnic%20acid
VACC	Vaccenic acid	n-Trans-11-octadecenoic acid; an unsaturated fatty acid of which both cis and trans isomers are found in butter and other animal fats.	www.biology-online.org/dictionary/Vaccenic_acid
VALI	Valine	An essential amino acid that is a constituent of proteins, especially fibrous proteins.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
VCON	Vanadium content	The concentration of vanadium found in a sample.	ECOTOX
VNLA	Vanillic acid	An odorless crystalline phenolic acid C8H8O4 found in some varieties of vanilla, formed by oxidation of vanillin, and used chiefly in the form of esters as food preservatives.	www.merriam-webster.com/medical/vanillic%20acid
VNLL	Vanillin	A phenolic acid derivative; also known as: 4-Hydroxy-3-methoxybenzaldehyde, Vanillaldehyde, Vanillic aldehyde, 4-Hydroxy-3-methoxybenzaldehyde, and Vanilline.	http://pubchem.ncbi.nlm.nih.gov/compound/vanillin#section=Odor
VMAC	Vanillylmandelic acid	A urinary metabolite of epinephrine and norepinephrine. It may be measured in the urine to determine the levels of these catecholamines.	Mosby's Medical Dictionary, 8th edition, 2009
VCXN	Vaucheriananthin	Vaucheriananthin is a Xanthophyll.	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki
VERA	Versicolorin A	A mycotoxin	ECOTOX
VHAC	Versiconal Hemicetal Acetate	An anthraquinone that is an intermediate in aflatoxin biosynthesis	ECOTOX 75785
VLDL	Very low density lipoprotein	Composed mostly of cholesterol, with little protein and used to transport cholesterol, triglycerides and other lipids to various tissues. Often called "bad cholesterol" because it deposits cholesterol on the walls of arteries.	NIH-Medline
VPRO	Vimentin	Intermediate filament protein found in mesodermally derived cells including muscle.	www.biology-online.org/dictionary/Vimentin

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VNCL	Vinculin	A cytoskeletal protein associated with cell-cell and cell-matrix interactions. The amino acid sequence of human vinculin has been determined. The protein consists of 1066 amino acid residues and its gene has been assigned to chromosome 10. Also: Isovinculin, alpha vinculin.	https://www.online-medical-dictionary.org/definitions-v/vinculin.html
VLXN	Violaxanthin	An orange to red crystalline carotenoid pigment C40H56O4 obtained from yellow pansies and many other plants: zeaxanthin di-epoxide.	www.merriam-webster.com/dictionary/violaxanthin
VXCA	Violaxanthin to Chlorophyll A ratio	Ratio of Violaxanthin to Chlorophyll A	ECOTOX
VTAE	Vitamin A ester (Retinyl ester)	A compound that has a fatty acid bound to the alcohol group of retinol.	http://www.cancernetwork.com/nuscifiles/fatsolublenutrients.pdf
VB12	Vitamin B12	Vitamin B12 is a cobalt-containing coordination compound produced by intestinal micro-organisms and found also in soil and water. Higher plants do not concentrate vitamin B12 from the soil and so are a poor source of the substance as compared with animal tissues. It is important for the normal functioning of the brain and nervous system, and for the formation of blood. Cyanocobalamin is an especially common vitamer of the B-12 vitamin family, animals and humans can convert it to active (cofactor) forms of the vitamin, such as methylcobalamin	http://www.ncbi.nlm.nih.gov and http://en.wikipedia.org/wiki/Vitamin_B12
VTMD	Vitamin D	Vitamin D is a fat-soluble vitamin that includes both cholecalciferols and ergocalciferols.	http://www.ncbi.nlm.nih.gov
VD3	Vitamin D3	A hormone synthesized in the skin on irradiation of 7-dehydrocholesterol or obtained from the diet; it is activated when metabolized to 1,25-dihydroxycholecalciferol. Also called cholecalciferol.	Dorland's Medical Dictionary for Health Consumers, 2007
VTME	Vitamin E	Any of a group of at least eight related fat-soluble compounds with similar biological antioxidant activity, particularly α -tocopherol but also including other isomers of tocopherol and the related compound tocotrienol. It is found in wheat germ oil, cereal germs, liver, egg yolk, green plants, milk fat, and vegetable oils and is also prepared synthetically. In various species it is important for normal reproduction, muscle development, and resistance of erythrocytes to hemolysis.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VITN	Vitellin	Major egg yolk proteins from egg-laying animals such as non-mammalian vertebrates; arthropods; and others. Vitellins are high-density lipoglycoproteins derived from circulating precursors, vitellogenins. Vitellins serve as nutrients for the growing non-mammalian embryos.	http://www.ncbi.nlm.nih.gov
VITE	Vitellogenin	A precursor protein of egg yolk normally in the blood or hemolymph only of females that is used as a biomarker in vertebrates of exposure to environmental estrogens which stimulate elevated levels in males as well as females	www.merriam-webster.com/dictionary/vitellogenin
VSFD	Vitellogenin fused with superoxide dismutase	Functions during superoxide metabolic processes, metal ion binding, oxidations-reduction processes, lipid transport activity, and lipid transport.	https://www.researchgate.net/publication/259990314_Proteomic_evaluation_of_citrato-coated_silver_nanoparticles_toxicity_in_Daphnia_magna
VEPO	Vitellogenin:protein ratio	The ratio of the amount of vitellogenin to the amount of protein in an organism.	
VIVT	Vitellogenin:Vitellin ratio	The amount of Vitellogenin to the amount of Vitellin in a sample.	
VTLP	Vitellogenin-like protein	A precursor protein of egg yolk normally in the blood or hemolymph only of females that is used as a biomarker in vertebrates of exposure to environmental estrogens which stimulate elevated levels in males as well as females.	www.merriam-webster.com/dictionary/vitellogenin
WTCO	Water Content	The amount of water found in a sample.	ECOTOX
WAXX	Wax	Waxes are natural secretions of plants or animals. Chemically, a wax is a type of lipid that may contain a wide variety of long-chain alkanes, esters, polyesters and hydroxy esters of long-chain primary alcohols and fatty acids. These substances are malleable at normal ambient temperatures, a melting point above approximately 45 C, relatively low viscosity when melted, insoluble in water, and hydrophobic.	ECOTOX and http://en.wikipedia.org/wiki
WAXE	Wax esters	A wax ester is an ester of a fatty acid and a fatty alcohol.	Ullmann's Encyclopedia of Industrial Chemistry

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
XNTH	Xanthine	A purine base found in most body tissues and fluids, certain plants, and some urinary calculi. It is an intermediate in the degradation of adenosine monophosphate to uric acid, being formed by oxidation of hypoxanthine. Also: 2,6-Dihydroxypurine, xanthin, 2,6-dioxopurine.	https://pubchem.ncbi.nlm.nih.gov/compound/1188
XNSN	Xanthosine	A crystalline nucleoside C10H12N4O6 that yields xanthine and ribose on hydrolysis.	http://www.merriam-webster.com/medical/xanthosine
XTRA	Xanthurenic acid	a bicyclic aromatic compound formed as a minor catabolite of tryptophan and present in increased amounts in urine in vitamin B6 deficiency and some disorders of tryptophan catabolism.	Dorland's Medical Dictionary for Health Consumers, 2007
ZEAR	Zearalenone	Also known as RAL and F-2 mycotoxin, is a potent estrogenic metabolite produced by some Fusarium and Gibberella species.	http://en.wikipedia.org/wiki/Zearalenone
ZXTN	Zeaxanthin	A common carotenoid alcohol which is synthesised in plants (e.g., peppers, corn, spinach, broccoli, kiwifruit, garden peas and other vegetables), giving many their characteristic colour. Synonym: zeaxanthol.	Segen's Medical Dictionary, 2012
ZXCH	Zeaxanthin to Chlorophyll A ratio	Ratio of Zeaxanthin to Chlorophyll A	ECOTOX
ZVX	Zeaxanthin to Violaxanthin ratio	Ration of Zeaxanthin to Violaxanthin	ECOTOX
ZNAI	Zinc Accumulation index	The ratio of zinc in an organism to zinc in the soil.	ECOTOX
ZNCO	Zinc Content	The concentration of zinc found in a sample.	ECOTOX
ZNPP	Zinc protoporphyrin	A tightly bound, specific non-polypeptide unit required for the biological function of some proteins. A prosthetic group consisting of a protoporphyrin ring and a central zinc (Zn) atom. High levels of zinc protoporphyrin (ZPP) in blood indicate lead exposure.	http://www.clunet.edu/BioDev/om/catalase/frames/hemetx.htm
ZNCD	Zinc to cadmium ratio	Ratio of zinc to cadmium in an organism or organism's tissues.	ECOTOX
ZNCU	Zinc to Copper ratio	Ratio of zinc to copper in an organism or organism's tissues.	ECOTOX
ZNFE	Zinc to iron ratio	Ratio of zinc to iron in an organism or organism's tissues.	ECOTOX
ZNNA	Zinc to sodium ratio	Ratio of zinc to sodium in an organism or organism's tissues.	ECOTOX

ECOTOX Code Appendix

BCM	Biochemical Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ZPGP	Zona pellucida glycoprotein	Zona pellucida glycoproteins are responsible for species-restricted binding of sperm to unfertilized eggs, inducing sperm to undergo acrosomal exocytosis, and preventing sperm from binding to fertilized eggs.	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2528931/
ZPP2	Zona pellucide protein 2	A glycoprotein that helps form a non-cellular membrane around a developing egg.	ECOREF 67746
ZPRO	Zona Radiata Protein	A radiately striated membrane situated next the yolk of an ovum, or separated from it by a very delicate membrane only or Eggshell Zona radiata proteins (Zrp). Zrps are comprised of three-to-four protein monomers in the 50–60 kDa MW range and show structural similarity to proteins of the Zona pellucida; an extracellular envelope that lies immediately outside the plasma membrane in the eggs of placental mammals	www.webster-dictionary.org/definition/Zona%20radiata and www.sciencedirect.com/science/article/pii/S01411360000177X

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
DCNS	(+)-delta-Cadinene synthase	A sesquiterpenoid. An intermediate in phytoalexin biosynthesis. Also: D-cadinene synthase, EC 4.2.3.13.	http://enzyme.expasy.org/EC/4.2.3.13
BGAL	(Beta)-galactosidase	An enzyme that hydrolyzes the β-galactoside linkage in lactose-producing glucose and galactose; also hydrolyzes the chromogenic substrate IPTG (isopropylthiogalactoside) and thus is used as an indicator of fused genes and gene expression. Also: Lactase, b-lactase, maxilact, hydrolact, b-d-Lactosidase, EC 3.2.1.23.	Farlex Partner Medical Dictionary, 2012 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/23.html
ALAD	(Delta)-Aminolevulinic Acid Dehydratase	An enzyme of which the concentration in erythrocytes is a widely used indicator of the level of lead poisoning in animals.	http://medical-dictionary.thefreedictionary.com/delta-aminolevulinic+acid+dehydratase
ALAS	(Gamma)-ala Synthetase	rate limiting step of heme synthesis, affected in sideroblastic anemia (X-linked) or makes gamma-ALA from glycine and succinyl-CoA using B6 as a cofactor	http://quizlet.com/12202513/heme-synthesis-and-its-problems-flash-cards/

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GGTR	(Gamma)-glutamyl Transferase	Gamma glutamyl transferase (GGT) found in the cell membrane in most tissues, but particularly high levels are present in liver (bile duct cells, hepatocytes) and kidney (renal convoluted tubular cells). Increased serum levels occur primarily with cholestasis. (**GGT is also used for gamma glutamyl transpeptidase, a liver enzyme; prior to using the GGTR code verify that indeed GGT is used as the transferase in the current publication. The gamma glutamyl transpeptidase code is GGTP.)	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
11BH	11 beta-hydroxylase	A mitochondrial Cytochrome P450 enzyme that catalyzes the 11-beta-Hydroxylation of steroids in the presence of molecular oxygen and NADPH-Ferrihemoprotein reductase. This enzyme, encoded by CYP11B1 Gene, is important in the synthesis of corticosterone and hydrocortisone.	http://www.online-medical-dictionary.org/definitions-1/11-beta-hydroxylase.html
15B7	15 beta/7alpha-hydroxylases	15 beta/7alpha-hydroxylases are an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
17BH	17beta-hydroxysteroid dehydrogenase	Converts androstenedione to testosterone in the fetal testes. Also: 17-beta-HSD, EC 1.1.1.62.	http://www.omim.org/entry/605573
ACCS	1-Aminocyclopropane-1-carboxylate synthase	A Class I aminotransferase, is the key regulatory enzyme in the biosynthetic pathway of the plant hormone ethylene. It catalyses the formation of 1-aminocyclopropane-1-carboxylate, a direct precursor of ethylene in higher plants. The enzyme functions as a homodimer and requires pyridoxal-5'-phosphate as a cofactor. (EC:4.4.1.14) Other names: 1-aminocyclopropanecarboxylate synthase; 1-aminocyclopropane-1-carboxylic acid synthase; 1-aminocyclopropane-1-carboxylate synthetase; aminocyclopropanecarboxylic acid synthase; aminocyclopropanecarboxylate synthase; ACC synthase; S-adenosyl-L-methionine methylthioadenosine-lyase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/4/1/14.html and Rottmann,W.H. et al.(1991)J. Mol. Biol. 222 937-61 1991 http://dx.doi.org/10.1016/0022-2836(91)90587-V
9BSB	20S proteasome beta subunit B	The proteasome is a multicatalytic proteinase complex which is characterized by its ability to cleave peptides with Arg, Phe, Tyr, Leu, and Glu adjacent to the leaving group at neutral or slightly basic pH.	http://www.uniprot.org/uniprot/O24633
26SP	26S protease regulatory subunit 6A	The 26S protease is involved in the ATP-dependent degradation of ubiquitinated proteins. Alternate names: 26S proteasome AAA-ATPase subunit RPT5, Proteasome 26S subunit ATPase 3, Proteasome subunit P50, Tat-binding protein 1.	http://www.ncbi.nlm.nih.gov/protein/50344782 and http://www.uniprot.org/uniprot/P17980

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
2OHB	2-OH Biphenyl hydroxylase	An enzyme	
HSHG	3-beta Hydroxysteroid dehydrogenase	Hydroxysteroid dehydrogenase is a type of alcohol oxidoreductases which acts as a dehydrogenase upon a hydroxysteroid. Accepted name: 3(or 17)beta-hydroxysteroid dehydrogenase; Other name(s): beta-hydroxy steroid dehydrogenase; 17-ketoreductase; 17beta-hydroxy steroid dehydrogenase; 3beta-hydroxysteroid dehydrogenase; 17beta-hydroxy steroid dehydrogenase; 3beta-hydroxy steroid dehydrogenase.	www.wikipedia.org/wiki/Hydroxysteroid_dehydrogenase and www.chem.qmul.ac.uk
CECD	3-Cyano-7-ethoxycoumarin O-deethylase	An enzyme.	
3HCD	3-Hydroxyacyl-CoA dehydrogenase	Normally, through a process called fatty acid oxidation, several enzymes work in a step-wise fashion to break down (metabolize) fats and convert them to energy. The 3-hydroxyacyl-CoA dehydrogenase enzyme is required for a step that metabolizes groups of fats called medium-chain fatty acids and short-chain fatty acids. Also: EC 1.1.1.35, Beta-hydroxyacyl dehydrogenase and Beta-keto-reductase	http://ghr.nlm.nih.gov/condition/3-hydroxyacyl-coa-dehydrogenase-deficiency and http://enzyme.expasy.org/EC/1.1.1.35
HCAD	3-Hydroxyacyl-CoA dehydrogenase	Beta-Hydroxyacyl dehydrogenase; enzyme catalyzing the oxidation of an l-3-hydroxyacyl-CoA to a 3-ketoacyl-CoA with reduction of NAD+; one of the enzymes of the b oxidation of fatty acids.	http://cancerweb.nci.ac.uk/omd/
3HAO	3-Hydroxyanthranilate oxygenase	An enzyme.	
3HBD	3-Hydroxybutyrate dehydrogenase	3-hydroxybutyrate dehydrogenase is an enzyme, Other name(s): NAD-beta-hydroxybutyrate dehydrogenase; hydroxybutyrate oxidoreductase; beta-hydroxybutyrate dehydrogenase; D-beta-hydroxybutyrate dehydrogenase; D-3-hydroxybutyrate dehydrogenase; D-(R)-3-hydroxybutyrate dehydrogenase; beta-hydroxybutyric acid dehydrogenase; 3-D-hydroxybutyrate dehydrogenase; beta-hydroxybutyric dehydrogenase, (R)-3-hydroxybutanoate:NAD+ oxidoreductase	http://www.chem.qmul.ac.uk
3MST	3-Mercaptopyruvate sulfurtransferase	An enzyme that is a part of the cysteine catabolic pathway; it catalyzes the conversion of 3-mercaptopyruvate to pyruvate and H2S; a deficiency of this enzyme will result in elevated urine concentrations of 3-mercaptopyruvate as well as of 3-mercaptoplactate, both in the form of disulfides with cysteine.	http://medical-dictionary.thefreedictionary.com/3-Mercaptopyruvate+sulfurtransferase

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
4ABT	4-Aminobutyrate transaminase	An enzyme that catalyzes the chemical reaction 4-aminobutanoate and 2-oxoglutarate into succinate semialdehyde and L-glutamate. EC 2.6.1.19. Other name(s): 4-aminobutyrate aminotransferase, Beta-alanine--oxoglutarate aminotransferase, GABA transaminase, Gamma-amino-N-butrate transaminase.	http://enzyme.expasy.org/EC/2.6.1.19
PNPP	4-Nitrophenylphosphatase	4-nitrophenylphosphatase is an enzyme that catalyzes the hydrolysis of nitrophenyl phosphates to nitrophenols. Other name(s): nitrophenyl phosphatase; p-nitrophenylphosphatase; para-nitrophenyl phosphatase; K-pNPPase; NPPase; PNPPase; Ecto-p-nitrophenyl phosphatase; p-nitrophenylphosphate phosphohydrolase, K-Dependent p-Nitrophenylphosphatase, 4-nitrophenylphosphate phosphohydrolase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
4OHB	4-OH Biphenyl Hydroxylase	No definition available.	
5NLT	5'-Nucleotidase activity	A nonlipid enzyme, elevated in some liver disorders and cancer of the pancreas. It is infrequently measured in the blood to diagnose certain liver and bone diseases. This enzyme is widely distributed throughout the body but is found in high concentrations in the liver and pancreas. The normal accumulation in serum is 0.1 to 6 units. Also: 5'-NT and EC 3.1.3.5	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/P21589
5ARD	5alpha-Reductase	Accepted name: 3-oxo-5alpha-steroid 4-dehydrogenase Other name(s): steroid 5alpha-reductase; 3-oxosteroid delta4-dehydrogenase; 3-oxo-5alpha-steroid delta4-dehydrogenase; steroid delta4-5alpha-reductase; delta4-3-keto steroid 5alpha-reductase; delta4-3-oxo steroid reductase; delta4-3-ketosteroid5alpha-oxidoreductase; delta4-3-oxosteroid-5alpha-reductase; 3-keto-delta4-steroid-5alpha-reductase; testosterone 5alpha-reductase; 4-ene-3-ketosteroid-5alpha-oxidoreductase; delta4-5alpha-dehydrogenase; 3-oxo-5alpha-steroid:(acceptor) delta4-oxidoreductase Systematic name: 3-oxo-5alpha-steroid:acceptor delta4-oxidoreductase	http://www.chem.qmul.ac.uk

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
5AVS	5-Aminolevulinate synthase	5-aminolevulinate synthase is an enzyme of the transferase class that catalyzes condensation of the succinyl group from succinyl coenzyme A with glycine to form delta-aminolevulinate. It is a pyridoxal phosphate protein and the reaction occurs in mitochondria as the first step of the heme biosynthetic pathway. The enzyme is a key regulatory enzyme in heme biosynthesis. Other name(s): ALAS; ALA synthase; alpha-aminolevulinic acid synthase; delta-aminolevulinate synthase; delta-aminolevulinate synthetase; delta-aminolevulinic acid synthase; delta-aminolevulinic acid synthetase; delta-aminolevulinic synthetase; 5-aminolevulinate synthetase; 5-aminolevulinic acid synthetase; ALA synthetase; aminolevulinate synthase; aminolevulinate synthetase; aminolevulinic acid synthetase; aminolevulinic synthetase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
RNPH	5'-Ribonucleotide phosphohydrolase	A glycoprotein enzyme present in various organs and in many cells. The enzyme catalyzes the hydrolysis of a 5'-ribonucleotide to a ribonucleoside and orthophosphate in the presence of water. It is cation-dependent and exists in a membrane-bound and soluble form.	http://de.dict.md/uebersetzung/5'+ribonucleotide+phosphohydrolase
6PGD	6-Phosphogluconate dehydrogenase	6-phosphogluconate dehydrogenase is an enzyme of the oxidoreductase class that catalyzes the reaction 6-phospho-D-gluconate and NADP+ to yield D-ribulose 5-phosphate, carbon dioxide, and NADPH. Also: phosphogluconate 2-dehydrogenase, 6-phosphogluconic dehydrogenase; phosphogluconate dehydrogenase; gluconate 6-phosphate dehydrogenase; 6-phosphogluconate dehydrogenase (NAD); 2-keto-6-phosphogluconate reductase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
A712	7,12-dimethylbenz(a)anthracene hydroxylase	7,12-dimethylbenz(a)anthracene hydroxylase is part of a large group of cytochrome P-450 (heme-thiolate) monooxygenases that complex with NAD(P)H-Flavin Oxioreductase in numerous mixed-function oxidations of aromatic compounds.	http://www.ncbi.nlm.nih.gov
76MS	76 kDa mitochondrial complex I subunit	Mitochondrial NADH:ubiquinone oxidoreductase (complex I) is the largest enzyme of the mitochondrial respiratory chain.	https://www.ncbi.nlm.nih.gov/pubmed/21749854 and https://www.ncbi.nlm.nih.gov/nuccore/AK071307

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
BFCD	7-Benzoyloxy-4-trifluoromethylcoumarin O-debenzylase	Mediated by CYP3A; an enzyme. Also benzoyloxy-4-[trifluoromethyl]-coumarin-O-debenzyloxylase , benzoyloxy-4-trifluoromethyl-coumarin O-debenzyloxylase, BFCOD.	ECOTOX and ECOREF#116891
EROD	7-Ethoxresorufin O-deethylase	An enzyme	
ACOH	Acetanilide-4-hydroxylase	A marker for CYP1A2.	ECOREF#75745
AASY	Acetolactate synthase	A flavoprotein enzyme that catalyzes the formation of acetolactate from 2 moles of Pyruvate in the biosynthesis of Valine and the formation of acetohydroxybutyrate from pyruvate and alpha-ketobutyrate in the biosynthesis of Isoleucine. Other name(s): a-acetohydroxy acid synthetase; a-acetohydroxyacid synthase; a-acetolactate synthase; a-acetolactate synthetase; acetohydroxy acid synthetase; acetohydroxyacid synthase; acetolactate pyruvate-lyase (carboxylating); acetolactic synthetase.	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
ACHE	Acetylcholinesterase	An enzyme present in the central nervous system, particularly in nervous tissue, muscle, and red cells, that catalyzes the hydrolysis of acetylcholine to choline and acetic acid. Also: AChE, EC:3.1.1.7	Dorland's Medical Dictionary for Health Consumers, 2007
ACAC	Acetyl-CoA carboxylase	Carries out three functions: biotin carboxyl carrier protein, biotin carboxylase and carboxyltransferase. Involved in the synthesis of very-long-chain fatty acid synthesis which is required to maintain a functional nuclear envelope. Required for acylation and vacuolar membrane association of VAC8 which is necessary to maintain a normal morphology of the vacuole. Also: ACC, EC:6.4.1.2	http://www.uniprot.org/uniprot/Q00955
ACPH	Acid Phosphatase	A hydrolase found in mammalian liver, spleen, bone marrow, plasma and formed blood elements, and prostate gland, catalyzing the cleavage of orthophosphate from orthophosphoric monoesters under acid conditions; determination of its activity in serum is an important diagnostic test. Also: EC:3.1.3.2., APase6, pH 6-optimum acid phosphatase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/?query=3-hydroxyacyl-CoA+dehydrogenase&sort=score
APRT	Acid Protease	Any of a number of protein-hydrolysing agents—e.g., endopeptidases or exopeptidases—including those produced by fungi—e.g., <i>Aspergillus oryzae</i> —which are used in manufacturing flour and soy products. Also: 3.4.23.-	soy products. Segen's Medical Dictionary, 2012 Farlex, and http://www.uniprot.org/uniprot/P22929

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
APYR	Acid pyrophosphatase	A group of enzymes within the class EC 3.6.1.- that catalyze the hydrolysis of diphosphate bonds, chiefly in nucleoside di- and triphosphates. They may liberate either a mono- or diphosphate.	
AATA	Acyl coenzyme A:testosterone acyltransferase	An enzyme responsible for testosterone esterification	Gooding et al, Environ Health Perspect. (2003) 111(4): 426-430
ACCO	Acyl-CoA oxidase	Acyl-CoA oxidase, enzyme that catalyzes the first and rate-determining steps of peroxisomal beta-oxidation of fatty acids. It acts on enzyme A derivatives of fatty acids with chain lengths from 8 to 18 . Also, fatty acyl-CoA oxidase; acyl coenzyme A oxidase; fatty acyl-coenzyme A oxidase, acyl-CoA:oxygen 2-oxidoreductase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
AGLP	Acylglycerol lipase	Hydrolyses glycerol monoesters of long-chain fatty acids. Also: monoacylglycerol lipase, monoacylglycerolipase, monoglyceride lipase, monoglyceride hydrolase, fatty acyl monoester lipase, monoacylglycerol hydrolase, monoglyceridyllipase, monoglyceridase, glycerol-ester acylhydrolase, EC 3.1.1.23.	http://www.enzyme-database.org/query.php?ec=3.1.1.23
A17E	ADAM 17 endopeptidase	A 70-kDa enzyme that belongs to the ADAM protein family of disintegrins and metalloproteases. Also known as ADAM 17, ADAM metallopeptidase domain 17, TACE , tumor necrosis factor alpha converting enzyme, CD156B, Snake venom-like protease, TNF-alpha convertase, cSVP, ADAM18, MGC71942, ADAM metallopeptidase domain 18, disintegrin and metalloproteinase domain-containing protein 17, TNF-alpha converting enzyme, CD156b antigen, EC 3.4.24.86.	http://en.wikipedia.org/wiki/ADAM17 , http://www.genecards.org/cgi-bin/carddisp.pl?id_type=entrezgene&id=6868 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/4/24/86.html
ADDM	Adenosine deaminase	An enzyme which catalyzes the conversion of adenosine to inosine and whose deficiency causes a form of severe combined immunodeficiency disease as a result of the accumulation of toxic metabolites which inhibit DNA synthesis—abbreviation. Also: Adenosine aminohydrolase, EC:3.5.4.4, ADA.	www.merriam-webster.com/medical/adenosine%20deaminaseand http://www.uniprot.org/uniprot/P56658
ATPA	Adenosine Triphosphatase	An enzyme in skeletal muscle and other tissues that catalyzes the hydrolysis of adenosine triphosphate to adenosine diphosphate and inorganic phosphate. Among various enzymes in this group, mitochondrial ATPase is involved in obtaining energy for cellular metabolism, and myosin ATPase is involved in muscle contraction.	Mosby's Medical Dictionary, 8th edition, 2009

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
AMDC	Adenosylmethionine decarboxylase	An enzyme that catalyzes the removal of the carboxylate group of S-adenosylmethionine to form S-adenosyl-5'-3-methylpropylamine which then acts as the n-propylamine group donor in the synthesis of the polyamines spermidine and spermine from putrescine. Other names: S-adenosylmethionine decarboxylase; S-adenosyl-L-methionine decarboxylase; S-adenosyl-L-methionine carboxy-lyase, EC 4.1.1.50.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/1/1/50.html and http://www.ebi.ac.uk/interpro/IEntry?acc=IPR001985
ADCY	Adenylate cyclase	Adenylate cyclase is an enzyme. Other name(s): adenylylcyclase; adenyl cyclase; 3',5'-cyclic AMP synthetase; ATP diphosphate-lyase (cyclizing).	http://www.chem.qmul.ac.uk/iubmb
AGPP	ADP glucose pyrophosphorylase	ADP glucose pyrophosphorylase is an enzyme. Other name(s): glucose-1-phosphate adenylyltransferase, adenosine diphosphate glucose pyrophosphorylase; adenosine diphosphoglucose pyrophosphorylase; ADP-glucose pyrophosphorylase; ADP-glucose synthetase; ADP-glucose synthetase; ADPG pyrophosphorylase; ADP:alpha-D-glucose-1-phosphate adenylyltransferase	http://www.chem.qmul.ac.uk
ADPS	ADPase	A calcium-activated enzyme that catalyzes the hydrolysis of ATP to yield AMP and orthophosphate. It can also act on ADP and other nucleoside triphosphates and diphosphates. Accepted name: nucleoside diphosphate phosphatase. Also: apyrase, ATP-diphosphatase; adenosine diphosphatase, thiaminpyrophosphatase, UDPase, inosine diphosphatase, IDPase, adenosinepyrophosphatase, guanosine diphosphatase, guanosine 5'-diphosphatase, inosine 5'-diphosphatase, uridine diphosphatase, uridine 5'-diphosphatase, type B nucleoside diphosphatase, GDPase, CDPase, nucleoside 5'-diphosphatase, type L nucleoside diphosphatase, NDPase, nucleoside diphosphate phosphohydrolase, nucleoside-diphosphatase, EC 3.6.1.6.	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
AAPT	Alanine aminopeptidase	Catalysis of the release of an N-terminal amino acid, preferentially alanine, from an oligopeptide or polypeptide.	http://www.informatics.jax.org/searches/GO.cgi?id=GO:0016284
ATAS	Alanine aminotransferase Aspartate aminotransferase ratio	The ratio of alanine aminotransferase (ALT) to aspartate aminotransferase (AST) found in a sample	ECOTOX
AGTF	Alanine gamma-glutamyltransferase	An enzyme.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
AATT	Alanine transaminase (ALT)	Alanine transaminase is an enzyme that catalyses the conversion of L-alanine and 2-oxoglutarate to pyruvate and L-glutamate. Other name(s): glutamic-pyruvic transaminase; glutamic-alanine transaminase; GPT; β -alanine aminotransferase; alanine aminotransferase; alanine- α -ketoglutarate aminotransferase; alanine-pyruvate aminotransferase; ALT; glutamic acid-pyruvic acid transaminase; glutamic-pyruvic aminotransferase; L-alanine aminotransferase; L-alanine transaminase; L-alanine- α -ketoglutarate aminotransferase; pyruvate transaminase; pyruvate-alanine aminotransferase; pyruvate-glutamate transaminase	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
ATRP	Alanine Transpeptidase	An enzyme.	
ADHE	Alcohol dehydrogenase	Alcohol dehydrogenase is responsible for catalyzing oxidation of primary and secondary alcohols to aldehydes and ketones. Other name(s): aldehyde reductase; ADH; alcohol dehydrogenase (NAD); aliphatic alcohol dehydrogenase; ethanol dehydrogenase; NAD-dependent alcohol dehydrogenase; NAD-specific aromatic alcohol dehydrogenase; NADH-alcohol dehydrogenase; NADH-aldehyde dehydrogenase; primary alcohol dehydrogenase; yeast alcohol dehydrogenase.	http://www.chem.qmul.ac.uk and http://en.wikipedia.org/wiki
ALDH	Aldehyde dehydrogenase (ALDH)	Aldehyde dehydrogenase is a polymorphic enzyme responsible for the oxidation of aldehydes to carboxylic acids, which leave the liver and are metabolized by the body's muscle and heart. ALDH1 and ALDH2 are the most important enzymes for aldehyde oxidation. These enzymes are found in many tissues of the body but are at the highest concentration in the liver.	http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase
ADND	Aldehyde dehydrogenase (NAD)	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NAD ⁺ as acceptor. Other name(s): CoA-independent aldehyde dehydrogenase; m-methylbenzaldehyde dehydrogenase; NAD-aldehyde dehydrogenase; NAD-dependent 4-hydroxynonenal dehydrogenase; NAD-dependent aldehyde dehydrogenase; NAD-linked aldehyde dehydrogenase; propionaldehyde dehydrogenase; aldehyde dehydrogenase (NAD), NAD ⁺ Aldehyde dehydrogenase, EC1.2.1.3.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/2/1/3.html and http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase_(NAD%2B)

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ADNP	Aldehyde dehydrogenase (NADP)	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NADP+ as acceptor. Other name(s): NADP-acetaldehyde dehydrogenase; NADP-dependent aldehyde dehydrogenase; aldehyde dehydrogenase (NADP), NADP+Aldehyde dehydrogenase, EC1.2.1.4.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/2/1/4.html and http://en.wikipedia.org/wiki/Aldehyde_dehydrogenase_(NADP%2B)
AD2B	Aldehyde dehydrogenase 2b	An enzyme involved in involved in the metabolic process and the oxidation-reduction process.	http://www.ebi.ac.uk/interpro/protein/Q6TH48
ALDO	Aldolase	A crystalline enzyme that occurs widely in living systems and catalyzes reversibly the cleavage of a phosphorylated fructose into triose sugars.	www.merriam-webster.com/dictionary/aldolase
AEPX	Aldrin Epoxidase	An enzyme.	
ALIE	Ali esterase	Ali esterase catalyzes a carboxylic ester to yield an alcohol and carboxylic acid anion; has wide specificity; also hydrolyzes vitamin A esters; can be used to separate stereoisomers; consider also esterase b which is a serine protease. Also known as carboxylesterase, B-esterase; monobutyrase; cocaine esterase; procaine esterase; methylbutyrase; vitamin A esterase; butyryl esterase; carboxyesterase; carboxylate esterase; carboxylic esterase; methylbutyrate esterase; triacetin esterase; carboxyl ester hydrolase; butyrate esterase; methylbutyrase; α -carboxylesterase; propionyl esterase; nonspecific carboxylesterase; esterase D; esterase B; esterase A; serine esterase; carboxylic acid esterase; cocaine esterase, carboxylic-ester hydrolase	http://www.chem.qmul.ac.uk/
ALPH	Alkaline Phosphatase	An enzyme that catalyzes the cleavage of orthophosphate from orthophosphoric monoesters under alkaline conditions. Differing forms of the enzyme occur in normal and malignant tissues. Also: APase, EC:3.1.3.1.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/P00634
AKPT	Alkaline protease	A protease works optimally at a pH of 8 to 11. Alkaline proteases are used in washing powders and hair removal from cattle hide, and are produced by bacteria, silkworms and other organisms. Also: EC=3.4.21.-.	Segen's Medical Dictionary, 2012 Farlex and http://www.uniprot.org/uniprot/P27693

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
AKPY	Alkaline pyrophosphatase	A group of enzymes within the class EC 3.6.1.- that catalyze the hydrolysis of diphosphate bonds, chiefly in nucleoside di- and triphosphates. They may liberate either a mono- or diphosphate.	
ALLN	Allantoinase Activity	An enzyme (an amidohydrolase) that catalyses the hydrolysis of allantoin to allantoic acid. Also: Allantoin-utilizing enzyme, EC:3.5.2.5.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P77671
AMYL	Alpha-amylase	A starch-splitting enzyme used in the treatment of inflammatory conditions and edema of soft tissues associated with traumatic injury. Also: 1,4-alpha-D-glucan glucanohydrolase, BLA, EC:3.2.1.1,	Mosby's Dental Dictionary, 2nd edition, 2008 and http://www.uniprot.org/uniprot/P06278
AFCD	alpha-Fucosidase	An enzyme that catalyzes the hydrolysis of an alpha-L-fucoside, producing an alcohol and L-fucose; a deficiency of the lysosomal enzyme will result in fucosidosis.	Farlex Partner Medical Dictionary, 2012 and
AGCT	alpha-Galactosidase	An enzyme that catalyzes the conversion of alpha-D-galactoside to D-galactose. Also: Alpha-D-galactoside galactohydrolase, Melibiase, EC:3.2.1.22.	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/Q9FXT4
AGPD	alpha-glycerol phosphate dehydrogenase	NAD-dependent glycerol-3-phosphate dehydrogenase (1.1.1.8) (GPD) catalyzes the reversible reduction of dihydroxyacetone phosphate to glycerol-3-phosphate. It is a cytoplasmic protein, active as a homodimer, each monomer containing an N-terminal NAD binding site. In insects, it acts in conjunction with a mitochondrial alpha-glycerophosphate oxidase in the alpha-glycerophosphate cycle, which is essential for the production of energy used in insect flight.	http://www.ebi.ac.uk
HBDS	alpha-Hydroxybutyrate dehydrogenase	An enzyme.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
AMNS	alpha-Mannosidase	An enzyme that catalyzes the hydrolysis of terminal, non-reducing alpha-D-mannose residues in alpha-D-mannosides. The enzyme plays a role in the processing of newly formed N-glycans and in degradation of mature glycoproteins. There are multiple isoforms of alpha-mannosidase, each having its own specific cellular location and pH optimum. Defects in the lysosomal form of the enzyme results in a buildup of mannoside intermediate metabolites and the disease alpha-mannosidosis. Also: Alpha-D-mannosidase mannohydrolase, EC:3.2.1.24.	http://www.labome.org/topics/chemicals/enzymes/enzymes/hydrolases/glycoside/mannosidases/alpha-mannosidase-12554.html and http://www.uniprot.org/uniprot/P22855
AMPD	Aminopeptidase	Any member of a sub-subclass of enzymes of the hydrolase class that catalyze the hydrolytic cleavage of the N-terminal amino acid or dipeptide from a peptide chain; they are exopeptidases and occur in plasma and many tissues.	www.mercksource.com/pp/us/cn
APND	Aminopyrine N-demethylase	An enzyme.	
AMDM	AMP deaminase (adenosine monophosphate deaminase)	An enzyme that hydrolyzes adenylic acid to inosinic acid and NH3. A muscular deficiency of AMP deaminase in muscles can lead to excess fatigue following exercise. Synonym(s): adenylic acid deaminase Also: Myoadenylate deaminase, EC:3.5.4.6.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P50998
AMLS	Amylase	An enzyme that catalyzes the hydrolysis of starch into simpler compounds. The α -amylases occur in animals and include pancreatic and salivary amylase; the β -amylases occur in higher plants.	Dorland's Medical Dictionary for Health Consumers, 2007
ALAT	Amyloytic activity	Characterized by or capable of the enzymatic splitting of starch into soluble products.	http://www.merriam-webster.com/medical/amylolytic
AAPA	Amyloytic activity to Proteolytic activity	The ratio of amyloytic to proteolytic activity. Also called A/P Coefficient.	ECOTOX and ECOREF#157763
ANAE	A-naphthyl Acetate Esterase	An enzyme.	
AGCE	Angiotensin converting enzyme	A glycoprotein (dipeptidyl carboxypeptidase) that catalyzes the conversion of angiotensin I to angiotensin II by splitting two terminal amino acids. ACE-inhibiting agents are used for controlling hypertension and for protecting the kidneys in diabetes mellitus. Also: ACE, EC:3.4.15.1, Dipeptidyl carboxypeptidase I, Kininase II, CD_antigen=CD143	Mosby's Medical Dictionary, 8th edition, 2009 and http://www.uniprot.org/uniprot/P12822
ANHG	Aniline hydrogenase	Aniline hydrogenase is an enzyme	ECOTOX
AHDX	Aniline Hydroxylase	An enzyme.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ARGN	Arginase	A crystalline enzyme that converts naturally occurring arginine into ornithine and urea. Also: EC:3.5.3.1	www.merriam-webster.com/medical/arginase and http://www.uniprot.org/uniprot/P00812
ARDC	Arginine decarboxylase	Catalyzes the production of agmatine and CO ₂ from L-arginine.	https://jb.asm.org/content/189/20/7376
AGKN	Arginine kinase	An enzyme that catalyzes the phosphorylation of the guanidine nitrogen of arginine in the presence of ATP and a divalent cation with formation of phosphorylarginine and ADP. Also: EC:2.7.3.3	www.reference.md/files/D001/mD001122.html and http://www.uniprot.org/uniprot/O15992
ARSN	Argininosuccinate synthetase	Argininosuccinate synthase or synthetase (ASS) (EC 6.3.4.5) is an enzyme that catalyzes the synthesis of argininosuccinate from citrulline and aspartate. ASS is responsible for the third step of the urea cycle and one of the reactions of the citrulline-NO cycle.	http://encyclopedia.thefreedictionary.com/Argininosuccinate+synthetase
ARMT	Aromatase	An enzyme which converts androgens to estrogens. This enzyme complex is located in the endoplasmic reticulum of estrogen-producing cells including ovaries, placenta, testicular sertoli and leydig cells, adipose, and brain tissue. Also known as Estrogen synthetase, P450Arom, CYP 19, CYP19, CYP19 Protein, Cytochrome P-450(AROM), Cytochrome P450 19, Estrogen Synthase, Androstenedione Aromatase, Cytochrome P-450 CYP19, Cytochrome P 450 CYP19, EC 1.14.14.1	http://www.ncbi.nlm.nih.gov/mesh?term=cyp19
AMTR	Arsenite methyltransferase	A subclass of enzymes of the transferase class that catalyze the transfer of a methyl group from one compound to another. Arsenite methyltransferase [liver arsenite methyltransferase] converts arsenite to monomethylarsenic Also: Arsenite methyl transferase, Methylarsenite methyltransferase, S-adenosyl-L-methionine: arsenic(III) methyltransferase, EC=2.1.1.137.	www.reference.md/files/C116/mC116338.html and http://www.uniprot.org/uniprot/Q9HBK9

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
AHHD	Aryl hydrocarbon hydrolase (AHH)	A group of cytochrome p-450 (haem-thiolate) proteins which utilise reduced flavin or flavoprotein as one donor and incorporate one atom of oxygen. They act on many aromatic compounds. They are a component part of the mixed-function oxidase system and are important for the oxidation of many drugs and toxins such as phenobarbital, carcinogens, and insecticide. These enzymes are considered to be an aspect of EC 1.14.14.1. Also: Aryl Hydrocarbon hydrolase (AHH).	http://www.kmle.com/search.php?Search=aryl- Link: cancerweb.ncl.ac.uk/omd/ and http://enzyme.expasy.org/EC/1.14.14.1
ARES	Aryldialkylphosphatase (Arylesterase)	Aryldialkylphosphatase acts on organophosphorus compounds (such as paraoxon) including esters of phosphonic and phosphinic acids. Inhibited by chelating agents; requires divalent cations for activity. Also: organophosphate hydrolase; paraoxonase; A-esterase; aryltriphosphatase; organophosphate esterase; esterase B1; esterase E4; paraoxon esterase; pirimiphos-methyloxon esterase; OPA anhydrolase; organophosphorus hydrolase; phosphotriesterase; paraoxon hydrolase; OPH; organophosphorus acid anhydrolase.	http://www.chem.qmul.ac.uk
ASPT	Arylsulfatase	A group of enzymes active in the hydrolysis of sulfates and the metabolism of mucopolysaccharides; found in liver, pancreas, kidneys and immature monocytes. Several species of molluscs and <i>Aerobacter</i> spp. serve as commercial sources of the enzyme which is used in analytic endocrinology. Also: Cys-type sulfatase, Arylsulphatase, EC:3.1.6.1	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://www.uniprot.org/uniprot/Q0TUK6
ASCP	Ascorbate peroxidase	An enzyme.	
ASOA	Ascorbic acid oxidase activity	A copper containing enzyme found in higher plants where it catalyzes the reversible oxidation of ascorbate to 2-dehydro-ascorbate acid with the concomitant reduction of molecular oxygen to water.	http://www.cordis.eu/tmr/src/grants/fair/975021.htm

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ASAT	Aspartate aminotransferase	Accepted name: aspartate transaminase. Usually abbreviated as AST. Other name(s): glutamic-oxaloacetic transaminase; glutamic-aspartic transaminase; transaminase A; AAT; AspT; 2-oxoglutarate-glutamate aminotransferase; aspartate a-ketoglutarate transaminase; aspartate aminotransferase; aspartate-2-oxoglutarate transaminase; aspartic acid aminotransferase; aspartic aminotransferase; aspartyl aminotransferase; AST; glutamate-oxalacetate aminotransferase; glutamate-oxalate transaminase; glutamic-aspartic aminotransferase; glutamic-oxalacetic transaminase; glutamic oxalic transaminase; GOT (enzyme); L-aspartate transaminase; L-aspartate-a-ketoglutarate transaminase; L-aspartate-2-ketoglutarate aminotransferase; L-aspartate-2-oxoglutarate aminotransferase; L-aspartate-2-oxoglutarate-transaminase; L-aspartic aminotransferase; oxaloacetate-aspartate aminotransferase; oxaloacetate transferase; aspartate:2-oxoglutarate aminotransferase; glutamate oxaloacetate transaminase; EC 2.6.1.1 Systematic name: L-aspartate:2-oxoglutarate aminotransferase	http://www.chem.qmul.ac.uk and http://enzyme.expasy.org/EC/2.6.1.1
AAGP	Aspartate aminotransferase to glutamate pyruvate transaminase ratio	Ratio of aspartate aminotransferase to glutamate pyruvate transaminase AST/GPT	ECOTOX
BATS	ATP synthase beta chain	This enzyme consists of two major segments: F0 portion, the transmembrane proton channel and F1 portion, the catalytic component. The proton channel component allows the diffusion of protons (hydrogen ions) from an area where there are more hydrogen ions to an area where there are less hydrogen ions due to a proton gradient. As the proton (H+ ion) moves down the concentration gradient this moves the enzyme in a spinning motion, which brings ADP and inorganic phosphate together to form a bond, thus creating ATP molecule. The resulting ATP molecule is released so that a new ADP molecule can enter for another phosphorylation. This enzyme can also work in reverse using the energy release from ATP hydrolysis to pump protons against their thermodynamic gradient. Since it can also use ATP as a source of energy it is also aptly called ATP synthetase. Also: ATP synthase, Chloroplast ATPase, F(0)F(1)-ATPase, F(1)-ATPase, F(0)F(1)-ATPase, H(+)-transporting ATP synthase, H(+)-transporting ATPase, Mitochondrial ATPase, EC 3.6.3.14	www.biology-online.org/dictionary/ATP_synthase , http://enzyme.expasy.org/EC/3.6.3.14 and http://www.uniprot.org/uniprot/W1EDX5

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ASAS	ATP synthase, alpha subunit	Mitochondrial membrane ATP synthase produces ATP from ADP in the presence of a proton gradient across the membrane which is generated by electron transport complexes of the respiratory chain. Subunit alpha does not bear the catalytic high-affinity ATP-binding sites.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1303195/
AZOR	Azo-reductase	Azo-reductase is an enzyme. Other name(s): new coccine (NC)-reductase; NC-reductase; azo-dye reductase; orange II azoreductase; NAD(P)H:1-(4'-sulfophenylazo)-2-naphthol oxidoreductase; orange I azoreductase; azo reductase; azoreductase; nicotinamide adenine dinucleotide (phosphate) azoreductase; NADPH2-dependent azoreductase; dimethylaminobenzene reductase; p-dimethylaminoazobenzene azoreductase; dibromopropylaminophenylazobenzoic azoreductase; N,N-dimethyl-4-phenylazoaniline azoreductase; p-aminoazobenzene reductase; methyl red azoreductase; NADPH2:4-(dimethylamino)azobenzene oxidoreductase, azobenzene reductase.	http://www.chem.qmul.ac.uk
B5P4	b5/P-450	An enzyme.	
BADH	Benzaldehyde dehydrogenase	This enzyme belongs to the family of oxidoreductases, specifically those acting on the aldehyde or oxo group of donor with NAD+ or NADP+ as acceptor.	http://www.uniprot.org/uniprot/Q9A5Q0
BAPH	Benzo(a)pyrene Hydroxylase	An enzyme.	
BAPM	Benzo(a)pyrene monooxygenase	An enzyme that catalyses the incorporation of one oxygen atom of molecular oxygen into benzo(a)pyrene.	
BPND	Benzphetamine-n-demethylase	An enzyme.	
<BHXA>	Benzpyrene hydroxylase	An enzyme.	
BROD	Benzylresorufin O-deethylase	An enzyme.	
BGMD	beta-Glucosaminidase	Cleaves all non-reducing terminal beta-linked N-acetylglucosamine.	http://www.prozyme.com/glycopro/index.html#GE30

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
BGSE	beta-Glucosidase	A glucosidase enzyme that acts upon β 1->4 bonds linking two glucose or glucose-substituted molecules (i.e., the disaccharide cellobiose). It is an exocellulase with specificity for a variety of beta-D-glycoside substrates. It catalyzes the hydrolysis of terminal non-reducing residues in beta-D-glucosides with release of glucose. Also: gentiobiase, cellobiase, emulsin, elaterase, aryl-beta-glucosidase, beta-D-glucosidase, beta-glucoside glucohydrolase, arbutinase, amygdalinase, p-nitrophenyl beta-glucosidase, primeverosidase, amygdalase, linamarase, salicilinase, beta-1,6-glucosidase, EC:3.2.1.21.	http://www.uniprot.org/uniprot/Q0350 and Lehninger Principles of Biochemistry (2000).
BGCR	beta-Glucuronidase	beta-Glucuronidase hydrolyzes conjugated glucuronides. It is ubiquitous in animal lysozymes. The enzyme has found wide application in determining urinary steroids.	http://www.worthington-biochem.com/manual/G/GL.html
HCAR	beta-Hydroxy-beta-methylglutaryl-CoA reductase	The rate-limiting enzyme for cholesterol synthesis and is regulated via a negative feedback mechanism mediated by sterols and non-sterol metabolites derived from mevalonate, the product of the reaction catalyzed by reductase. Normally in mammalian cells this enzyme is suppressed by cholesterol derived from the internalization and degradation of low density lipoprotein (LDL) via the LDL receptor. Also: 3-hydroxy-3-methylglutaryl-CoA reductase.	www.ncbi.nlm.nih.gov/gene/3156
BHST	Betaine homocysteine S-methyltransferase	A zinc metallo-enzyme that catalyzes the transfer of a methyl group from betaine to homocysteine to produce dimethylglycine and methionine respectively. This enzyme belongs to the family of transferases, specifically those transferring one-carbon group methyltransferases and participates in the metabolism of glycine, serine, threonine and also methionine. EC 2.1.1.5. Also: betaine-homocysteine methyltransferase; betaine-homocysteine transmethylase, Betaine homocysteine methyltransferase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/1/1/5.html and http://en.wikipedia.org/wiki/Betaine%20homocysteine_S-methyltransferase

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
NABH	beta-N-Acetylhexosaminidase	One of two chitinolytic enzymes involved in exoskeleton degradation and recycling in invertebrates. Enzyme reaction hydrolysis of terminal non-reducing <i>N</i> -acetyl-D-hexosamine residues in <i>N</i> -acetyl-beta-D-hexosaminides. Acts on <i>N</i> -acetylglucosides and <i>N</i> -acetylgalactosides. Also: Chitobiase, hexosaminidase; beta-acetylaminodeoxyhexosidase; <i>N</i> -acetyl-beta-D-hexosaminidase; <i>N</i> -acetyl-beta-hexosaminidase; beta-hexosaminidase; beta-acetylhexosaminidinase; beta-D- <i>N</i> -acetylhexosaminidase; beta- <i>N</i> -acetyl-D-hexosaminidase; beta- <i>N</i> -acetylglucosaminidase; hexosaminidase A; <i>N</i> -acetylhexosaminidase; beta-D-hexosaminidase; beta- <i>N</i> -acetyl-D-hexosaminide <i>N</i> -acetylhexosaminohydrolase, , EC:3.2.1.52, 3.2.1.29(deleted), 3.2.1.30(deleted).	http://www.genome.jp/dbget-bin/www_bget?ec:3.2.1.52 , http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/52.html , http://www.brenda-enzymes.org/enzyme.php?ecno=3.2.1.29 , http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/2/1/29.html , and http://www.uniprot.org/uniprot/Q54468
BLA1	Bla g 1 allergen	A usually harmless substance capable of triggering a response that starts in the immune system and results in an allergic reaction, in this case specific to Bla g 1.	https://www.aaaai.org/conditions-and-treatments/conditions-dictionary/allergen
BLA2	Bla g 2 allergen	A usually harmless substance capable of triggering a response that starts in the immune system and results in an allergic reaction, in this case specific to Bla g 2.	https://www.aaaai.org/conditions-and-treatments/conditions-dictionary/allergen
BN4H	Bunitrolol 4-hydroxylase	A superfamily of hundreds of closely related heme proteins found throughout the phylogenetic spectrum, from animals, plants, fungi, to bacteria. They include numerous complex monooxygenases. In animals, these P-450 enzymes serve two major functions: (1) biosynthesis of steroids, fatty acids, and bile acids; (2) metabolism of endogenous and a wide variety of exogenous substrates, such as toxins and drugs. They are classified, according to their sequence similarities rather than functions, into CYP gene families (>40% homology) and subfamilies (>59% homology). For example, enzymes from the CYP1, CYP2, and CYP3 gene families are responsible for most drug metabolism.	www.reference.md/files/C071/mC071864.html
BCOD	Butoxycoumarin O-dealkylase	An enzyme.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
BCHE	Butyrylcholinesterase	An enzyme that acts on a variety of choline esters and a few other compounds. Other name(s): pseudocholinesterase; butyrylcholine esterase; non-specific cholinesterase; choline esterase II (unspecific); benzoylcholinesterase; choline esterase; propionylcholinesterase; anticholineesterase; BtChoEase, acetylcholine acylhydrolase, EC 3.1.1.8.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/1/18.html and http://www.enzyme-database.org/query.php?ec=3.1.1.8
CACP	Ca2+/calmodulin-dependent protein kinase	Ca2+/calmodulin-dependent protein kinase is an enzyme. Other names: ATP:caldesmon O-phosphotransferase; caldesmon kinase; caldesmon kinase (phosphorylating); Ca2+/calmodulin-dependent microtubule-associated protein 2 kinase; Ca2+/calmodulin-dependent protein kinase 1; Ca2+/calmodulin-dependent protein kinase II; Ca2+/calmodulin-dependent protein kinase IV; Ca2+/calmodulin-dependent protein kinase kinase; Ca2+/calmodulin-dependent protein kinase kinase beta; calmodulin-dependent kinase II; CaM kinase; CaM kinase II; CAM PKII; CaM-regulated serine/threonine kinase; CaMKI; CaMKII; CaMKIV; CaMKKalpha; CaMKKbeta; microtubule-associated protein 2 kinase; STK20	http://www.chem.qmul.ac.uk
CATP	Calcium adenosine triphosphatase	Calcium ATPase is a form of P-ATPase that transfers calcium after a muscle has contracted. The calcium ATPase are: Plasma membrane Ca2+ ATPase (PMCA) and Sarcoplasmic reticulum Ca2+ ATPase (SERCA).	http://en.wikipedia.org/wiki/Calcium_ATPase
CCAT	Calcium Carbonate adenosine triphosphatase	An enzyme.	
CMAT	Calcium Magnesium adenosine triphosphatase	An enzyme that catalyzes the hydrolysis of ATP and is activated by millimolar concentrations of either Ca(2+) or Mg(2+). Also: Ca/Mg ATPase, Calcium Magnesium ATPase, Ca-Mg ATPase, Ca2+-Mg2+ ATPase.	http://www.reference.md/files/D017/mD017301.html
PKSA	cAMP-dependent protein kinase	An enzyme that has several functions in the cell, including regulation of glycogen, sugar, and lipid metabolism. Also known as, PKA; PKA C; protein kinase A; STK22 , EC 2.7.11.11.	http://www.wikipedia.org and http://enzyme.expasy.org/EC/2.7.11.11

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CAAH	Carbonic anhydrase	A zinc-containing enzyme that occurs in living tissues (as red blood cells) and aids carbon-dioxide transport from the tissues and its release from the blood in the lungs by catalyzing the reversible hydration of carbon dioxide to carbonic acid. EC 4.2.1.1 Accepted name: Carbonate dehydratase	http://www.merriam-webster.com/medical/Carbonic%20Anhydrase and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/2/1/1.html
CBEE	Carboxylesterase	Carboxylesterase is a Serine-dependent esterase with wide Substrate Specificity. The enzyme is involved in the detoxification of Xenobiotics and the activation of ester and of amide Prodrugs.	http://www.online-medical-dictionary.org/definitions-c/carboxylesterase.html
CATS	Carnitine Acetyltransferase	An enzyme that catalyzes the formation of O-Acetyl carnitine from Acetyl-CoA plus Carnitine. Also: Carnitine O-acetyltransferase.	http://www.online-medical-dictionary.org/definitions-c/carnitine-acetyltransferase.html
CPTO	Carnitine O-palmitoyltransferase	An enzyme that catalyzes reversibly the conversion of palmitoyl-CoA to palmitoylcarnitine in the inner mitochondrial membrane. Also known as: CPT, CPTo, outer malonyl-CoA inhibitable carnitine palmitoyltransferase, CPTi, CPT I (outer membrane carnitine palmitoyl transferase), carnitine palmitoyltransferase I, carnitine palmitoyltransferase II, CPT-A, CPT-B, acylcarnitine transferase, carnitine palmitoyltransferase, carnitine palmitoyltransferase-A, L-carnitine palmitoyltransferase, palmitoylcarnitine transferase, palmitoyl-CoA:L-carnitine O-palmitoyltransferase, EC 2.3.1.21.	http://www.ncbi.nlm.nih.gov/mesh/68002334 and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/3/1/21.html
CSP3	Caspase 3	A short pro-domain caspase that plays an effector role in apoptosis. Other name(s): CPP32; apopain; yama protein.	http://www.ncbi.nlm.nih.gov and www.chem.qmul.ac.uk
CSP8	Caspase 8	Caspase-8 is a member of the cysteine proteases, which are implicated in apoptosis and cytokine processing. Like all caspases, caspase-8 is synthesized as an inactive single polypeptide chain zymogen procaspase and is activated by proteolytic cleavage, through either autoactivation after recruitment into a multimeric complex or trans-cleavage by other caspases.	http://www.ncbi.nlm.nih.gov/pubmed/11185963

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CSP9	Caspase 9	A long pro-domain caspase that contains a caspase recruitment domain in its pro-domain region. Caspase 9 is activated during Cell stress by mitochondria-derived proapoptotic factors and by CARD signaling adaptor proteins such as apoptotic protease-activating factor 1. It activates apoptosis by cleaving and activating effector caspases.	http://www.online-medical-dictionary.org/definitions-c/caspase-9.html
C3C7	Caspase3 Caspase7 ratio	The ratio of Caspase3 to Caspase7 found in a sample.	ECOTOX
CTLS	Catalase	A red crystalline enzyme that consists of a protein complex with hematin groups and catalyzes the decomposition of hydrogen peroxide into water and oxygen. Also: EC:1.11.1.6	www.merriam-webster.com/dictionary/catalase
CTMT	Catechol o-methyltransferase	A transferase that catalyzes the methylation of the hydroxyl group at the 3 position of the aromatic ring of catechols, including the catecholamines norepinephrine and epinephrine (thus, converting to normetanephrine and metanephrine, respectively), the methyl group coming from S-adenosyl-L-methionine. An important step in the catabolism of the catecholamines. Also: EC:2.1.1.6.	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P22734
CTHP	Cathepsin	One of a number of enzymes each of which catalyzes the hydrolytic cleavage of specific peptide bonds.	Dorland's Medical Dictionary for Health Consumers, 2007
CTHB	Cathepsin b	A lysosomal cysteine proteinase which hydrolyzes proteins, with a specificity resembling that of papain. The enzyme is present in a variety of tissues and is important in many physiological and pathological processes. In pathology, cathepsin b has been found to be involved in demyelination, emphysema, rheumatoid arthritis, and neoplastic infiltration. Also: APP secretase, Cathepsin B1, EC=3.4.22.1	www.biology-online.org/dictionary/Cathepsin_b and http://www.uniprot.org/uniprot/P07858
CTHD	Cathepsin d	An acid hydrolase isolated from cartilage which plays a part in the endogenous degradation of proteoglycans in degenerative diseases of joints.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://www.uniprot.org/uniprot/P07339

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CLLS	Cellulase	Any of several enzymes, produced primarily by fungi and bacteria that catalyze the hydrolysis of cellulose. Also: EC:3.2.1.4	Based on the Random House Dictionary, Random House, Inc. 2014. and http://www.brenda-enzymes.info/php/result_flat.php4?ecno=3.2.1.4&organism=
CRLP	Ceruloplasmin	A dehydrogenase produced in the liver involved in copper detoxification and possibly in mopping up excess oxygen radicals or superoxide anions ↑ in Neoplasms, inflammation, liver disease, rheumatoid arthritis, SLE, pregnancy, OCs, estrogen therapy in Wilson's disease, Menkes' kinky hair syndrome, hepatitis, cirrhosis, nephrotic syndrome, sprue, scleroderma of small intestine. A blue, copper-containing globulin that may play a part in erythropoiesis and oxygen reduction.	McGraw-Hill Concise Dictionary of Modern Medicine, 2002
CTNS	Chitinase	An enzyme that cleaves the glycosidic bonds in chitin, thereby breaking down the polysaccharide structural component of the hard outer covering of many animals and of the cell wall of fungi.	www.biology-online.org/dictionary/Chitinase
CATE	Chloramphenicol O-acetyltransferase	Chloramphenicol O-acetyltransferase is an enzyme. Other name(s): chloramphenicol acetyltransferase; chloramphenicol acetylase; chloramphenicol transacetylase; CAT I; CAT II; CAT III; acetyl-CoA:chloramphenicol 3-O-acetyltransferase.	http://www.chem.qmul.ac.uk
CYOX	Chlorpyrifos-oxonase	An enzyme which has activity similar to arylalkylphosphatase (EC 3.1.8.1); enzyme from rat plasma and liver hydrolyzes chlorpyrifos oxon ... Registry number: EC 3.1.8.- ... Synonym: cpfoase	wwwENCYCLO.co.uk/define/chlorpyrifos%20oxonase
C7A1	Cholesterol 7-alpha-Hydroxylase	A membrane-bound cytochrome p450 enzyme that catalyzes the 7-alpha-hydroxylation of cholesterol in the presence of molecular oxygen and nadph-ferrihemoprotein reductase. This enzyme, encoded by cyp7, converts cholesterol to 7-alpha-hydroxycholesterol which is the first and rate-limiting step in the synthesis of bile acids. Also: cholesterol 7alpha-monooxygenase, CYP7A1	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
CLES	Cholesterol esterase	An enzyme that catalyzes the hydrolytic cleavage of cholesterol and other sterol esters and triglycerides. Deficiency of the lysosomal enzyme causes the allelic disorders Wolman's disease and cholesteryl ester storage disease.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CACA	Choline acetyltransferase	An enzyme catalyzing the synthesis of acetylcholine; it is a marker for cholinergic neurons. Also: EC 2.3.1.6, Accepted Name: Choline O-acetyltransferase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://www.uniprot.org/uniprot/Q6LEN5
CAPK	Choline phosphokinase	An enzyme that catalyzes the formation of O-phosphocholine and ADP from choline and ATP Also known as choline kinase, choline phosphotransferase, and EC 2.7.1.32	Farlex Partner Medical Dictionary, 2012 and http://www.brenda-enzymes.org/enzyme.php?ecno=2.7.1.32
CEST	Cholinesterase	An enzyme found in blood and in various other tissues that catalyzes hydrolysis of choline esters, including acetylcholine.	McGraw-Hill Dictionary of Scientific & Technical Terms, 6E (2003)
CSYN	Citrate synthase	An enzyme that catalyzes condensation of acetyl coenzyme A with oxaloacetate to form citric acid in the Krebs cycle—called also citrogenase, EC:2.3.3.16	www.merriam-webster.com/medical/citrate%20synthase and http://www.uniprot.org/uniprot/P0ABH7
CGNS	Collagenase	Collagenases are endopeptidases that digest native collagen in the triple helix region. Collagens are the major fibrous component of animal extracellular connective tissue.	http://www.worthington-biochem.com/cls/default.html
CZSD	Copper zinc superoxide dismutase	CuZn superoxide dismutase (CuZnSOD) catalyses the dismutation reaction of the total superoxide radical to molecular oxygen and hydrogen peroxide. This type of SOD is distinguished by its metal prosthetic group, Cu/Zn.	From Molecular Biophysics Group

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CPPO	Coproporphyrinogen oxidase	<p>The CPOX gene provides instructions for making an enzyme known as coproporphyrinogen oxidase. This enzyme is involved in the production of a molecule called heme. Heme is vital for all of the body's organs, although it is most abundant in the blood, bone marrow, and liver. Heme is an essential component of iron-containing proteins called hemoproteins, including hemoglobin (the protein that carries oxygen in the blood).</p> <p>The production of heme is a multi-step process that requires eight different enzymes. Coproporphyrinogen oxidase is responsible for the sixth step in this process, the removal of carbon and oxygen atoms from coproporphyrinogen III (the product of the fifth step) to form protoporphyrinogen IX. Symbol: CPOX</p>	http://ghr.nlm.nih.gov/gene/CPOX
CRKI	Creatine kinase	<p>Any of three isoenzymes found especially in vertebrate skeletal and myocardial muscle and the brain that catalyze the transfer of a high-energy phosphate group from phosphocreatine to ADP with the formation of ATP and creatine and typically occur in elevated levels in the blood following injury to brain or muscle tissue. Also: creatine phosphokinase, creatine phosphotransferase, phosphocreatine kinase, adenosine triphosphate-creatinine transphosphorylase, Lohmann's enzyme, EC 2.7.3.2.</p>	www.merriam-webster.com/medical/creatine%20kinase.html and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/7/3/2.html
CUAT	Cu2+-exporting ATPase	<p>A P-type ATPase that undergoes covalent phosphorylation during the transport cycle. Also: Copper adenosine triphosphatase, Cu-ATPase, Cu2+-ATPase, CopB, ATP phosphohydrolase (Cu2+-exporting), EC 3.6.3.4.</p>	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/6/3/4.html
GMPP	Cyclic guanylic acid phosphodiesterase, cGMP PDE	An enzyme involved with the process of sight.	
CYCS	Cyclooxygenase	Enzyme complexes that catalyze the formation of prostaglandins from the appropriate unsaturated fatty acids, molecular oxygen, and a reduced acceptor.	http://www.online-medical-dictionary.org/definitions-c/cyclooxygenase.html

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CYST	Cysteine dioxygenase	An enzyme that catalyzes the oxidation of cysteine to cysteine sulfinic acid, which is the first major step in cysteine catabolism in mammalian tissues. Also: EC:1.13.11.20, Cysteine oxidase, L-cysteine:oxygen oxidoreductase	http://pubs.rsc.org/en/content/articlelanding/cc/2007/b702158e#!divAbstract , http://www.brenda-enzymes.org/enzyme.php?ecno=1.13.11.20 and http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=1.13.11.20
CYSY	Cysteine synthase	An enzyme that catalyzes the biosynthesis of cysteine in microorganisms and plants from O-acetyl-L-serine and hydrogen sulfide. Formerly listed as EC 4.2.99.8.	https://www.online-medical-dictionary.org/definitions-c/cysteine-synthase.html
CYAM	Cystine aminopeptidase	A zinc-containing sialoglycoprotein that is used to study aminopeptidase activity in the pathogenesis of hypertension. EC 3.4.11.3. Other names Oxytocinase; Cystyl Aminopeptidase; Cystine Arylamidase; Vasopressinase; Cystine Aminopeptidase; Cystinaminopeptidase; Cystidyl Aminopeptidase	www.reference.md/files/D010/mD010122.html
CYTB	Cytochrome b	A cytochrome of the respiratory chain. A deficiency of this cytochrome leads to chronic granulomatous disease. Also: Complex III subunit 3, Complex III subunit CYTB, Complex III subunit III, Cytochrome b-c1 complex subunit 3, Cytochrome b-c1 complex subunit CYTB, Ubiquinol-cytochrome-c reductase complex cytochrome b subunit	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/?query=Cytochrome+b&sort=score
CYB5	Cytochrome B-5	A cytochrome in the endoplasmic reticulum that acts with a number of oxygenases; a deficiency of this cytochrome results in a form of hereditary methemoglobinemia. Also: microsomal cytochrome b5 type A, Cytochrome B5, MCB5	Farlex Partner Medical Dictionary, 2012 and http://www.uniprot.org/uniprot/P00167
CYCC	Cytochrome c + c1	No Definition	
CCCS	Cytochrome c oxidase citrate synthase ratio	Ratio of cytochrome c oxidase to citrate synthase found in a sample.	ECOTOX

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
CCOX	Cytochrome C-oxidase	An enzyme complex of the inner mitochondrial membrane that catalyses the reaction between ferrocytocochrome c and oxygen to yield ferricytocochrome c and water. Other name(s): cytochrome oxidase; cytochrome a3; cytochrome aa3; Warburg's respiratory enzyme; indophenol oxidase; indophenolase; complex IV (mitochondrial electron transport); ferrocytocochrome c oxidase; NADH cytochrome c oxidase, EC 1.9.3.1.	http://www.lexic.us/definition-of/cytochrome_aa3 and http://www.chem.qmul.ac.uk
CP1A	Cytochrome P1A (CYP1A)	No Definition	
CYP2	Cytochrome P2	No Definition	
CY2B	Cytochrome P2B (CYP2B)	One of the intracellular hemoprotein respiratory pigments that are enzymes functioning in electron transport as carriers of electrons	
P418	Cytochrome P418	Heme proteins whose characteristic mode of action involves transfer of reducing equivalents which are associated with a reversible change in oxidation state of the prosthetic group, in this case specific to P418.	ECOTOX and http://www.online-medical-dictionary.org/definitions-c/cytochromes.html
P420	Cytochrome P-420	No Definition	
P450	Cytochrome P-450	A superfamily of hundreds of closely related heme proteins found throughout the phylogenetic spectrum, from animals, plants, fungi, to bacteria. They include numerous complex monooxygenases (mixed function oxygenases). In animals, these P-450 enzymes serve two major functions: (1) biosynthesis of steroids, fatty acids, and bile acids; (2) metabolism of endogenous and a wide variety of exogenous substrates, such as toxins and drugs (biotransformation). They are classified, according to their sequence similarities rather than functions, into CYP gene families (>40% homology) and subfamilies (>59% homology). For example, enzymes from the CYP1, CYP2, and CYP3 gene families are responsible for most drug metabolism. Also, Cytochrome P450, EC:1.14.--	http://ghr.nlm.nih.gov/glossary=cytochromeP450
P1A1	Cytochrome P-450 1A1	An isoenzyme translation product of the P450 subfamily 1A CYP1A gene.	ECOREF 61237
1A12	Cytochrome P450 1A1/2	A microsomal cytochrome p450 isoform protein. (CYP1A1/2)	ECOTOX

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
C1A2	Cytochrome P-450 1A2	A cytochrome P-450 monooxygenase that can be induced by polycyclic aromatic xenobiotics in the liver of human and several animal species. This enzyme is of significant clinical interest due to the large number of drug interactions associated with its induction and its metabolism of THEOPHYLLINE. Caffeine is considered to be a model substrate for this enzyme. CYP1A2 activity can also be increased by environmental factors such as cigarette smoking, charbroiled meat, cruciferous vegetables, and a number of drugs including phenytoin, phenobarbital, and omeprazole. Also, EC:1.14.14.1, CYPIA2, Cytochrome P-448, Cytochrome P-450d, Cytochrome P450-D	www.reference.md/files/D019/mD019388.html
C1B1	Cytochrome P450 1B1	Cytochromes P450 are a group of heme-thiolate monooxygenases. In liver microsomes, this enzyme is involved in an NADPH-dependent electron transport pathway. It oxidizes a variety of structurally unrelated compounds, including steroids, fatty acids, retinoid and xenobiotics. EC:1.14.14.1.	http://www.uniprot.org/uniprot/Q16678
C2A6	Cytochrome P450 2A6	Cytochrome P450 2A6 (abbreviated CYP2A6) is a member of the cytochrome P450 mixed-function oxidase system, which is involved in the metabolism of xenobiotics in the body. CYP2A6 is the primary enzyme responsible for the oxidation of nicotine and cotinine. It is also involved in the metabolism of several pharmaceuticals, carcinogens, and a number of coumarin-type alkaloids. CYP2A6 is the only enzyme in the human body that appreciably catalyzes the 7-hydroxylation of coumarin, such that the formation of the product of this reaction, 7-hydroxycoumarin, is used as a probe for CYP2A6 activity. Also: Cytochrome P450, family 2, subfamily A, polypeptide 6, EC=1.14.13.- 1,4-cineole 2-exo-monooxygenase, CYPIIA6, Coumarin 7-hydroxylase, Cytochrome P450 IIA3, Cytochrome P450(I).	http://en.wikipedia.org/wiki/CYP2A6 and http://www.uniprot.org/uniprot/P11509
P2B1	Cytochrome P450 2B1 (CYP2B1)	Cytochrome P450 2B1 (CYP2B1) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
2B12	Cytochrome P450 2B1/2	A microsomal cytochrome p450 isoform protein. (CYP2B1/2)	ECOTOX
2B10	Cytochrome P450 2B10 (CYP2B10)	Cytochrome P450 2B10 (CYP2B10) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
2C11	Cytochrome P450 2C11 (CYP2C11)	Cytochrome P450 2C11 (CYP2C11) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
C116	Cytochrome P450 2C11/6	A microsomal cytochrome p450 isoform protein. (CYP2C11/6)	ECOTOX
C2C6	Cytochrome P450 2C6	Cytochrome P450 2C6 (CYP2C6) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds. Also: CYPIIC6, Cytochrome P450 PB1, PTF2.	ECOTOX, http://www.uniprot.org/uniprot/P05178 and http://www.ncbi.nlm.nih.gov
C2E1	Cytochrome P450 2E1	A member of the cytochrome P450 mixed-function oxidase system, is involved in the metabolism of xenobiotics in the body. While it is involved only in the oxidative metabolism of a small range of substrates (mostly small polar molecules), there are many important drug interactions mediated by CYP2E1. Also: CYP2E1, N-Nitrosodimethylamine Demethylase	http://www.ncbi.nlm.nih.gov/ and http://en.wikipedia.org
C2K1	Cytochrome P450 2K1	A microsomal cytochrome p450 isoform protein. (CYP2K1)	
C2M1	Cytochrome P450 2M1	A microsomal cytochrome p450 isoform protein. (CYP2M1)	
C3A1	Cytochrome P450 3A1 (CYP3A1)	Cytochrome P450 3A1 (CYP3A1) is an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov
3A21	Cytochrome P450 3A2/1	A microsomal cytochrome p450 isoform protein. (CYP3A2/1)	ECOTOX
CA27	Cytochrome P450 3A27	A microsomal cytochrome p450 isoform protein. (CYP3A27)	
CY2C	Cytochrome P-450 CYP2C	Electron transfer hemeprotein having a mode of action in which the transfer of a single electron is affected by the reversible valence change of the central iron atom of the heme prosthetic group; found in the endoplasmic reticulum that acts as an intermediary in MFO reactions.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
C2D6	Cytochrome p-450 cyp2d6	Cytochrome P450 2D6 (CYP2D6), a member of the cytochrome P450 mixed-function oxidase system, is one of the most important enzymes involved in the metabolism of xenobiotics in the body. Also, many substances are bioactivated by CYP2D6 to form their active compounds. CYP2D6 shows the largest phenotypical variability among the CYPs, largely due to genetic polymorphism. The genotype accounts for normal, reduced, and non-existent CYP2D6 function in subjects. The type of CYP2D6 function of an individual may influence the person's response to different doses of drugs that CYP2D6 metabolizes. Also EC:1.14.14.1, CYPIID6, Cytochrome P450-DB1, Debrisoquine 4-hydroxylase	http://en.wikipedia.org/wiki/CYP2D6
CPOD	Cytochrome P450 dependent O-demethylase	An enzyme	ECOTOX
CYP3	Cytochrome P450, Family 3, Subfamily A (CYP3A)	Monooxygenases which catalyze many reactions involved in drug metabolism and synthesis of cholesterol, steroids and other lipids. Also: Cytochrome P3A, CYP3, CYP3A, cytochrome P450, subfamily IIIA (nifedipine oxidase), CYP3A43.	http://www.genecards.org/cgi-bin/carddisp.pl?gene=CYP3A
CYTA	Cytochrome P450A	A cytochrome when the heme contains a formyl side chain and a cytochrome with a protoheme IX prosthetic group.	Dorland's Medical Dictionary
CPDE	Cytochrome P450-dependent O-deethylation activity	An enzyme	ECOTOX
2B4M	Cytochrome P450 isoenzyme LM2	A cytochrome p450 enzyme. Also: Cytochrome P450 isozyme LM2, Cytochrome P450 alloenzyme LM2, and Cytochrome P450 allozyme LM2.	ECOTOX and https://www.online-medical-dictionary.org/definitions-i/isoenzymes.html
I4BM	Cytochrome P450 isoenzyme LM4b	A cytochrome p450 enzyme. Also: Cytochrome P450 isozyme LM4b, Cytochrome P450 alloenzyme LM4b, and Cytochrome P450 allozyme LM4b.	ECOTOX and https://www.online-medical-dictionary.org/definitions-i/isoenzymes.html

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
DAAO	D-amino acid oxidase	Regulates the level of the neuromodulator D-serine in the brain. Has high activity towards D-DOPA and contributes to dopamine synthesis. Could act as a detoxifying agent which removes D-amino acids accumulated during aging. Acts on a variety of D-amino acids with a preference for those having small hydrophobic side chains followed by those bearing polar, aromatic, and basic groups. Does not act on acidic amino acids.	http://www.uniprot.org/uniprot/P14920
DEAS	Dehydroascorbatase	Catalyses the hydrolysis of the gamma lactone, dehydroascorbate, to diketogulonate.	onlinelibrary.wiley.com/cochranelibRARY/search/mesh?searchRow.searchOptions.conceptId=D003682&searchRow.searchCriteria.meshTerm=Dehydroascorbatase
DHAO	Dehydroascorbate reductase	dehydroascorbate reductase, Accepted name: glutathione dehydrogenase (ascorbate), Other name(s): dehydroascorbic reductase; dehydroascorbic acid reductase; glutathione dehydroascorbate reductase; DHA reductase ; GDOR; glutathione:dehydroascorbic acid oxidoreductase; Systematic name: glutathione:dehydroascorbate oxidoreductase	www.chem.qmul.ac.uk
DHYG	Dehydrogenase	Enzyme that oxidizes a substrate by transferring hydrogen to an acceptor that is either NAD/NADP or a flavin enzyme.	http://cancerweb.nci.ac.uk/omd/
DBHD	delta-5-3-beta hydroxysteroid dehydrogenase	Converts dehydroepiandrosterone to delta-4-androstene-3,17-dione	
D6DS	Delta-6-desaturase	Linoleoyl-CoA Desaturase is an enzyme that catalyzes the syn-dehydrogenation of linoleol-CoA gamma-linolenoyl-CoA Also: linoleate desaturase, linoleic desaturase, Delta-6 Fatty Acid Desaturase , Delta-6-Desaturase, Delta-6-FADTase, Linoleic Acid Delta-6 Desaturase, Linoleoyl Coenzyme A Desaturase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
DNSE	Deoxyribonuclease II	Deoxyribonuclease II is an enzyme. Other name(s): DNase II; pancreatic DNase II; deoxyribonuclease 3'-nucleotidohydrolase; DNase II; pancreatic DNase II; acid deoxyribonuclease; acid DNase	http://www.chem.qmul.ac.uk

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
DMOX	Diamine oxidase	The amine oxidase DAO, formerly called histaminase, is found in various tissues, but is especially active in the intestinal mucosa. Its function is the oxidative deaminating of several polyamines, essential substances for cell proliferation. Also: Diaminoxidase.	https://www.karger.com/Article/Pdf/171432
DBFD	Dibenzylfluorescein dealkylase	A biotransformation enzyme.	ECOREF#118462
DSCA	Diethylsuccinase	No definition available.	
DGAT	Diglyceride acyltransferase	An enzyme that catalyses the last step of the triacylglycerol synthesis reaction in which diacylglycerol is covalently joined to long-chain acyl-COA to form triglyceride. It was formerly categorized as EC 2.3.1.124. Also: Diacylglycerol O-Acyltransferase.	https://www.online-medical-dictionary.org/definitions-d/diacylglycerol-o-acyltransferase.html
DMAG	Dimethylargininase	An enzyme that hydrolyzes N(G),N(G)-dimethyl-L-arginine (ADMA) and N(G)-monomethyl-L-arginine (MMA) which act as inhibitors of NOS. It has therefore a role in the regulation of nitric oxide generation. Also: N(G),N(G)-dimethylarginine dimethylaminohydrolase 1, Dimethylarginine dimethylaminohydrolase 1, Dimethylarginine dimethylaminohydrolase, DDAHI, Dimethylargininase-1, EC 3.5.3.18.	http://www.uniprot.org/uniprot/O08557 and http://enzyme.expasy.org/EC/3.5.3.18
DCM1	DNA (cytosine-5)-methyltransferase 1	An enzyme that has a role in the establishment and regulation of tissue-specific patterns of methylated cytosine residues. Also: DNA methyltransferase 1.	ShowDetailView&TermToSearch=1786">http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd>ShowDetailView&TermToSearch=1786
DBHX	Dopamine beta-hydroxylase	This enzyme converts dopamine into norepinephrine	www.behavenet.com/capsules/neurochem/dopaminebetahydroxylase.htm
DTDP	DT-diaphorase	Prevents the redox cycling of certain compounds.	
E20M	Ecdysone 20-monoxygenase	Ecdysone 20-monoxygenase is an enzyme from insect fat body or malpighian tubules involving a heme-thiolate protein (P-450). NADPH can act as ultimate hydrogen donor. Also: alpha-ecdysone C-20 hydroxylase; ecdysone 20-hydroxylase	http://www.chem.qmul.ac.uk
ESTS	Elastase	An enzyme that digests elastin. Also, EC:3.4.21.	Collins English Dictionary and http://www.uniprot.org/uniprot/P32197

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ENCL	Endocellulase	An enzyme that is able to break beta 1-4 bonds randomly along a cellulose strand. Also, EC:3.2.1.4	http://www.uniprot.org/uniprot/U6NE74
ENDC	Endochitinase	Catalysis of the hydrolysis of nonterminal (1->4)-beta linkages of N-acetyl-D-glucosamine (GlcNAc) polymers of chitin and chitodextrins. Typically, endochitinases cleave randomly within the chitin chain.	http://www.ebi.ac.uk/QuickGO/GTerm?id=GO:0008843
ENG	Endoglucanase	An enzyme isolated from fungi and bacteria. It catalyzes the endohydrolysis of 1,4-beta-glucosidic linkages in cellulose, lichenin, and cereal beta-glucans. EC 3.2.1.4.	http://www.online-medical-dictionary.org/omd.asp?q=endoglucanase
E1AA	Enolase 1 (alpha)	Multifunctional enzyme that, as well as its role in glycolysis, plays a part in various processes such as growth control, hypoxia tolerance and allergic responses (By similarity). Also: Alpha-enolase, 2-phospho-D-glycerate hydro-lyase, non-neural enolase.	https://www.uniprot.org/uniprot/P17182
GENZ	Enzyme, General	Any of numerous complex proteins that are produced by living cells and catalyze specific biochemical reactions at body temperatures	http://www.merriam-webster.com/dictionary/enzyme
EPND	EPN (O-Ethyl-O-p-nitrophenyl phenylphosphonothioate) detoxification	No definition available.	
EPHY	Epoxide hydrase	No definition available.	
EMDL	Erythromycin N-demethylase	A Cytochrome P450-dependent monooxygenase activity	ECOTOX
ESTE	Esterase	Any of a group of enzymes that hydrolyse esters into alcohols and acids. Also, EC:3.1.1.	Collins English Dictionary and http://www.uniprot.org/uniprot/P18773
ESLI	Esterase lipase	No Definition	
ESST	Estradiol sulfotransferase	Estrogen sulfotransferase (EST) catalyzes the sulfation of estrogens such as estradiol and estrone, using the cofactor 3'-phosphoadenosine-5'-phosphosulfate (PAPS).	http://www.epa.gov/endocrine/inventory/NIEH-091.html
ECOD	Ethoxycoumarin O-deethylase	No definition available.	
ENDM	Ethylmorphine-n-demethylase	No definition available.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
EXCL	Exocellulase	An enzyme that is able to cleave the glucose molecules from the ends of cellulose strands	
ERKM	Extracellular Signal-Regulated MAP Kinases	A mitogen-activated protein kinase subfamily that is widely expressed and plays a role in regulation of meiosis; mitosis; and post mitotic functions in differentiated cells. The extracellular signal regulated map kinases are regulated by a broad variety of cell surface receptors and can be activated by certain carcinogens. Also: ATP:protein phosphotransferase (MAPKK-activated), c-Jun N-terminal kinase; Dp38; ERK; ERK1; ERK2; extracellular signal-regulated kinase; JNK; JNK3a1; LeMPK3; MAP kinase; MAP-2 kinase; MAPK; MBP kinase I; MBP kinase II; microtubule-associated protein 2 kinase; microtubule-associated protein kinase; myelin basic protein kinase; p38d; p38-2; p42 mitogen-activated protein kinase; p42mapk; PMK-1; PMK-2; PMK-3; pp42; pp44mapk; pp44mpk; SAPK; STK26; stress-activated protein kinase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
FAAH	Fatty acid amide hydrolase	Integral membrane protein, the enzyme is responsible for the catabolism of neuromodulatory fatty acid amides, including anandamide and oleamide, occurs in mammalia. Also: FAAH; oleamide hydrolase; anandamide amidohydrolase EC 3.5.1.99.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/5/1/99.html
FASC	Fatty acid synthase complex	The multienzyme complex that catalyzes the formation of palmitate from acetyl-coenzyme A, malonyl-coenzyme A, and NADPH. Also: Fatty acid synthase.	Medical Dictionary Copyright, 2006
FADE	Fatty acyl desaturase	Fatty acyl desaturases are enzymes involved in fatty acid chain synthesis, elongation and desaturation	ECOTOX
FNIR	Ferredoxin-nitrite reductase	An enzyme involved with nitrogen assimilation. Also: Ferredoxin--nitrite reductase, Ferredoxin--nitrite reductase chloroplastic, EC 1.7.7.1.	http://enzyme.expasy.org/EC/1.7.7.1 and http://www.brenda-enzymes.info/enzyme.php?ecno=1.7.7.1

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
FMOO	Flavin-containing monooxygenase (FMO)	A microsomal enzyme responsible for metabolism of some drugs. Other name(s): dimethylaniline oxidase; dimethylaniline N-oxidase; FAD-containing monooxygenase; <i>N,N</i> -dimethylaniline monooxygenase; DMA oxidase; flavin mixed function oxidase; Ziegler's enzyme; mixed-function amine oxidase; FMO; FMO-I; FMO-II; FMO1; FMO ₂ ; FMO3; FMO4; FMO5; flavin monooxygenase; methylphenyltetrahydropyridine N-monooxygenase; 1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine:oxygen N-oxidoreductase; dimethylaniline monooxygenase (<i>N</i> -oxide-forming); <i>N,N</i> -dimethylaniline,NADPH:oxygen oxidoreductase (<i>N</i> -oxide-forming)	http://www.fda.gov/cder/drug/drugReactions/default.htm and http://www.chem.qmul.ac.uk
F16D	Fructose 1,6-diphosphatase	A pacemaker or rate-limiting enzyme in the liver; participates in the control of the rate of hepatic metabolism. Also, EC 3.1.3.11, Fructose-bisphosphatase, Fructose 1,6-bisphosphatase, Hexose diphosphatase.	Saunders Comprehensive Veterinary Dictionary, 2007, http://www.brenda-enzymes.org/enzyme.php?ecno=3.1.3.11 and http://enzyme.expasy.org/EC/3.1.3.11
F6PD	Fructose-6-phosphate dehydrogenase	An enzyme	
FDPA	Fructose-diphosphate aldolase	Catalyzes the aldol condensation of dihydroxyacetone phosphate (DHAP or glycerone-phosphate) with glyceraldehyde 3-phosphate (G3P) to form fructose 1,6-bisphosphate (FBP) in gluconeogenesis and the reverse reaction in glycolysis. Also, Fructose-bisphosphate aldolase, EC:4.1.2.13	http://www.uniprot.org/uniprot/P14540
GMCS	gamma-Cystathionase	A liver enzyme, requiring pyridoxal phosphate as coenzyme, which catalyzes the hydrolysis of L-cystathionine to L-cysteine and 2-ketobutyrate, releasing NH ₃ ; also catalyzes formation of 2-ketobutyrate from L-homoserine, of pyruvate (and NH ₃ and H ₂ S) from L-cysteine, and of thiocysteine, pyruvate, and NH ₃ from cystine.	http://medical-dictionary.thefreedictionary.com/gamma-cystathionase
GGTP	gamma-Glutamyl transpeptidase	is an enzyme that transfers gamma-glutamyl functional groups. It is found in many tissues, the most notable one being the liver, and has significance in medicine as a diagnostic marker. Also, EC 2.3.2.2, γ -glutamyl transferase, GGT, GGTP, gamma-GT, Gamma-glutamyl transferase	http://en.wikipedia.org/wiki/Gamma-glutamyl_transpeptidase and http://www.brenda-enzymes.org/enzyme.php?ecno=2.3.2.2

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GGCS	gamma-Glutamylcysteine synthetase	An enzyme that catalyses the ATP-dependent condensation of cysteine and glutamate to form the dipeptide gamma-glutamylcysteine. The peptide bond in this peptide product is between the carboxylate group of the glutamate and the amino group of the cysteine.	Njälsson R, Norgren S (2005). "Physiological and pathological aspects of GSH metabolism". <i>Acta Paediatr</i> 94 (2): 132–137. doi:10.1080/08035250410025285. PMID 15981742
GSCT	gamma-Secretase	A multi-subunit internal protease that cleaves within the transmembrane domain of its substrates. It is an integral membrane protein and minimally consists of four proteins; presenilin, nicastrin, APH-1 and PEN-2. Gamma-secretase is involved in the processing of Notch.	http://www.tocris.com/pharmacologicalBrowser.php?ItemID=218804
GLTN	Gelatinase	A proteolytic enzyme in organisms that confer the ability to hydrolyze gelatin into smaller peptides or chains of amino acids.	http://www.biology-online.org/dictionary/Gelatinase
GLKN	Glucokinase	Catalyzes the initial step in utilization of glucose by the beta-cell and liver at physiological glucose concentration. Glucokinase has a high Km for glucose, and so it is effective only when glucose is abundant. The role of GCK is to provide G6P for the synthesis of glycogen. Pancreatic glucokinase plays an important role in modulating insulin secretion. Hepatic glucokinase helps to facilitate the uptake and conversion of glucose by acting as an insulin-sensitive determinant of hepatic glucose usage. Also, EC:2.7.1.2, Hexokinase type IV, HK IV, Hexokinase-4, HK4, Hexokinase-D	http://www.uniprot.org/uniprot/P35557
GPIM	Glucose phosphate isomerase	An enzyme that catalyses the reversible interconversion of d-fructose 6-phosphate and d-glucose-6-phosphate; a part of glycolysis and gluconeogenesis; glucosephosphate isomerase deficiency is an inherited disorder resulting in liver glycogenesis and haemolytic anaemia. Synonym: hexosephosphate isomerase, phosphohexomutase, phosphohexose isomerase. Also, EC:5.3.1.9	www.lexic.us/definition-of/glucose-phosphate-isomerase and http://www.uniprot.org/uniprot/X2CSG4
G6PT	Glucose-6-phosphatase	Hydrolyzes glucose-6-phosphate to glucose in the endoplasmic reticulum. Forms with the glucose-6-phosphate transporter (SLC37A4/G6PT) the complex responsible for glucose production through glycogenolysis and gluconeogenesis. Hence, it is the key enzyme in homeostatic regulation of blood glucose levels. Also, EC:3.1.3.9, G6Pase, G-6-Pase	http://www.uniprot.org/uniprot/O19133

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
G6PD	Glucose-6-phosphate dehydrogenase	An enzyme found especially in red blood cells that dehydrogenates glucose-6-phosphate in a glucose degradation pathway alternative to the Krebs cycle.	www.merriam-webster.com/medical/glucose-6-phosphate%20dehydrogenase
GD6D	Glucose-6-phosphate dehydrogenase : 6-phosphogluconate dehydrogenase ratio	Ratio of Glucose-6-phosphate dehydrogenase to 6-phosphogluconate dehydrogenase	ECOTOX
GCTA	Glucosyltransferase	Any enzyme that transfers glucosyl groups from one compound to another; glucosyltransferases are in EC subclass 2.4 (glycosyltransferases). Also, Transglucosylase	Farlex Partner Medical Dictionary, 2012
GLTR	Glucuronyl transferase	Glucuronyl transferase is a liver enzyme. It changes bilirubin into a form that can be removed through the bile. It also changes some hormones, medicines, and toxins into non-harmful products. If the body does not produce enough glucuronyl transferase, jaundice can occur	www.nlm.nih.gov/medlineplus/ency/article/002370.htm
GCLS	Glutamate cysteine ligase	One of the enzymes active in the gamma-glutamyl cycle. It catalyzes the synthesis of gamma-glutamylcysteine from glutamate and cysteine in the presence of ATP with the formation of ADP and orthophosphate. Also: Glutamate-cysteine ligase; Glutamylcysteine synthetase; gamma glutamyl cysteine synthetase.	https://www.online-medical-dictionary.org/definitions-g/glutamate-cysteine-ligase.html
GLMC	Glutamate decarboxylase	Catalyzes the production of GABA. The calmodulin-binding is calcium-dependent and it is proposed that this may, directly or indirectly, form a calcium regulated control of GABA biosynthesis. Also, EC:4.1.1.15.	http://www.uniprot.org/uniprot/P54767
GLMD	Glutamate dehydrogenase	Glutamate dehydrogenase (GD), glutamic dehydrogenase An enzyme that catalyzes the reversible reaction of glutamic acid into 2-oxoglutaric acid and ammonia. High concentrations occur in the liver of sheep, cattle, horses and dogs. Serum levels are useful in detecting hepatocellular damage in ruminants. Also, EC:1.4.1.3	http://medical-dictionary.thefreedictionary.com/glutamate+dehydrogenase+(GD)++glutamic+dehydrogenase and http://www.uniprot.org/uniprot/P52596
GOPG	Glutamate oxaloacetate transaminase to glutamic pyruvic transaminase ratio	Ratio of Glutamate Oxaloacetate Transaminase to Glutamic Pyruvic Transaminase	ECOTOX

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GMSN	Glutamate synthase (NADH)	An enzyme involved with nitrogen assimilation. Also: Glutamate (reduced nicotinamide adenine dinucleotide) synthase, NADH: GOGAT, L-glutamate synthase (NADH), L-glutamate synthetase (NADH), NADH-glutamate synthase, NADH-dependent glutamate synthase, NADH-GOGAT, EC 1.4.1.14.	http://www.genome.jp/dbget-bin/www_bget?ec:1.4.1.14 and http://www.brenda-enzymes.info/enzyme.php?ecno=1.4.1.14
GSNP	Glutamate synthase (NADPH)	A key enzyme in the early stages of ammonia assimilation in bacteria, algae and plants, catalyzing the reductive transamidation of the amido nitrogen from glutamine to 2-oxoglutarate to form two molecules of glutamate. Also: Glutamate (reduced nicotinamide adenine dinucleotide phosphate) synthase, Glutamate synthetase (NADP), Glutamine amide-2-oxoglutarate aminotransferase (oxidoreductase, NADP), Glutamine-ketoglutaric aminotransferase, GOGAT, L-glutamate synthase (NADPH), L-glutamate synthetase (NADPH), L-glutamine:2-oxoglutarate aminotransferase NADPH oxidizing, NADPH-dependent glutamate synthase, NADPH-glutamate synthase, EC 1.4.1.13.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.4.1.13 and http://enzyme.expasy.org/EC/1.4.1.13
GLMT	Glutamate transferase	No definition available.	
GLAD	Glutamic acid dehydrogenase	Also, EC 1.4.1.2, Glutamate dehydrogenase, Glutamic dehydrogenase.	http://enzyme.expasy.org/EC/1.4.1.2 and http://www.brenda-enzymes.org/enzyme.php?ecno=1.4.1.2
GOTR	Glutamic-oxaloacetic transaminase	An enzyme that catalyzes the reversible transfer of an amino group from aspartate to α -ketoglutarate to form glutamate and oxaloacetate, requiring the coenzyme pyridoxal phosphate; it is normally present in serum and in various body tissues, especially in the heart and liver. It is released into the serum as the result of tissue injury, especially injury to the heart or liver, hence the concentration in the serum may be increased in myocardial infarction or acute damage to hepatic cells. Serum levels are also increased in some muscle diseases, such as progressive muscular dystrophy. Also, aspartate transaminase (AST) (ASAT), EC 2.6.1.1	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003 and http://enzyme.expasy.org/EC/2.6.1.1

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GLUT	Glutaminase	An enzyme that catalyzes the deamination of glutamine to form glutamate and an ammonium ion; most of the latter are converted to urea via the urea cycle. Also, EC 3.5.1.2, L-glutamine amidohydrolase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.5.1.2
GLMS	Glutamine synthetase	An enzyme that catalyzes the reaction of L-glutamate, ammonia, and ATP to glutamine, ADP, and orthophosphate; one of the few known mammalian enzymes that uses ammonium ion as a substrate under physiologic conditions. Also, EC 6.3.1.2 and Glutamate--ammonia ligase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/6.3.1.2
GTPD	Glutamyl transpeptidase	A membrane-bound glycoprotein necessary for the formation of mercapturic acids from glutathione conjugates. This enzyme has a number of acceptor amino acids and catalyzes three reactions.	Dictionary of Toxicology 3rd Edition
GLPX	Glutathione peroxidase	A selenium-containing enzyme whose blood level is a good indicator of the selenium status of the animal; occurs in a plasma form, an enzyme with specificity for phospholipids, and an intracellular form. Also, GPx, EC 1.11.1.9	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 Elsevier and http://enzyme.expasy.org/EC/1.11.1.9
GLRE	Glutathione reductase	A flavin enzyme involved in the defense of the erythrocyte against hemolysis. A partial deficiency occurs relatively frequently but is due to a deficiency of riboflavin; called also GR. Also, Glutathione-disulfide reductase, Glutathione reductase (NADPH), Glutathione S-reductase, GSH reductase, GSSG reductase, NADPH-glutathione reductase, NADPH-GSSG reductase, NADPH:oxidized-glutathione oxidoreductase, EC 1.8.1.7	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 Elsevier and http://enzyme.expasy.org/EC/1.8.1.7
GSTR	Glutathione S-transferase	A class of enzymes that catalyzes the reaction of glutathione with an acceptor molecule (for example, an arene oxide) to form an S-substituted glutathione; a key step in detoxification of many substances; start of the mercapturic acid pathway. Also, Ligandin, Glutathione S-alkyltransferase, Glutathione S-aralkyltransferase, Glutathione S-aryltransferase, S-(hydroxyalkyl)glutathione lyase, Glutathione transferase, EC 2.5.1.18. Formerly EC 1.8.6.1, EC 2.5.1.12, EC 2.5.1.13, EC 2.5.1.14 and EC 4.4.1.7.	Farlex Partner Medical Dictionary, 2012, http://www.uniprot.org/uniprot/Q8MU52 and http://enzyme.expasy.org/EC/2.5.1.18

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GSO1	Glutathione S-transferase omega 1	An enzyme that is a member of a superfamily of proteins (specifically omega class) that is a glutathione S-transferase (GST) with glutathione-dependent thiol transferase and dehydroascorbate reductase activities. GSTs are involved in the metabolism of xenobiotics and carcinogens.	ShowDetailView&TermToSearch=9446">http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd>ShowDetailView&TermToSearch=9446
GT1B	Glutathione S-transferase theta 1b	A member of a superfamily of proteins that catalyze the conjugation of reduced glutathione to a variety of electrophilic and hydrophobic compounds.	http://www.urogene.org/pgdb/gene/92.html
GTST	Glutathione synthetase	A ligase catalyzing the formation of glutathione; deficient activity causes decreased levels of glutathione and increased levels of 5-oxoproline and cysteine. If confined to erythrocytes, the deficiency results in well-compensated hemolytic anemia; if generalized, metabolic acidosis and neurologic dysfunction may also occur. Also, Glutathione synthase, GSH synthetase, EC 6.3.2.3	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/6.3.2.3
GAPD	Glyceraldehyde 3-phosphate dehydrogenase	Glyceraldehyde-3-phosphate dehydrogenase is a key enzyme in glycolysis that catalyzes the first step of the pathway by converting D-glyceraldehyde 3-phosphate (G3P) into 3-phospho-D-glyceroyl phosphate. Component of the GAIT (gamma interferon-activated inhibitor of translation) complex which mediates interferon-gamma-induced transcript-selective translation inhibition in inflammation processes. Upon interferon-gamma treatment assembles into the GAIT complex which binds to stem loop-containing GAIT elements in the 3'-UTR of diverse inflammatory mRNAs (such as ceruloplasmin) and suppresses their translation. Also, Glyceraldehyde-3-phosphate dehydrogenase (phosphorylating), GAPDH, NAD-dependent glyceraldehyde-3-phosphate dehydrogenase, Triosephosphate dehydrogenase, EC 1.2.1.12	http://www.uniprot.org/uniprot/P04406 and http://enzyme.expasy.org/EC/1.2.1.12
GLYD	Glyceraldehyde dehydrogenase	No definition available.	

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
G31A	Glycerol-3-phosphate 1-O-acyltransferase	An enzyme. Acyl-[acyl-carrier protein] can also act as acyl donor. The enzyme acts only on derivatives of fatty acids of chain length above C10. Also: acyl-CoA:sn-glycerol-3-phosphate 1-O-acyltransferase, 3-glycerophosphate acyltransferase, alpha-glycerophosphate acyltransferase, sn-glycerol 3-phosphate acyltransferase, sn-glycerol-3-phosphate acyltransferase, ACP:sn-glycerol-3-phosphate acyltransferase, glycerol 3-phosphate acyltransferase, glycerol phosphate transacylase, glycerophosphate acyltransferase, glycerophosphate transacylase, glycerol-3-phosphate O-acyltransferase, EC 2.3.1.15.	http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=2.3.1.15
GNMT	Glycine N-methyltransferase	An enzyme that catalyzes the methylation of glycine by using S-adenosylmethionine (AdoMet) to form N-methylglycine (sarcosine) with the concomitant production of S-adenosylhomocysteine (AdoHcy). Possible crucial role in the regulation of tissue concentration of AdoMet and of metabolism of methionine. Also: Folate-binding protein, Gnmt, EC 2.1.1.20.	http://www.uniprot.org/uniprot/P13255
GLPP	Glycogen phosphorylase	The major enzyme in glycogenolysis, leading to the release of glucose-1-phosphate from glycogen. This enzyme is activated by phosphorylation from ATP by glycogen phosphorylase kinase, activated by cAMP-dependent protein kinase or by Ca ²⁺ via calmodulin, or inhibited by hydrolysis of the phosphate by glycogen phosphorylase phosphatase. Also, Amylophosphorylase, Muscle phosphorylase a and b, Polyphosphorylase, EC 2.4.1.1	Saunders Comprehensive Veterinary Dictionary, 2007 and http://enzyme.expasy.org/EC/2.4.1.1
GYSS	Glycogen(starch) synthase	An enzyme that catalyzes the key step of glycogen synthesis and plays an important role in glycogen metabolism in liver and muscle. Also: EC 2.4.1.11, UDP-glucose:glycogen 4-alpha-D-glucosyltransferase, glucosyltransferase uridine diphosphoglucose-glycogen, glycogen synthase, glycogen (starch) synthase, glycogen synthase 2, glycogen synthetase (starch), granule-bound starch synthase, UDP-glucose-glycogen glucosyltransferase, UDP-glycogen synthase, UDPG-glycogen synthetase, UDPG-glycogen transglucosylase, uridine diphosphoglucose-glycogen glucosyltransferase.	http://www.brenda-enzymes.org/enzyme.php?ecno=2.4.1.11

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GCOX	Glycolate oxidase	Glycolate oxidase is an enzyme. Other name(s): (S)-2-hydroxy-acid oxidase; hydroxy-acid oxidase A; hydroxy-acid oxidase B; glycolate oxidase; oxidase, L-2-hydroxy acid; hydroxyacid oxidase A; L-alpha-hydroxy acid oxidase; L-2-hydroxy acid oxidase, EC 1.4.3.19.	www.chem.qmul.ac.uk and http://enzyme.expasy.org/EC/1.4.3.19
GUPX	Guaiacol Peroxidase	Plant peroxidase. Guaiacol peroxidases have also been found in sterile root exudates and shown to oxidize Mn ²⁺ to form Mn ³⁺ chelates that are capable of decolorizing aromatic dyes. Peroxidase is commonly assayed by noting the development of color (A470) during the oxidation of a simple phenolic compound, guaiacol (ortho-methoxyphenol). For every four molecules of H ₂ O ₂ that are reduced, one molecule of tetraguaiaacol is formed.	http://lbewww.epfl.ch/COST837/PhytoRemed2000_Files/Session2.pdf http://www-plb.ucdavis.edu/courses/s99/plb111/Enzymes.html .
HATP	H ⁺ -transporting ATPase	Multisubunit enzymes that reversibly synthesize adenosine triphosphate. They are coupled to the transport of protons across a membrane. Other names: ATP synthase; F1-ATPase; FoF1-ATPase; ATP phosphohydrolase (H ⁺ -transporting), H ⁺ -transporting two-sector ATPase, mitochondrial ATPase; coupling factors (F0, F1 and CF1); chloroplast ATPase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk/
HOXY	Heme oxygenase (Haem oxygenase)	An enzyme that catalyzes the reaction of heme with dioxygen and three electron donors to produce biliverdin, carbon monoxide, Fe ³⁺ , and three water molecules; the only reaction in humans that produces carbon monoxide. Also, EC 1.14.99.3, Heme oxygenase (biliverdin-producing), Heme oxidase, Heme oxygenase (decyclizing).	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.14.99.3
FECH	Heme synthetase	Heme synthetase is an enzyme. Also: ferrochelatase, ferro-protoporphyrin chelatase; iron chelatase; heme synthetase; protoheme ferro-lyase	http://www.chem.qmul.ac.uk
HEPX	Heptachlor epoxidase	No definition available.	
HXBH	Hexobarbital hydroxylase	A drug metabolizing enzyme that metabolizes hexobarbital	ECOTOX
HXKN	Hexokinase	An enzyme that catalyzes the transfer of a high-energy phosphate group to a hexose, the initial step in the cellular utilization of free hexoses. The enzyme occurs in all tissues as various isozymes with varying specificities; the liver isozyme (type IV) is specific for glucose and is often called glucokinase. Also, EC 2.7.1.1, Hexokinase type I, Hexokinase type II, Hexokinase type III, Hexokinase type IV (glucokinase)	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/2.7.1.1

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
HSLP	Hormone-sensitive lipase	The enzyme activity is increased in response to hormones that elevate intracellular levels of cAMP. It hydrolyzes all acylglycerols (triacylglycerol, diacylglycerol and monoacylglycerol) as well as cholesterol esters, steroid fatty acid esters, retinyl esters and p-nitrophenyl esters. Also: HSL, Diacylglycerol acylhydrolase , EC 3.1.1.79.	http://enzyme.expasy.org/EC/3.1.1.79
HPSE	Hydrogen peroxidase	No definition available.	
HAHY	Hydroxyacylglutathione hydrolase	An enzyme with catalytic activity similar to that of lactoylglutathione lyase, but more general; catalyzes the hydrolysis of an S-2-hydroxyacylglutathione, producing glutathione and a 2-hydroxy acid anion. Also: Glyoxalase II, EC 3.1.2.6. Formerly EC 3.1.2.8.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.2.6
IDPT	Inorganic diphosphatase	A member of the sPPase family I. An enzyme that imports protons from the cytosol into the vacuolar lumen. Also: Pyrophosphatase (inorganic) 1, Diphosphate phosphohydrolase, Inorganic pyrophosphatase, Pyrophosphate phosphohydrolase, Pyrophosphate phosphohydrolase, EC 3.6.1.1.	http://enzyme.expasy.org/EC/3.6.1.1 and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=3.6.1.1
IPYR	Inorganic pyrophosphate	A chemical that can block bone mineral crystal formation.	http://www.honestead.com/hypophosphatasia/files/page8.html
IVAS	Invertase	An enzyme that catalyzes the hydrolysis of sucrose into glucose and fructose. Also called beta-fructofuranosidase, Saccharase, Beta-fructosidase, EC 3.2.1.26	The American Heritage® Medical Dictionary Copyright, 2007, 2004 and http://enzyme.expasy.org/EC/3.2.1.26
ITMD	Iodothyronine 5'-monodeiodinase	An integral membrane bound selenoenzyme. The enzyme activity has only been demonstrated in the direction of 5'-deiodination, which renders the thyroid hormone more active. The enzyme consists of type I and type II enzymes, both containing selenocysteine, but with different kinetics. Accepted name: thyroxine 5'-deiodinase Other names: diiodothyronine 5'-deiodinase [ambiguous]; iodothyronine 5'-deiodinase; iodothyronine outer ring monodeiodinase; type I iodothyronine deiodinase; type II iodothyronine deiodinase; thyroxine 5-deiodinase [misleading]; L-thyroxine iodohydrolase (reducing)	ECOREF 48163 and http://www.chem.qmul.ac.uk/iubmb/enzyme

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
FESD	Iron superoxide dimutase	Fe superoxide dimutase (FeSOD) catalyses the dimutase reaction of the toxic superoxide radical to molecular oxygen and hydrogen peroxide. This type of SOD is distinguished by its metal prosthetic group, Fe.	From University of Leeds PROMISE database
I3CR	Iron(III)-chelate reductase	The enzyme catalyses the reduction of bound ferric iron in a variety of iron chelators (siderophores), resulting in the release of ferrous iron. Also: ferric chelate reductase, iron chelate reductase.	http://www.sbcq.mul.ac.uk/iubmb/enzyme/EC1/16/1/7.html
ICDH	Isocitrate dehydrogenase	Either of two enzymes that catalyze the oxidative decarboxylation of isocitrate during the Krebs cycle.	The American Heritage® Medical Dictionary Copyright, 2007, 2004
IDND	Isocitrate dehydrogenase (NAD ⁺)	An enzyme of the oxidoreductase class that catalyzes the conversion of isocitrate and NAD ⁺ to yield 2-ketoglutarate, carbon dioxide, and NADH. It occurs in cell mitochondria. The enzyme requires Mg ²⁺ , Mn ²⁺ ; it is activated by ADP, citrate, and Ca ²⁺ , and inhibited by NADH, NADPH, and ATP. The reaction is the key rate-limiting step of the citric acid (tricarboxylic) cycle. (From Dorland, 27th ed) EC 1.1.1.41. Other name(s): isocitric dehydrogenase; α -ketoglutaric-isocitric carboxylase; isocitric acid dehydrogenase; NAD dependent isocitrate dehydrogenase; NAD isocitrate dehydrogenase; NAD-linked isocitrate dehydrogenase; NAD-specific isocitrate dehydrogenase; NAD isocitric dehydrogenase; isocitrate dehydrogenase (NAD); IDH (ambiguous); nicotinamide adenine dinucleotide isocitrate dehydrogenase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/1/1/41.html and http://www.ncbi.nlm.nih.gov/mesh?term=nad%2B-isocitrate%20dehydrogenase
IDNP	Isocitrate dehydrogenase (NADP ⁺)	A non-allosteric, NADP ⁺ -linked enzyme that is found in both mitochondria and cytoplasm. Other name(s): oxalosuccinate decarboxylase; isocitrate dehydrogenase (NADP); oxalsuccinic decarboxylase; isocitrate (NADP) dehydrogenase; isocitrate (nicotinamide adenine dinucleotide phosphate) dehydrogenase; NADP-specific isocitrate dehydrogenase; NADP-linked isocitrate dehydrogenase; NADP-dependent isocitrate dehydrogenase; NADP isocitric dehydrogenase; isocitrate dehydrogenase (NADP-dependent); NADP-dependent isocitric dehydrogenase; triphosphopyridine nucleotide-linked isocitrate dehydrogenase-oxaloacetate carboxylase; NADP ⁺ -linked isocitrate dehydrogenase; IDH (ambiguous); dual-cofactor-specific isocitrate dehydrogenase; NADP+-ICDH; NADP+-IDH; IDP; IDP1; IDP2; IDP3. EC 1.1.1.42	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/1/1/42.html and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.1.1.42

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
ICLY	Isocitric lyase	An enzyme unique to the glyoxylate cycle which enables plant tissues to utilize triglycerides as an energy source.	ECOREF#73229
JHES	Juvenile-hormone esterase	An enzyme that plays a crucial role in the decrease of JH activity in lepidopteran insects, by hydrolyzing the methyl ester of JH. It is also involved in the transport of JH. Demethylates the insect juvenile hormones, JH1 and JH3, but does not hydrolyse the analogous ethyl or isopropyl esters. Also: EC 3.1.1.59, JH-esterase, juvenile hormone analog esterase, juvenile hormone carboxyesterase.	http://www.enzyme-database.org/query.php?ec=3.1.1.59 and http://www.uniprot.org/uniprot/P12992
KYNU	Kynureninase	A liver enzyme catalyzing the hydrolysis of the L-kynurene side chain, with the formation of anthranilic acid and L-alanine; a participant in L-tryptophan metabolism. Also, L-kynurenine hydrolase, EC 3.7.1.3	lex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.7.1.3
KATE	Kynurenine aminotransferase	Kynurenine aminotransferase (KAT) catalyzes the formation of kynurenic acid (KYNA), the natural antagonist of ionotropic glutamate receptors.	Han and Li, 2004, FEBS Letters, 577(3):381-385
L3CS	L-3-cyanoalanine synthase	This enzyme belongs to the family of lyases, specifically the class of carbon-sulfur lyases and participates in cyanoamino acid metabolism. Other names: beta-cyanoalanine synthase, beta-cyanoalanine synthetase, beta-cyano-L-alanine synthase, L-cysteine hydrogen-sulfide-lyase (adding HCN), L-cysteine hydrogen-sulfide-lyase (adding hydrogen cyanide L-3-cyanoalanine-forming), L-3-cyanoalanine synthase, Beta-3-cyanoalanine synthase. (EC 4.4.1.9).	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC4/4/1/9.html and http://en.wikipedia.org/wiki/L-3-cyanoalanine_synthase
LACC	Laccase	A group of multi-copper proteins of low specificity acting on both o- and p-quinols, and often acting also on aminophenols and phenylenediamine. The semiquinone may react further either enzymically or non-enzymically. Also: benzenediol:oxygen oxidoreductase, Laccase allele OR, Laccase allele TS, Ligninolytic phenoloxidase, p-diphenol oxidase, urishiol oxidase, urushiol oxidase, EC 1.10.3.2.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.10.3.2
LADH	Lactate dehydrogenase	An enzyme found in the cells of many body tissues, including the heart, liver, kidneys, skeletal muscle, brain, red blood cells, and lungs. It is responsible for converting muscle lactic acid into pyruvic acid, an essential step in producing cellular energy. Also: Lactic dehydrogenase, LDH.	Gale Encyclopedia of Medicine. 2008

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
LDMD	Lactate dehydrogenase/malic dehydrogenase ratio	No definition available.	
LGLY	Lactoylglutathione lyase	A lyase cleaving S-d-lactoylglutathione to glutathione and methylglyoxal. Synonym(s): Aldoketomutase, Glyoxalase I, Ketone-aldehyde mutase, Methylglyoxalase, (R)-S-lactoylglutathione methylglyoxal-lyase (isomerizing), EC 4.4.1.5	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.4.1.5
LACH	Lauric Acid Hydroxylase	A P450 oxidoreductase that catalyzes the hydroxylation of the terminal carbon of linear hydrocarbons such as octane and fatty acids in the omega position. The enzyme may also play a role in the oxidation of a variety of structurally unrelated compounds such as xenobiotics, and steroids.	http://www.online-medical-dictionary.org/definitions-l/lauric-acid-hydroxylase.html
LAMO	Lauric acid monooxygenase	An enzyme that catalyzes the formation of hydroxylaurate from lauric acid.	http://onlinelibrary.wiley.com/doi/10.111/j.1432-1033.1978.tb12586.x/pdf
LCOA	Lauroyl-coA oxidase	A medium-chain fatty acyl-CoA that results from the formal condensation of the thiol group of coenzyme A with the carboxy group of lauric (dodecanoic) acid.	http://www.ebi.ac.uk/chebi/searchId.do?chebid=CHEBI:15521
LEAM	Leucine aminopeptidase	A digestive enzyme of small intestine enterocytes. Also, EC 3.4.11.1, Leucyl aminopeptidase, Cytosol aminopeptidase, Leucine aminopeptidase, Peptidase S.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007 and http://enzyme.expasy.org/EC/3.4.11.1
LTRS	leucine tRNA ligase	An enzyme that activates leucine with its specific transfer RNA. Other name(s): leucyl-tRNA synthetase; leucyl-transfer ribonucleate synthetase; leucyl-transfer RNA synthetase; leucyl-transfer ribonucleic acid synthetase; leucine-tRNA synthetase; leucine translase.	http://www.chem.qmul.ac.uk and www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
GGSD	L-glutamate gamma-semialdehyde dehydrogenase	An enzyme that plays a key role in proline biosynthesis, leading to osmoregulation in plants. Also: Delta-1-pyrroline-5-carboxylate synthase, P5CS, 1-pyrroline dehydrogenase, delta1-pyrroline-5-carboxylate dehydrogenase, L-pyrroline-5-carboxylate-NAD ⁺ oxidoreductase, pyrroline-5-carboxylate dehydrogenase, pyrroline-5-carboxylic acid dehydrogenase, delta1-pyrroline-5-carboxylic acid dehydrogenase, 1-pyrroline-5-carboxylate:NAD ⁺ oxidoreductase, 1-pyrroline-5-carboxylate dehydrogenase, L-glutamate gamma-semialdehyde:NAD ⁺ oxidoreductase, Aldehyde dehydrogenase family 18 member A1, Aldh18a1, Pycs, old EC1.5.1.12, EC 1.2.1.88.	http://www.uniprot.org/uniprot/Q9Z110 and http://www.ebi.ac.uk/intenz/query?cmd=SearchEC&ec=1.2.1.88
LGDD	L-Gulonate dehydrogenase and decarboxylase	Enzymes involved in the metabolism of L-ascorbic acid.	ECOREF 58373
GULO	L-Gulonolactone oxidase	An enzyme which oxidizes L-gulonolactone to 2-keto-L-gulonolactone.	http://www.positivehealth.com/permit/Articles/Nutrition/vt3.htm
LGPX	Lignin peroxidase	Involved in the oxidative breakdown of lignin by white-rot basidiomycete fungi. Also: Diarylpropane oxygenase, Diarylpropane peroxidase, Ligninase I, LiP, and EC 1.11.1.14.	https://enzyme.expasy.org/EC/1.11.1.14
LIPS	Lipase	Any enzyme that catalyzes the cleavage of a fatty acid anion from a triglyceride or phospholipid. Also, EC 3.1.1.3, Triacylglycerol lipase, Tributyrase, Triglyceride lipase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.1.1.3
LPPR	Lipoperoxide	a product of the oxidation of unsaturated lipids	http://64.233.167.104/search?q=cachel:1gRkyBs7mKEJ:www.apsnet.org/phyo/PDFS/1999/0819-03R.pdf+Lipoperoxide&hl=en&start=93
LPLP	Lipoprotein lipase	An enzyme that catalyzes the hydrolytic cleavage of fatty acids from triglycerides (or di- or monoglycerides) in chylomicrons, very-low-density lipoproteins, and low-density lipoproteins. Also, EC 3.1.1.34, Clearing factor lipase, Diacylglycerol lipase, Diglyceride lipase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.1.1.34

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
LPXG	Lipoxygenase	An enzyme that catalyzes the oxidation of polyunsaturated fatty acids to form a peroxide of the acid.	Dorland's Medical Dictionary for Health Consumers, 2007
LGPS	Liver glycogen phosphorylase	Phosphorylase is an important allosteric enzyme in carbohydrate metabolism. Enzymes from different sources differ in their regulatory mechanisms and in their natural substrates. Also: Glycogen phosphorylase, liver form.	https://www.uniprot.org/uniprot/P06737
LLDB	L-lactate dehydrogenase B chain	This protein is involved in step 1 of the subpathway that synthesizes (S)-lactate from pyruvate. Also: LDH-B, LDH heart subunit, renal carcinoma antigen NY-REN-46.	https://www.uniprot.org/uniprot/P07195
LNSE	I-Leucyl-beta-naphthylamide splitting enzyme	Frequently used to test for leucine aminopeptidase (ec 3.4.11.1) activity; hydrolyzes naphthylamides of leucine.	http://cancerweb.ncl.ac.uk/omd/
T4GL	L-Thyroxine (T4) Glucuronidation	Glucuronidation represents a major means of metabolizing hormones so that they can then be excreted. In this case L-Thyroxine (T4).	http://www.anapsid.org/cnd/hormones/glucuronidation.html
LUCI	Luciferase	An enzyme present in certain luminous organisms that act to bring about the oxidation of luciferins; energy produced in the process is liberated as bioluminescence.	Mosby's Dental Dictionary, 2nd edition, 2008
LYDC	Lysine decarboxylase	Catalyzes the first-step in the biosynthetic pathway of quinolizidine alkaloids (QAs), which form a distinct, large family of plant alkaloids.	https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3336119/
LPDH	Lysopine dehydrogenase	Lysopine dehydrogenase is an enzyme. Other name(s): D-lysopine synthase; D-lysopine dehydrogenase; D(+)-lysopine dehydrogenase , N2-(D-1-carboxyethyl)-L-lysine:NADP+ oxidoreductase (L-lysine-forming)	http://www.chem.qmul.ac.uk
LYZM	Lysozyme activity	An enzyme present in saliva, tears, egg white, and many animal fluids, functioning as an antibacterial agent by catalyzing the hydrolysis of specific glycosidic linkages in peptidoglycans and chitin, breaking down some bacterial cell walls. Also, EC 3.2.1.17, Muramidase	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.2.1.17
LYSO	Lysyl oxidase	A copper-containing enzyme responsible for the maintenance of collagen and elastin in tissues; its absence leads to aneurysm formation in and rupture of large blood vessels.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
MGAT	Magnesium adenosine triphosphatase	No definition available.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
MCAT	Magnesium carbonate adenosine triphosphatase	No definition available.	
MLDA	Malate dehydrogenase	An enzyme that, using either NAD+ or NADP+, catalyzes the dehydrogenation of malate to oxaloacetate or its decarboxylation to pyruvate and CO ₂ . At least six malate dehydrogenases are known, distinguished by their products, use of NAD+ or NADP+, and specificity of substrate (one acts on D-malate, the rest act on L-malate); one of these proteins is an enzyme in the tricarboxylic acid cycle. Also, Malic acid dehydrogenase, Malic dehydrogenase, Malic enzyme, pyruvic-malic carboxylase, EC 1.1.1.37	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.1.1.37
MLCB	Malathion Carboxylesterase	No definition available.	
MALE	Malic Enzyme	No definition available.	
MLTS	Maltase	Any enzyme with similar glycolytic activity, cleaving α-1,4 and sometimes α-1,6 linked glucose residues from nonreducing termini, in humans there are considered to be four such enzymes; two are the heat-stable enzymes, usually called maltases, constituting the glucoamylase complex; the other two are the heat-labile enzymes, usually called sucrase and isomaltase. Also, EC:3.2.1.20, Acid maltase, Glucoinvertase, Glucosidose, Lysosomal alpha-glucosidase, Maltase-glucoamylase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.2.1.20
MGPX	Manganese peroxidase	The enzyme from white rot basidiomycetes is involved in the oxidative degradation of lignin. The enzyme oxidizes a bound Mn(2+) ion to Mn(3+) in the presence of hydrogen peroxide. Also: Mn-dependent peroxidase and EC 1.11.13.	https://enzyme.expasy.org/EC/1.11.1.13
MNSD	Manganese superoxide dismutase	Manganese superoxide dismutase (MnSOD) is located in mitochondria, is the key enzyme that protects the energy-generating mitochondria from oxidative damage.	http://www.hindawi.com/journals/er/2011/387176/
MM29	Matrix metalloproteinase 2 and Matrix metalloproteinase 9	Matrix metalloproteinase 2 and Matrix metalloproteinase 9 in a sample.	ECOTOX
MGCY	Membrane guanylyl cyclase	An enzyme that catalyzes the conversion of GTP to 3',5'-cyclic GMP and pyrophosphate. Also: guanylate cyclase, deoxyguanylate cyclase, guanyl cyclase, inosinate cyclase.	https://www.online-medical-dictionary.org/definitions-g/guanylate-cyclase.html

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
MSRA	Methionine sulfoxide reductase	The enzyme plays a role in preventing oxidative-stress damage caused by reactive oxygen species by reducing the oxidized form of methionine back to methionine and thereby reactivating peptides that had been damaged. This enzyme belongs to the family of oxidoreductases, specifically those acting on a sulfur group of donors with a disulfide as acceptor. Other names in common use include MsrB, methionine sulfoxide reductase (ambiguous), pMSR, methionine S-oxide reductase (ambiguous), selenoprotein R, methionine S-oxide reductase (R-form oxidizing), methionine sulfoxide reductase B, SelR, SelX, PilB, and pRMs. Includes peptide-methionine (S)-S-oxide reductase, peptide-methionine (R)-S-oxide reductase, L-methionine (S)-S-oxide reductase, and L-methionine (R)-S-oxide reductase.	www.chem.qmul.ac.uk and www.wikipedia.org/wiki/Methionine_sulfoxide_reductase
MCOD	Methoxycoumarin O-dealkylase	No definition available.	
MROD	Methoxyresorufin-o-deethylase	No definition available.	
ML5K	Mevalonate 5-phosphate kinase	A peroxisomal enzyme that catalyzes the conversion of mevalonate 5-phosphate into mevalonate 5-diphosphate as the fifth reaction of the cholesterol biosynthetic pathway.	http://www.omim.org/entry/607622 and http://www.genome.jp/dbget-bin/www_bget?ec:2.7.4.2
M5PD	Mevalonate 5-pyrophosphate decarboxylase	An enzyme that catalyzes the conversion of mevalonate pyrophosphate into isopentenyl pyrophosphate. This unusual enzyme decarboxylates and dehydrates its substrate while hydrolyzing ATP.	http://www.omim.org/entry/603236?search=Mevalonate%205-pyrophosphate%20decarboxylase%20&highlight=decarboxylase%20mevalonate%20pyrophosphate%205pyrophosphate and http://www.genome.jp/dbget-bin/www_bget?ec:4.1.1.33
MLKS	Mevalonate kinase	This enzyme converts a substance called mevalonic acid into mevalonate-5-phosphate. This conversion is the second step in a pathway that produces cholesterol.	https://ghr.nlm.nih.gov/gene/MVK

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
MPN3	Mitochondrial peroxiredoxin 3	Thiol-specific peroxidase that catalyzes the reduction of hydrogen peroxide and organic hydroperoxides to water and alcohols, respectively. Also: Thioredoxin-dependent peroxide reductase, mitochondrial, Peroxiredoxin 3.	https://www.uniprot.org/uniprot/P30048
MAPK	Mitogen-activated protein kinases	Mitogen-activated protein (MAP) kinases (EC 2.7.11.24) are serine/threonine-specific protein kinases that respond to extracellular stimuli (mitogens) and regulate various cellular activities, such as gene expression, mitosis, differentiation, and cell survival/apoptosis	http://en.wikipedia.org/wiki/Mitogen-activated_protein_kinase
MFOS	Mixed function oxidases	An enzyme complex found in animals that oxidizes toxic compounds to render them more susceptible to metabolism and excretion. Such complexes are induced in a wide range of species following exposure to toxic organic substances, such as alkaloids, phenolics, terpenoids, and quinones. The enzymes are localized in the liver in vertebrates and in similar tissues, such as the hepatopancreas, in invertebrates. They catalyse the introduction to the toxic molecule of single oxygen atoms in the form of hydroxyl groups, which requires energy. High levels of these enzymes occur in plant-eating insects, in which they detoxify the natural toxins of the plants. Such enzymes may also render insects more resistant to insecticides.	A Dictionary of Biology. 2004.
MMP2	MMP2	Matrix metalloproteinase 2 is a secreted endopeptidase in the interstitial collagenase family. Also: gelatinase A; 72-kDa gelatinase; type IV collagenase; 3/4 collagenase (Obsolete); 72 kDa gelatinase type A; collagenase IV; collagenase type IV; MMP 2; type IV collagen metalloproteinase; type IV collagenase/gelatinase.	http://www.chem.qmul.ac.uk
MMP9	MMP9	Matrix metalloproteinase 9 is an enzyme in the interstitial collagenase family. Also: gelatinase B; 92-kDa gelatinase; type V collagenase; 92-kDa type IV collagenase; macrophage gelatinase; 95 kDa type IV collagenase/gelatinase; collagenase IV; collagenase type IV; gelatinase MMP 9; MMP 9; type IV collagen metalloproteinase.	http://www.chem.qmul.ac.uk

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
MAOA	Mono Amino Oxidase	An enzyme that catalyzes the oxidative deamination of naturally occurring monoamines. It is a flavin-containing enzyme that is localized in mitochondrial membranes, whether in nerve terminals, the liver, or other organs. Other name(s): amine oxidase (flavin-containing); monoamine oxidase, tyramine oxidase; tyraminase; amine oxidase; adrenalin oxidase; epinephrine oxidase; MAO; polyamine oxidase; serotonin deaminase; adrenaline oxidase; spermidine oxidase; spermine oxidase; monoamine:O ₂ oxidoreductase (deaminating)	http://www.chem.qmul.ac.uk and http://www.ncbi.nlm.nih.gov
MDHA	Monodehydroascorbate reductase	monodehydroascorbate reductase, Other name(s): NADH:semidehydroascorbic acid oxidoreductase; MDHA; semidehydroascorbate reductase; AFR; AFR-reductase; ascorbic free radical reductase; ascorbate free radical reductase; SOR; MDAsA reductase (NADPH) ; SDA reductase; NADH:ascorbate radical oxidoreductase; NADH-semidehydroascorbate oxidoreductase; ascorbate free-radical reductase ; NADH:AFR oxidoreductase; monodehydroascorbate reductase (NADH ₂), Systematic name: NADH:monodehydroascorbate oxidoreductase	www.chem.qmul.ac.uk
MUDH	Multiple dehydrogenases (measured total produced by soil microorganisms)	No definition available.	www.biology-online.org/dictionary/Dehydrogenase
NNDD	N,N-dimethylaniline n-demethylase	An enzyme. Also known as NDADase.	ECOTOX
ATYL	n-Acetylglucosaminidase	Lysosomal enzymes are involved in cellular collagen metabolism.	http://www.resmedjournal.com/article/S0954-6111(02)91344-2/abstract
NATT	N-Acetyltransferase	An enzyme that catalyzes the transfer of acetyl groups from acetyl-CoA to arylamines. They have wide specificity for aromatic amines, particularly serotonin, and can also catalyze acetyl transfer between arylamines without CoA. EC 2.3.1.5.	www.online-medical-dictionary.org

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PARP	NAD(+) ADP-ribosyltransferase	An enzyme that modifies various nuclear proteins by poly(ADP-ribosylation). The modification is dependent on DNA and is involved in the regulation of various important cellular processes such as differentiation, proliferation, and tumor transformation and also in the regulation of the molecular events involved in the recovery of cell from DNA damage. Also: PARP, Poly [ADP-ribose] polymerase, Poly[ADP-ribose] synthase, ADP-ribosyltransferase (polymerizing), Poly(adenosine diphosphate ribose) polymerase, Poly(ADP-ribose) synthetase, Poly(ADP-ribose)polymerase, EC 2.4.2.30.	http://enzyme.expasy.org/EC/2.4.2.30 and http://www.uniprot.org/uniprot/P35875
NCB5	NADH cytochrome B5 reductase	Electron transport proteins found in animals, plants and yeasts.	
NDFR	NADH Ferrichrome Reductase	Nicotinamide adenine dinucleotide ferrichrome reductase.	
NDFC	NADH ferricyanide reductase	Nicotinamide adenine dinucleotide ferricyanide reductase.	
NURH	NADH:ubiquinone reductase (H(+)-translocating)	A flavoprotein (FMN) containing iron-sulfur clusters. The complex is present in mitochondria and aerobic bacteria. Breakdown of the complex can release EC 1.6.99.3, NADH dehydrogenase. Also: Coenzyme Q reductase, Complex I (electron transport chain), Complex I (mitochondrial electron transport), Dihydronicotinamide adenine dinucleotide-coenzyme Q reductase, DPNH-coenzyme Q reductase, DPNH-ubiquinone reductase, Electron transfer complex I, Mitochondrial electron transport complex 1, Mitochondrial electron transport complex I, NADH coenzyme Q1 reductase, NADH dehydrogenase (ubiquinone), NADH-coenzyme Q reductase, NADH-CoQ oxidoreductase, NADH-CoQ reductase, NADH-ubiquinone oxidoreductase, NADH-ubiquinone reductase, Reduced nicotinamide adenine dinucleotide-coenzyme Q reductase, Ubiquinone reductase, EC 1.6.5.3.	http://enzyme.expasy.org/EC/1.6.5.3 and http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.6.5.3
NACR	NADH-cytochrome C reductase	Nicotinamide adenine dinucleotide cytochrome C reductase.	
NDDP	NADH-DT-diaphorase	No definition available.	
NCCR	NADPH Cytochrome C Reductase	Nicotinamide adenine dinucleotide phosphate cytochrome C reductase.	

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
DHYD	NADPH Dehydrogenase	Catalyzes the reduction of the double bond of an array of alpha,beta-unsaturated aldehydes and ketones. It also reduces the nitro group of nitroester and nitroaromatic compounds. It could have a role in detoxification processes. Also, EC 1.6.99.1, NADPH diaphorase.	http://www.uniprot.org/uniprot/P54550 and http://enzyme.expasy.org/EC/1.6.99.1
450R	NADPH-cytochrome P-450 Reductase	No definition available.	
NDFH	NADPH-ferrihemoprotein reductase	An enzyme catalyzing the reduction of 2 ferricytochrome by NADPH to 2 ferrocyanochrome; the physiologic acceptor is probably cytochrome P-450; thus, it has a role in steroid hydroxylations. Also, Cytochrome reductase	Farlex Partner Medical Dictionary, 2012
NNTR	NADPH-tetrazolium reductase	Enzyme that has the property of transferring electrons from NADPH to electron acceptors.	http://www.vef.unizg.hr/vetarhiv/papers/2004-74-5-2.pdf
NDMT	N-Demethylase	That transfers a methyl group from S adenosyl methionine to a substrate. most commonly encountered in bacterial chemotaxis where the methyl accepting chemotaxis proteins (MCPs) become methylated in the course of adaptation. Also known as methyltransferase.	
NEES	Neurotoxic esterase	Also known as neuropathy target esterase, It is a phospholipase that deacetylates intracellular phosphatidylcholine to produce glycerophosphocholine.	http://www.oecd.org/chemicalsafety/testing/45124281.pdf , and http://en.wikipedia.org/wiki/Neuropathy_target_esterase
NE24	Neutral endopeptidase 24.11	Neutral endopeptidase 24.11 cleaves a variety of active peptides, including enkephalins, at the amino side of hydrophobic amino acids. It is widely distributed in the body including specific structures in the central nervous system, lung, male genital tract, and intestine and in neutrophils, fibroblasts, and epithelial cells. Also, enkephalinase, NEP, and gi-321461668.	http://www.ncbi.nlm.nih.gov/pubmed/2521610
HAFS	N-Hydroxy-2-acetylaminofluorene sulfotransferase	A growth hormone dependant, liver enzyme involved in the microsomal metabolism of testosterone.	ECOREF 58214
NADN	Nicotinamide adenine dinucleotide (oxidized) (NAD)	(NAD) a coenzyme composed of nicotinamide mononucleotide in pyrophosphate linkage with adenosine monophosphate; it is involved in numerous enzymatic reactions, in which it serves as an electron carrier by being alternately oxidized (NAD+) and reduced (NADH).	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
NADH	Nicotinamide adenine dinucleotide (reduced) (NADH)	The reduced form of nicotinamide-adenine dinucleotide. A coenzyme that incorporates niacin and involved in the Krebs cycle. Has been used to relieve jet lag and as a treatment for chronic fatigue syndrome. No known precautions when the daily dosage is kept at 5 mg or lower.	Saunders Comprehensive Veterinary Dictionary, 3 ed, 2007
NAOX	Nicotinamide adenine dinucleotide phosphate oxidase (NADPH) Oxidase	<p>is a membrane-bound enzyme complex. It can be found in the plasma membrane as well as in the membranes of phagosomes used by neutrophil white blood cells to engulf microorganism.</p> <p>NADPH oxidase generates superoxide by transferring electrons from NADPH inside the cell across the membrane and coupling these to molecular oxygen to produce superoxide anion, a reactive free-radical. Superoxide can be produced in phagosomes, which contain ingested bacteria and fungi, or it can be produced outside of the cell. In a phagosome, superoxide can spontaneously form hydrogen peroxide that will undergo further reactions to generate reactive oxygen species (ROS).</p>	http://en.wikipedia.org/wiki/NADPH_oxidase
NCTR	Nicotinamide transferase	An enzyme that catalyzes nicotinamide and other structurally related compounds	ECOTOX and http://www.ncbi.nlm.nih.gov/mesh/68050903
NRDT	Nitrate Reductase	Nitrate reductase is a key enzyme involved in the first step of nitrate assimilation in plants, fungi and bacteria. Also, EC 1.7.99.4	http://www.uniprot.org/uniprot/Q06457
NOSZ	Nitric oxide synthase	Nitric oxide synthase is a NADPH-dependent enzyme that catalyzes the conversion of L-arginine and oxygen to produce citrulline and nitric oxide. Also: nitric oxide synthetase; endothelium-derived relaxation factor-forming enzyme; endothelium-derived relaxing factor synthase; NO synthase; NADPH-diaphorase	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
NTRD	Nitrite reductase	An enzyme that catalyses the conversion of nitrite to ammonium hydroxide.	(http://medical-dictionary.thefreedictionary.com/Nitrite+reductase)
NITG	Nitrogenase	A molybdenum-iron protein that reduces dinitrogen in three successive two-electron reductions from nitrogen to diimine to hydrazine to two molecules of ammonia; the molybdenum may be replaced by vanadium or iron.	http://enzyme.expasy.org/EC/1.18.6.1

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
NRED	Nitroreductase	A family of evolutionarily related proteins involved in the reduction of nitrogen-containing compounds, including those containing the nitro functional group. Members of this family utilise FMN as a cofactor and are often found to be homodimers	http://en.wikipedia.org/wiki/Nitroreductase
NNDE	Nitrosamine-N-demethylase	A polymorphic enzyme that activates carcinogenic N-nitrosamines, benzene, urethane, and other low molecular weight compounds. It is inducible by ethanol and metabolizes alcohol. Experimentally, it is used to study the effects of ethanol usage and withdrawal via enzyme markers such as N-nitrosodimethylamine demethylase. Also, EC 1.5.99.-	Pharmacogenetics 1995;5 Spec No:S141-4
NSES	Non-specific esterases	Esterases are ubiquitous enzymes present in the cells of all living organisms. In this case it is the measurement of nonspecific.	ECOREF#97635

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
STPK	Non-specific serine/threonine protein kinase	This is a heterogeneous group of serine/threonine protein kinases that do not have an activating compound and are either non-specific or their specificity has not been analysed to date. Also:EC 2.7.11.1, Serine/threonine-protein kinase SIK2,Salt-inducible kinase 2, SIK-2,Serine/threonine-protein kinase SNF1-like kinase 2,Protein phosphokinase,Protein serine kinase,Protein serine-threonine kinase, Protein-serine kinase,Serine kinase,Serine protein kinase,Serine-specific protein kinase,Serine/threonine protein kinase,Threonine-specific protein kinase, A-kinase,AP50 kinase,ATP-protein transphosphorylase,calcium-dependent protein kinase C,calcium/phospholipid-dependent protein kinase,casein kinase,casein kinase (phosphorylating),casein kinase 2,casein kinase I,casein kinase II,cGMP-dependent protein kinase,CK-2,CKI,CKII,cyclic AMP-dependent protein kinase,cyclic AMP-dependent protein kinase A,cyclic monophosphate-dependent protein kinase,cyclic nucleotide-dependent protein kinase,cyclin-dependent kinase, cytidine 3',5'-cyclic monophosphate-responsive protein kinase,dsk1,glycogen synthase a kinase,glycogen synthase kinase,HIPK2,Hpr kinase,hydroxyalkyl-protein kinase,M phase-specific cdc2 kinase,mitogen-activated S6 kinase,p82 kinase,phosphorylase b kinase kinase,protein glutamyl kinase,protein kinase (phosphorylating),protein kinase CK2,protein kinase p58,protein-aspartyl kinase,protein-cysteine kinase,Prp4 protein kinase,Raf kinase,Raf-1,ribosomal protein S6 kinase II,ribosomal S6 protein kinase,STK32,T-antigen kinase,twitchin kinase,type-2 casein kinase,beta1IPKC,epsilon PKC,Wee 1-like kinase,Wee-kinase, WEE1Hu.	http://www.uniprot.org/uniprot/Q8CFH6 , http://www.genome.jp/dbget-bin/www_bget?ec:2.7.11.1
NDPK	Nucleoside diphosphate kinase	Enzymes required for the synthesis of nucleoside triphosphates (NTP) other than ATP. They provide NTPs for nucleic acid synthesis, CTP for lipid synthesis, UTP for polysaccharide synthesis and GTP for protein elongation, signal transduction and microtubule polymerisation. EC 2.7.4.6.	http://www.ebi.ac.uk/interpro/entry/IPR001564

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
OAHL	O-acetylhomoserine (thiol)-lyase	An enzyme that catalyzes the reaction of N5-methyltetrahydrofolate with L-homocysteine to form tetrahydrofolate and L-methionine; a cobalamin-requiring enzyme; a deficiency of this enzyme results in an accumulation of L-homocysteine and neurological abnormalities. Also, EC 2.5.1.49, O-acetylhomoserine aminocarboxypropyltransferase, Methionine synthase, O-acetyl-L-homoserine acetate-lyase (adding methanethiol), O-acetyl-L-homoserine sulfhydrolase, O-acetylhomoserine sulfhydrolase, OAHL sulfhydrylase. Formerly EC 4.2.99.10.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.5.1.49
OLHD	omega laurate hydroxylase	Steroid metabolizing enzyme.	ECOREF 62306
O1LH	omega-1-laurate hydroxylase	Steroid metabolizing enzyme.	ECOREF 62306
O2LH	omega-2-laurate hydroxylase	Steroid metabolizing enzyme.	ECOREF 62306
ORCT	Ornithine Carbamoyl Transferase	An enzyme that catalyzes the carbamoylation of ornithine to form citrulline, a step in the urea cycle; deficiency of the enzyme is an X-linked aminoacidopathy causing hyperammonemia, neurologic abnormalities, and oroticaciduria and is usually fatal in the neonatal period in males. Also, EC 2.1.3.3, Ornithine carbamoyltransferase, Citrulline phosphorylase, Ornithine transcarbamylase, OTC, OTCase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/2.1.3.3
ORDC	Ornithine decarboxylase	An enzyme catalyzing the decarboxylation of L-ornithine to putrescine and CO ₂ ; first step in polyamine biosynthesis. Also, EC 4.1.1.17 , L-ornithine carboxy-lyase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.17
OOAT	Ornithine-Oxo-Acid Transaminase	A pyridoxal phosphate enzyme that catalyzes the formation of glutamate gamma-semialdehyde and an L-amino acid from L-ornithine and a 2-keto-acid. EC 2.6.1.13. Also known as ornithine aminotransferase, ornithine delta-transaminase, L-ornithine:alpha-ketoglutarate delta-aminotransferase, L-ornithine 5-aminotransferase, L-ornithine aminotransferase, ornithine 5-aminotransferase, ornithine transaminase, ornithine-alpha-ketoglutarate aminotransferase, ornithine-2-oxoacid aminotransferase, ornithine-keto acid aminotransferase, ornithine-keto acid transaminase, ornithine-ketoglutarate aminotransferase, ornithine-oxo acid aminotransferase, ornithine:alpha-oxoglutarate transaminase.	http://www.ncbi.nlm.nih.gov/mesh/68009953 and http://www.genome.jp/dbget-bin/www_bget?ec:2.6.1.13

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PMAP	p38 Mitogen-activated protein kinase	A class of mitogen-activated protein kinases that are responsive to stress stimuli, such as cytokines, ultraviolet irradiation, heat shock, and osmotic shock, and are involved in cell differentiation, apoptosis and autophagy.	https://en.wikipedia.org/wiki/P38_mitogen-activated_protein_kinases
PACA	Palmitoyl-CoA	A fatty acid coenzyme derivative which plays a key role in fatty acid oxidation and biosynthesis.	http://pubchem.ncbi.nlm.nih.gov/compound/palmitoyl-CoA#section=Top
PAEA	Palmitoyl-CoA:estradiol acyltransferase	An enzyme responsible for estradiol esterification.	Janer, et al (2005) Aquat. Toxicol. 75(1):32-42
PAPN	Papain	Papain is an enzyme involved in the hydrolysis of proteins with broad specificity for peptide bonds, but preference for an amino acid bearing a large hydrophobic side chain at the P2 position. Other name(s): papayotin; summetrin; velardon; papaine; Papaya peptidase I	http://www.chem.qmul.ac.uk
PNOD	para-Nitrophenetole-o-deethylase	No definition available.	
PNAC	para-Nitrophenyl Acetate Carboxylsterase	No definition available.	
PCTN	Pectinase activity	Random hydrolysis of 1,4-alpha-D-galactosiduronic linkages in pectate and other galacturonans Also called Polygalacturonase or Pectin depolymerase.	http://www.expasy.ch/cgi-bin/nicezyme.pl?3.2.1.15
PCES	Pectinesterase	An ubiquitous cell-wall-associated enzyme that presents several isoforms that facilitate plant cell wall modification and subsequent breakdown. It is found in all higher plants as well as in some bacteria and fungi. Pectinesterase functions primarily by altering the localised pH of the cell wall resulting in alterations in cell wall integrity. Also: pectin demethoxylase, pectin methoxylase, pectin methyl esterase, pectase, pectin methyl esterase, pectinoesterase, EC 3.1.1.11.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/1/1/11.html and http://en.wikipedia.org/wiki/Pectinesterase
PBHD	Pentobarbital Hydroxylase	No definition available.	
PROD	Pentylresorufin O-deethylase	No definition available.	
PPSN	Pepsin	any of several enzymes of the gastric juice that catalyze the hydrolysis of proteins to form polypeptides.	www.mercksource.com

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PPID	Peptidylprolyl isomerase D	An enzyme which is encoded by the PPID gene. A member of the peptidyl-prolyl cis-trans isomerase (PPIase) family. PPIases catalyze the cis-trans isomerization of proline imidic peptide bonds in oligopeptides and accelerate the folding of proteins. This protein can bind to the immunosuppressant cyclosporin. Also: Cyclophilin D.	http://en.wikipedia.org/wiki/Peptidylprolyl_isomerase_D
PODA	Peroxidase Activity	An enzyme that catalyzes reactions in which hydrogen peroxide is an electron acceptor. Also: POD activity, myeloperoxidase; lactoperoxidase; verdoperoxidase; guaiacol peroxidase; thiocyanate peroxidase; eosinophil peroxidase; Japanese radish peroxidase; horseradish peroxidase (HRP); extensin peroxidase; heme peroxidase; MPO; oxyperoxidase; protoheme peroxidase; pyrocatechol peroxidase; scopoletin peroxidase.	http://www.chem.qmul.ac.uk
PBEE	Peroxisomal bifunctional enzyme	This protein is involved in the pathway fatty acid beta-oxidation, which is part of Lipid metabolism.	http://www.uniprot.org/uniprot/Q08426
PHLD	Phenoloxidase	An enzyme that catalyzes oxidation of benzenediols to semiquinones with O ₂ .	Farlex Partner Medical Dictionary, 2012
PBES	Phenyl Benzoate Esterase	No definition available.	
PHLL	Phenylalanine ammonia lyase	A nonmammalian enzyme that catalyzes the conversion of L-phenylalanine to trans-cinnamate and ammonia; it has been used in the treatment of phenylketonuria.	Farlex Partner Medical Dictionary, 2012
PNMT	Phenylethanolamine N-methyl transferase	A key enzyme in catecholamine biosynthesis that catalyzes the conversion of norepinephrine to epinephrine, using S-adenosyl-L-methionine; found in the adrenal medulla and some neurons; this enzyme's biosynthesis is induced by cortisol.	Farlex Partner Medical Dictionary, 2012
PHTS	Phosphatase	Phosphoric Monoester Hydrolases is an enzyme group also called phosphatases or phosphomonoesterases. These enzymes catalyse the hydrolysis of various bonds.	http://www.chem.qmul.ac.uk
PDPT	Phosphatidate phosphatase	Other name(s): phosphatic acid phosphatase; acid phosphatidyl phosphatase; phosphatic acid phosphohydrolase; phosphatidic acid phosphatase; 3-sn-phosphatidate phosphohydrolase	http://www.chem.qmul.ac.uk and www.expasy.org
PSPM	Phosphoamidase	An enzyme catalyzing the hydrolysis of phosphorus-nitrogen bonds, notably the hydrolysis of N-phosphocreatine to creatine and orthophosphate. Also, Phosphamidase	Farlex Partner Medical Dictionary, 2012

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PPDE	Phosphodiesterase	Any of a group of enzymes that catalyze the hydrolytic cleavage of an ester linkage in a phosphoric acid compound containing two such ester linkages.	Dorland's Medical Dictionary for Health Consumers, 2007
PPPC	Phosphoenol pyruvate carboxylase	An enzyme that catalyses a two-step reaction: formation of carboxyphosphate and enolate form of pyruvate, and carboxylation of enolate with the release of phosphate. It replenishes oxaloacetate in the tricarboxylic acid cycle when operating in reverse. Also, EC 4.1.1.31, PEP carboxylase, PEPCase, Phosphoenolpyruvic carboxylase.	Segen's Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.31
PPCK	Phosphoenolpyruvate carboxykinase	Phosphoenolpyruvate carboxykinase (PEPCK) is a key enzyme in the synthesis of glucose in the liver and kidney and of glyceride-glycerol in white adipose tissue and the small intestine.	https://www.ncbi.nlm.nih.gov/pubmed/9242918
PPPA	Phosphoenolpyruvic acid	The phosphoric ester of pyruvic acid in the latter's enol form; an intermediate in the conversion of d-glucose to pyruvate and an example of a high-energy phosphate ester.	Farlex Partner Medical Dictionary, 2012
PFRC	Phosphofructokinase	An enzyme that functions in carbohydrate metabolism and especially in glycolysis by catalyzing the transfer of a second phosphate (as from ATP) to fructose	http://www.merriam-webster.com/dictionary/phosphofructokinase
PPCM	Phosphoglucomutase (alpha-D-glucose-1,6-bisphosphate-dependent)	An enzyme that participates in both the breakdown and synthesis of glucose. Also: Phosphoglucomutase 1, Glucose phosphomutase 1, Glucose phosphomutase, Phosphoglucose mutase, EC 5.4.2.2.	http://enzyme.expasy.org/EC/5.4.2.2 and http://www.uniprot.org/uniprot/P38652
PGKS	Phosphoglycerate kinase	An enzyme that catalyses the formation of ATP to ADP and vice versa. In the second step of the second phase in glycolysis, 1,3-diphosphoglycerate is converted to 3-phosphoglycerate, forming one molecule of ATP. If the reverse were to occur, one molecule of ADP would be formed. This reaction is essential in most cells for the generation of ATP in aerobes, for fermentation in anaerobes and for carbon fixation in plants. Alternate names: PGK, 3-PGK, ATP-3-phospho-D-glycerate-1-phosphotransferase, ATP:D-3-phosphoglycerate 1-phosphotransferase, 3-phosphoglycerate kinase, 3-phosphoglycerate phosphokinase, 3-phosphoglyceric acid kinase, 3-phosphoglyceric acid phosphokinase, 3-phosphoglyceric kinase, glyceral 3-phosphate kinase, glycerocephosphate kinase, phosphoglyceric acid kinase, phosphoglyceric kinase, phosphoglycerokinase, Phosphoglycerate kinase 1, EC 2.7.2.3.	http://enzyme.expasy.org/EC/2.7.2.3 , http://www.ebi.ac.uk/interpro/LEntry?acc=IPR001576 and http://www.uniprot.org/uniprot/P09411

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Note
PLA2	Phospholipase A2	An enzyme that catalyzes the hydrolysis of a lecithin to a lysolecithin by removing the 2-acyl group; also acts on other phospholipids by removing a fatty acid from the 2-position; this enzyme has an important role in prostaglandin and leukotriene biosynthesis. Also, Lecithinase A, Phosphatidase, Phosphatidolipase, Phosphatidylcholine 2-acylhydrolase, EC 3.1.1.4	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.1.4
PHLC	Phospholipase C	An enzyme that catalyzes the hydrolysis of phosphatidylcholine (and possibly other phospholipids) to produce choline phosphate and 1,2-diacylglycerol; also acts on sphingomyelin; a key enzyme in the formation of inositol 1,4,5-trisphosphate ; C. welchii and C. oedematiens β - and γ -toxins all have phospholipase C activity. Also, Lecithinase C, Lipophosphodiesterase I, Clostridium oedematiens beta- and gamma-toxins, Clostridium welchii alpha-toxin, EC 3.1.4.3	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/3.1.4.3
PHGP	phospholipid-hydroperoxide glutathione peroxidase (PHGPx)	Selenoenzyme found in biological materials; a protein thiol peroxidase. Other name(s): peroxidation-inhibiting protein; PHGPX; peroxidation-inhibiting protein: peroxidase, glutathione (phospholipid hydroperoxide-reducing); phospholipid hydroperoxide glutathione peroxidase; hydroperoxide glutathione peroxidase.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
PPVH	Phosphopyruvate hydratase	A crystalline enzyme that is found especially in muscle and yeast and is important in the metabolism of carbohydrates. An essential glycolytic enzyme that catalyses the interconversion of 2-phosphoglycerate and phosphoenolpyruvate enolase. Alternate names: 2-phosphoglycerate dehydratase, 14-3-2-protein, nervous-system specific enolase, phosphoenolpyruvate hydratase, 2-phosphoglycerate dehydratase, 2-phosphoglyceric dehydratase, 2-phosphoglycerate enolase, gamma-enolase, 2-phospho-D-glycerate hydro-lyase, Enolase 3, EC 4.2.1.11.	http://www.uniprot.org/uniprot/P13929 , http://www.merriam-webster.com/dictionary/enolase and http://enzyme.expasy.org/EC/4.2.1.11
PPHL	Phosphorylase	Any of a group of enzymes that catalyze phosphorolysis with the formation of organic phosphates (as glucose-1-phosphate in the breakdown and synthesis of glycogen) and that occur in animal and plant tissues.	http://www.merriam-webster.com/dictionary/phosphorylase
PHLA	Phosphorylase A	The active form of glycogen phosphorylase that is derived from the phosphorylation of phosphorylase b. Phosphorylase a is deactivated via hydrolysis of phosphoserine by phosphorylase phosphatase to form phosphorylase b.	http://www.ncbi.nlm.nih.gov/mesh/68010762

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PHLB	Phosphorylase B	The inactive form of glycogen phosphorylase that is converted to the active form phosphorylase A via phosphorylation by phosphorylase kinase and ATP.	http://www.ncbi.nlm.nih.gov/mesh/68010763
PYST	Phytocelatin synthase	An enzyme involved in the synthesis of phytocelatins (PC) and homophytocelatins (hPC), the heavy-metal-binding peptides of plants. This enzyme is required for detoxification of heavy metals such as cadmium and arsenate. Also: glutathione gamma-glutamylcysteinyltransferase, gamma-glutamylcysteine dipeptidyl transpeptidase and EC 2.3.2.15.	http://www.ebi.ac.uk/interpro/entry/IPR007719 and http://www.genome.jp/dbget-bin/www_bget?ec:2.3.2.15
PCLX	Picoline carboxylase	An enzyme.	
PNAD	p-Nitroanisole demethylase	No definition available.	
NPHL	p-Nitrophenol hydroxylase	A Cytochrome P450-dependent monooxygenase activity	ECOTOX
PPOX	Polyphenol oxidase	Catechol oxidase - any group of enzymes of the oxidoreductase class that catalyze the oxidation of catechols to 1,2-benzoquinones. The group includes enzymes called also diphenol oxidase or polyphenol oxidase, based on their substrates	Dorland's Medical Dictionary
PHBG	Porphobilinogen	An intermediary product in the biosynthesis of heme; it is produced in excess and excreted in the urine in acute intermittent porphyria.	Dorland's Medical Dictionary for Health Consumers, 2007
PPBD	Porphobilinogen deaminase	Porphobilinogen deaminase is an enzyme. Also: hydroxymethylbilane synthase; HMB-synthase; pre-uroporphyrinogen synthase; uroporphyrinogen I synthase; uroporphyrinogen I synthetase; uroporphyrinogen synthase; uroporphyrinogen synthetase; porphobilinogen ammonia-lyase (polymerizing); (4-[2-carboxyethyl]-3-[carboxymethyl]pyrrol-2-yl)methyltransferase (hydrolysing)	http://www.chem.qmul.ac.uk
PBCE	Pre-B cell enhancing factor	Catalyzes the condensation of nicotinamide with 5-phosphoribosyl-1-pyrophosphate to yield nicotinamide mononucleotide, an intermediate in the biosynthesis of NAD. Also: Nicotinamide phosphoribosyltransferase, pre-B-cell colony-enhancing factor 1, visfatin.	https://www.uniprot.org/uniprot/P43490
P6BH	Progesterone 6beta-hydroxylase	Progesterone 6beta-hydroxylase an isoform of the unspecific monooxygenase EC 1.14.14.1 that oxidizes a variety of structurally unrelated compounds.	ECOTOX and http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PPDO	Prolyl hydroxylase	Accepted name: procollagen-proline dioxygenase; Other name(s): protocollagen hydroxylase; proline hydroxylase; proline,2-oxoglutarate 4-dioxygenase; collagen proline hydroxylase; hydroxylase, collagen proline; peptidyl proline hydroxylase; proline protocollagen hydroxylase; proline, 2-oxoglutarate dioxygenase; prolylprotocollagen dioxygenase; prolylprotocollagen hydroxylase; protocollagen proline 4-hydroxylase; protocollagen proline dioxygenase; protocollagen proline hydroxylase; protocollagen prolyl hydroxylase; prolyl 4-hydroxylase; prolyl-glycyl-peptide, 2-oxoglutarate:oxygen oxidoreductase, 4-hydroxylating; procollagen-L-proline,2-oxoglutarate:oxygen oxidoreductase (4-hydroxylating)	http://www.chem.qmul.ac.uk
PCOD	Propoxycoumarin O-dealkylase	No definition available. —Cytochrome A drug-metabolizing enzyme found in the hepatic, placental and intestinal microsomes that metabolizes 7-alkoxycoumarin to 7-hydroxycoumarin. The enzyme is cytochrome P 450 dependent.	https://www.online-medical-dictionary.org/definitions-~/7-alkoxycoumarin-o-dealkylase.html
PGES	Prostaglandin-endoperoxide synthase	An enzyme (EC 1.14.99.1) that is responsible for formation of important biological mediators called prostanoids, including prostaglandins, prostacyclin and thromboxane. Also known as Cyclooxygenase (COX), prostaglandin synthase, prostaglandin G/H synthase, (PG)H synthase, PG synthetase, prostaglandin synthetase, fatty acid cyclooxygenase, prostaglandin endoperoxide synthetase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC1/14/99/1.html and http://en.wikipedia.org/wiki/Cyclooxygenase
PRTS	Protease	Any of various enzymes, including the proteinases and peptidases, that catalyze the hydrolytic breakdown of proteins	The American Heritage® Medical Dictionary, 2007, 2004
PSA4	Proteasome 26S subunit, ATPase, 4	Component of the 26S proteasome, a multiprotein complex involved in the ATP-dependent degradation of ubiquitinated proteins. Also: 26S proteasome regulatory subunit 6B.	https://www.uniprot.org/uniprot/P43686
PRCE	Protein C (activated)	A peptidase of family S1 (trypsin family), one of the gamma-carboxyglutamic acid-containing coagulation factors. Formed from protein C, the proenzyme that circulates in plasma, by the action of a complex of thrombin with thrombomodulin, or by serine endopeptidases present in several snake venoms. Other name(s): blood-coagulation factor XIVa; activated blood coagulation factor XIV; activated protein C; autoprothrombin II-A; protein Ca; APC; GSAPC	http://www.chem.qmul.ac.uk

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
PDSI	Protein disulfide-isomerase	An enzyme that catalyzes the rearrangement of -S-S- bonds in proteins. Also, EC 5.3.4.1, S-S rearrangase. Also: Prolyl 4-hydroxylase subunit beta, cellular thyroid hormone-binding protein.	http://enzyme.expasy.org/EC/5.3.4.1 and https://www.uniprot.org/uniprot/P07237
PDA3	Protein disulfide-isomerase A3	Protein disulfide-isomerase A3 (PDIA3) is an enzyme that has protein disulfide isomerase activity which is the catalysis of the rearrangement of both intrachain and interchain disulfide bonds in proteins. PDIA3 is also part of the major histocompatibility complex (MHC) class I peptide-loading complex, which is essential for formation of the final antigen conformation and export from the endoplasmic reticulum to the cell surface. Also: disulfide-isomerase A3 precursor, Protein disulfide isomerase family A member 3, 58 kDa glucose-regulated protein, 58 kDa microsomal protein, ER protein 60, Endoplasmic reticulum resident protein 60 , ER protein 57, Endoplasmic reticulum resident protein 57, Disulfide isomerase ER-60, Pdia3, Erp60, Grp58, ERp60, HIP-70, Q-2.	http://www.uniprot.org/uniprot/P11598 , http://www.ebi.ac.uk/QuickGO/GTerm?id=GO:0003756 and http://en.wikipedia.org/wiki/PDIA3
PKSC	Protein kinase C	A family of serine- and threonine-specific protein kinases that depend on lipids for activity. They can be activated by calcium but have a requirement for the second messenger diacylglycerol. Members of this group of enzymes phosphorylate a wide variety of protein targets and are known to be involved in diverse cell-signalling pathways. Members of the protein kinase C family also serve as major receptors for phorbol esters, a class of tumour promoters. Also, EC 2.7.11.13, Calcium-dependent protein kinase C, Calcium-independent protein kinase C, Calcium/phospholipid dependent protein kinase, Protein kinase C epsilon	http://www.genome.jp/dbget-bin/www_bget?ec:2.7.11.13
PRTA	Proteolytic activity	An enzyme that promotes proteolysis (= the splitting of proteins by hydrolysis of the peptide bonds with formation of smaller polypeptides).	Dorland's Illustrated Medical Dictionary
PRTX	Protoporphyrinogen oxidase	A membrane-bound flavoenzyme that catalyzes the oxygen-dependent aromatization of protoporphyrinogen IX (Protogen) to protoporphyrin IX (Proto IX). It is the last enzyme of the common branch of the Heme and Chorophyll pathways in plants, and is the molecular target of diphenyl ether-type herbicides. Also: Protox, Protoporphyrinogenase, Protoporphyrinogen Dehydrogenase, Protoporphyrinogen IX Oxidase, EC 1.3.3.4.	http://www.ncbi.nlm.nih.gov/mesh/68050768

ECOTOX Code Appendix

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PXPK	Pyridoxal phosphokinase	An enzyme that catalyzes reversibly the phosphorylation of pyridoxal in the presence of ATP with the formation of pyridoxal 5-phosphate and ADP. Pyridoxine, pyridoxamine and various derivatives can also act as acceptors. EC 2.7.1.35.	www.online-medical-d
P5CR	Pyroline-5-carboxylate reductase	This enzyme is involved in step 1 of the subpathway that synthesizes L-proline from L-glutamate 5-semialdehyde. Also: proline oxidase, L-proline oxidase, P5CR, EC 1.5.1.2.	http://www.brenda-enzymes.org/enzyme.php?ecno=1.5.1.2 and http://www.uniprot.org/uniprot/O04016
PYRC	Pyruvate carboxylase	Catalyzes a 2-step reaction, involving the ATP-dependent carboxylation of the covalently attached biotin in the first step and the transfer of the carboxyl group to pyruvate in the second, leading to oxaloacetate production. Also, EC:6.4.1.1, Pyruvic carboxylase	http://www.uniprot.org/uniprot/Q9KWU4
PYKN	Pyruvate kinase	A phosphotransferase that catalyzes reversibly the phosphorylation of pyruvate to phosphoenolpyruvate in the presence of ATP. It has four isozymes (l, r, m1, and m2). Also, EC 2.7.1.40 , Phosphoenol transphosphorylase, Phosphoenolpyruvate kinase.	http://www.ncbi.nlm.nih.gov/mesh/68011770 and http://enzyme.expasy.org/EC/2.7.1.40
QNPT	Quinolinate phosphoribosyltransferase	An enzyme involved in the catabolism of quinolinic acid (QA). Also EC 2.4.2.19, Nicotinate-nucleotide pyrophosphorylase [carboxylating],	http://www.ncbi.nlm.nih.gov/IEB/Research/Acembly/av.cgi?exdb=AceView&db=35g&term=QPRT and http://www.uniprot.org/uniprot/P43619
QORD	Quinone oxidoreductase	A flavoprotein similar to NADH dehydrogenase (quinone), but oxidizing NADPH.	Biology-online.org
RNIN	Renin	A proteinase of high specificity that is released by the kidney and acts to raise blood pressure by activating angiotensin. Not to be confused with rennin (chymosin). Also, EC 3.4.23.15, Angiotensin-forming enzyme, Angiotensinogenase. Formerly EC 3.4.4.15 and EC 3.4.99.19.	The American Heritage® Dictionary of the English Language, 2000 and http://enzyme.expasy.org/EC/3.4.23.15
RHDS	Rhodanese	A transferase that catalyzes the formation of thiocyanate and sulfite from cyanide and thiosulfate. Also, EC 2.8.1.1. Thiosulfate cyanide transsulfurase, Thiosulfate thiotransferase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.8.1.1

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
RNSE	Ribonuclease	Any of various enzymes that catalyze the hydrolysis of RNA. Also called RNase. Also, EC 3.1.27.-	The American Heritage® Medical Dictionary, 2007, 2004 and http://www.uniprot.org/uniprot/P48068
RUBI	Ribulose bisphosphate carboxylase/oxygenase (Rubisco)	A dimerizing carboxy-lyase; an enzyme that catalyzes the addition of carbon dioxide to D-ribulose 1,5-bisphosphate and the hydrolysis of the addition product to two molecules of 3-D-phosphoglyceric acid, a key reaction in the fixation of CO ₂ in photosynthesis. Also, EC 4.1.1.39, Carboxydismutase, D-ribulose 1,5-diphosphate carboxylase, D-ribulose-1,5-bisphosphate carboxylase, Diphosphoribulose carboxylase, Ribulose 1,5-bisphosphate carboxylase, Ribulose 1,5-bisphosphate carboxylase/oxygenase, Ribulose 1,5-diphosphate carboxylase, Ribulose 1,5-diphosphate carboxylase/oxygenase, Ribulose bisphosphate carboxylase/oxygenase, Ribulose diphosphate carboxylase, Ribulose diphosphate carboxylase/oxygenase, RuBisCO, RuBP carboxylase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/4.1.1.39
CB2P	Sb:cb283	An uncharacterized enzyme at LOC767682 involved in aminopeptidase activity and ion binding.	ECOTOX and http://www.uniprot.org/uniprot/Q32LS3
SPGX	Selenium dependent glutathione peroxidase	Selenium has a main role as an antioxidant in the enzyme selenium-glutathione-peroxidase.	http://www.uphs.upenn.edu/ency/article/002414.htm
SCMT	Selenocysteine methyltransferase	An enzyme that catalyzes the methylation of selenocysteine with S-methylmethionine as donor. Does not methylate cysteine.	http://www.uniprot.org/uniprot/P56707
SATS	Serine acetyl transferase	An enzyme that catalyzes the conversion of L-serine to coenzyme A and O-acetyl-L-serine, using acetyl-CoA as a donor.	https://www.online-medical-dictionary.org/definitions-s/serine-o-acetyltransferase.html
SRDT	Serine dehydratase	Serine dehydratases are enzymes in the lyase class and currently classified as Ammonia-Lyases (previously as Hydro-Lyases).	ECOTOX and http://www.chem.qmul.ac.uk

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
SGOT	Serum glutamate oxalo acetate transaminase	Serum glutamic aminotransferase; an enzyme that catalyzes the transfer of the amino group from glutamic acid to oxaloacetic acid forming alpha-ketoglutaric acid and aspartic acid, used to measure liver function. Also called aspartate transaminase, AST, GOT, glutamic-oxaloacetic transaminase.	The American Heritage® Medical Dictionary, 2007, 2004
SSAR	Serum glutamate oxalo acetate transaminase and serum glutamic pyruvic transaminase to alkaline phosphatase ratio (SGOT & SPGT to ALPH ratio)	Ratio of Serum Glutamate Oxalo Acetate Transaminase and Serum Glutamic Pyruvic Transaminase to Alkaline Phosphatase	
SSRA	Serum glutamate oxalo acetate transaminase to serum glutamic pyruvic transaminase ratio (SGOT to SPGT ratio)	Ratio of Serum Glutamate Oxalo Acetate Transaminase to Serum Glutamic Pyruvic Transaminase.	
NAAT	Sodium adenosine triphosphatase	No definition available.	
NKAT	Sodium potassium ATPase	Na ⁺ ,K ⁺ -ATPase an enzyme that spans the plasma membrane and hydrolyzes adenosine triphosphate to provide the energy necessary to drive the cellular sodium pump.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
SBDH	Sorbitol dehydrogenase	Converts sorbitol to fructose. Part of the polyol pathway that plays an important role in sperm physiology. May play a role in the sperm motility by providing an energetic source for sperm. Also, EC 1.1.1.14, L-iditol 2-dehydrogenase, Glucitol dehydrogenase, Polyol dehydrogenase.	http://enzyme.expasy.org/EC/1.1.1.14 and http://www.uniprot.org/uniprot/Q00796
STCS	Starch synthase	Starch synthase is an enzyme. Other name(s): ADP-glucose β starch glucosyltransferase; adenosine diphosphate glucose-starch glucosyltransferase; adenosine diphosphoglucose-starch glucosyltransferase; ADP-glucose starch synthase; ADP-glucose synthase; ADP-glucose transglucosylase; ADP-glucose-starch glucosyltransferase; ADPG starch synthetase; ADPG-starch glucosyltransferase; starch synthetase; ADP-glucose:1,4-alpha-D-glucan 4-alpha-D-glucosyltransferase	http://www.chem.qmul.ac.uk

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
S17A	Steroid 17-alpha-hydroxylase/17,20 lyase	An enzyme that acts upon pregnenolone and progesterone to add a hydroxyl (-OH) group at carbon 17 of the steroid D ring (the hydroxylase activity), or acts upon 17-hydroxyprogesterone and 17-hydroxypregnolone to split the side-chain off the steroid nucleus (the lyase activity). Involved in sexual development during fetal life and at puberty. Also: CYPXVII; Cytochrome P450 17A1; Cytochrome P450-C17steroid 17alpha-monoxygenase; steroid 17alpha-hydroxylase; cytochrome P-45017alpha; cytochrome P-450 (P-45017alpha,lyase); 17alpha-hydroxylase-C17,20 lyase; Cytochrome P450, family 17, subfamily A, polypeptide 1; steroid 17-alpha-monoxygenase; 17α-hydroxylase/17,20 lyase/17,20 desmolase; EC1.14.99.9.	http://www.genome.jp/dbget-bin/www_bget?enzyme+1.14.99.9 , http://www.uniprot.org/uniprot/P05093#section_comments_and http://en.wikipedia.org/wiki/CYP17A1
SSTT	Steryl-sulfatase	An arylsulfatase with high specificity towards sulfated steroids. Defects in this enzyme are the cause of ichthyosis, x-linked. Also, EC 3.1.6.2, Arylsulfatase C, Steroid sulfatase, Steryl-sulfate sulfohydrolase.	http://www.ncbi.nlm.nih.gov/mesh/?term=steryl-sulfatase and http://enzyme.expasy.org/EC/3.1.6.2
SCDH	Succinate dehydrogenase	A flavoenzyme that catalyzes the removal of hydrogen from succinic acid and converts it into fumaric acid; for example, succinate + FAD \rightleftharpoons fumarate + FADH2; this complex is a part of the tricarboxylic acid cycle. Also, fumarate reductase (NADH), fumaric hydrogenase	Farlex Partner Medical Dictionary, 2012
SDFS	Succinate dehydrogenase (ubiquinone) flavoprotein subunit, mitochondrial-like isoform 1	Flavoprotein (FP) subunit of succinate dehydrogenase (SDH) that is involved in complex II of the mitochondrial electron transport chain and is responsible for transferring electrons from succinate to ubiquinone (coenzyme Q). Also: Flavoprotein subunit of complex II, succinate dehydrogenase [ubiquinone] flavoprotein subunit, mitochondrial.	https://www.uniprot.org/uniprot/P31040
SUPS	Sucrose phosphate synthase	This enzyme participates in starch and sucrose metabolism. Also, EC 2.4.1.14, Sucrosephosphate--UDP glucosyltransferase, UDP-glucose-fructose-phosphate glucosyltransferase..	http://en.wikipedia.org/wiki/Sucrose-phosphate_synthase and http://enzyme.expasy.org/EC/2.4.1.14

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
SCRS	Sucrose synthase	Sucrose synthase has a dual role in producing both UDP-glucose (necessary for cell wall and glycoprotein biosynthesis) and ADP-glucose (necessary for starch biosynthesis). Other name(s): UDPglucose-fructose glucosyltransferase; sucrose synthetase; sucrose-UDP glucosyltransferase; sucrose-uridine diphosphate glucosyltransferase; uridine diphosphoglucose-fructose glucosyltransferase	http://www.chem.qmul.ac.uk
SADT	Sulfate adenylyltransferase	An enzyme, EC 2.7.7.4. Other name(s): ATP-sulfurylase, adenosine-5'-triphosphate sulfurylase, adenosinetriphosphate sulfurylase, adenylylsulfate pyrophosphorylase, ATP sulfurylase, ATP-sulfurylase, sulfurylase.	http://www.chem.qmul.ac.uk/iubmb/enzyme/EC2/7/7/4.html
SOXE	Sulfite oxidase	Sulfite oxidase is a molybdenum requiring enzyme that catalyzes the terminal reaction in the oxidative degradation of sulfur amino acids with the formation of a sulfate.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
SFTA	Sulfotransferase	Generic term for enzymes in EC sub-subclass 2.8.2 catalyzing the transfer of a sulfate group from 3'-phosphoadenylyl sulfate (active sulfate) to the hydroxyl group of an acceptor, producing the sulfated derivative and 3'-phosphoadenosine 5'-phosphate.	lex Partner Medical Dictionary, 2012
SODA	Superoxide dismutase (SOD)	An enzyme that catalyzes the decomposition of a superoxide into hydrogen peroxide and oxygen. Other name(s): superoxide dismutase I; superoxide dismutase II; SOD; Systematic name: superoxide:superoxide oxidoreductase	www.chem.qmul.ac.uk
SDCT	Superoxide dismutase to catalase ratio	The ratio of superoxide dismutase to catalase. Also: SOD/CAT ratio.	ECOTOX
SYPX	Syringaldazine peroxidase	No definition available.	ECOTOX
TRPP	Tartrate-resistant acid phosphatase	One of several acid phosphatases in humans, other mammals, plants, and a few prokaryotes. The protein fold of tartrate-resistant acid phosphatase (TRAP) resembles that of the catalytic domain of plant purple acid phosphatase and other serine/threonine-protein phosphatases that also contain a metallophosphoesterase domain. Also: Tartrate resistant acid phosphatase.	https://www.online-medical-dictionary.org/definitions-t/tartrate-resistant-acid-phosphatase.html

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
TC6H	Taurochenodeoxycholate 6alpha-hydroxylase	A heme-thiolate protein (P-450). Requires cytochrome b5 for maximal activity. Acts on taurochenodeoxycholate, taurodeoxycholate and less readily on lithocholate and chenodeoxycholate. Also known as: Cytochrome P450 3A4, CYP3A4, CYP4A21, taurochenodeoxycholate 6alpha-monooxygenase, taurochenodeoxycholic acid 6alpha-hydroxylase, EC 1.14.13.97.	http://www.brenda-enzymes.org/php/result_flat.php4?ecno=1.14.13.97
T15A	Testosterone 15-alpha hydroxylase	An enzyme that acts on Testosterone at the 15-alpha position	ECOTOX
T15B	Testosterone 15-beta hydroxylase	An enzyme that acts on Testosterone at the 15-beta position.	ECOTOX
TBHY	Testosterone 16 beta-hydroxylase	An enzyme that acts on testosterone at the 16-beta position.	ECOTOX
T16A	Testosterone 16-alpha hydroxylase	An enzyme that acts on testosterone at the 16-alpha position.	ECOTOX
TT2A	Testosterone 2-alpha hydroxylase	Testosterone 2-alpha hydroxylase is an enzyme that acts on testosterone at the 2-alpha position	ECOTOX
T2BH	Testosterone 2beta-hydroxylase	Testosterone 2beta-hydroxylase is an enzyme that acts on testosterone at the 2-beta position.	ECOTOX
TT6A	Testosterone 6-alpha hydroxylase	An enzyme that acts on testosterone at the 6-alpha position.	ECOTOX
TT6B	Testosterone 6-beta-hydroxylase	An enzyme that acts on testosterone at the 6-beta position.	ECOTOX
TT7A	Testosterone 7alpha-hydroxylase	An enzyme that acts on testosterone at the 7-alpha position.	ECOTOX
TTRH	Testosterone hydroxylase	An enzyme that is used as a marker for cytochrome expression. A metabolite of testosterone.	http://www.ncbi.nlm.nih.gov/pubmed/9313945
TSST	Testosterone sulfotransferase	An enzyme involved in the sulfonation of testosterone.	https://www.collectiveip.com/grants/NIH:6432501
THMN	Thiaminase	An enzyme that catalyzes the splitting of thiamin into a pyrimidine and a thiazole derivative. Is present in some ferns, e.g. bracken, and in some species of fish so that diets containing these materials are likely to be deficient in thiamin.	Saunders Comprehensive Veterinary Dictionary, 2007
TMTS	Thiol methyltransferase	An enzyme that catalyzes the chemical reaction S-adenosyl-L-methionine plus a thiol to S-adenosyl-L-homocysteine plus a thioether. Also: thiol S-methyltransferase, S-methyltransferase, EC 2.1.1.9 and TMT.	http://www.genome.jp/dbget-bin/www_bget?ec:2.1.1.9

ECOTOX Code Appendix

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THTR	Thiol transferase	A family of small molecular weight proteins with thiol-disulfide exchange activity.	http://www.ncbi.nlm.nih.gov/pubmed/8430514
TDPD	Thioredoxin peroxidase	An enzyme also known as thiol peroxidase activity; TrxPx activity; TPx activity. Catalysis of the reaction: thioredoxin + H ₂ O ₂ = thioredoxin disulfide + H ₂ O.	http://db.yeastgenome.org/cgi-bin/GO/goTerm.pl?goid=8379
TDRS	Thioredoxin reductase	A flavoprotein enzyme that catalyzes the oxidation of thioredoxins to thioredoxin disulfide in the presence of NADP ⁺ . EC 1.8.1.9.	http://www.online-medical-dictionary.org/definitions-t/thioredoxin-reductase.html
TUOX	Thiourea oxygenase	An enzyme.	
TYKN	Thymidine kinase	An enzyme of the transferase class that catalyzes a phosphorylation reaction of pyrimidine salvage and phosphorylation of drugs, such as acyclovir and ganciclovir, into a form that will be active against viruses. Also, EC 2.7.1.21. Formerly EC 2.7.1.75.	Mosby's Medical Dictionary, 2009 and http://enzyme.expasy.org/EC/2.7.1.21
T5D3	thyroxine 5-deiodinase	Thyroxine 5-deiodinase enzyme activity has only been demonstrated in the direction of 5-deiodination. The removal of the 5-iodine from the inner ring largely inactivates the hormone thyroxine. Other names: diiodothyronine 5'-deiodinase[ambiguous]; iodothyronine 5-deiodinase; iodothyronine inner ring monodeiodinase; type III iodothyronine deiodinase.	http://www.chem.qmul.ac.uk/iubmb
TAMN	Transaminase	Any of a group of enzymes that catalyze the reversible transfer of an amino group from a donor, usually an amino acid, to an acceptor, usually a 2-keto acid. Most use pyridoxal phosphate as a coenzyme.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
TSKT	Transketolase	A transferase bringing about the reversible interconversion of sedoheptulose 7-phosphate and d-glyceraldehyde 3-phosphate to produce d-ribose 5-phosphate and d-xylulose 5-phosphate, and also other similar reactions, such as hydroxypyruvate and an aldehyde into CO ₂ and an extended hydroxypyruvate; a part of the nonoxidative phase of the pentose phosphate pathway. Also, EC 2.2.1.1, Glycolaldehydetransferase	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.2.1.1
TRHL	Trehalase	An enzyme which hydrolyzes the disaccharide trehalose, yielding glucose. It is widespread in nature and found in various human tissues as well as in human plasma.	http://www.ncbi.nlm.nih.gov/pubmed/2619709

ECOTOX Code Appendix

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TRBA	Tributyrinase	The fat-splitting enzyme in pancreatic juice; it hydrolyzes triacylglycerol to produce a diacylglycerol and a fatty acid anion; a deficiency of the hepatic enzyme results in hypercholesterolemia and hypertriglyceridemia. Synonym(s): lipase, steapsin, tributyrase, tributyrinase.	Farlex Partner Medical Dictionary, 2012
T3GL	Triiodothyrosine (T3) glucuronidation	Glucuronidation represents a major means of metabolizing hormones so that they can then be excreted. In this case triiodothyrosine (T3).	http://www.anapsid.org/cnd/hormones/glucuronidation.html
TPIM	Triosephosphate isomerase	A ubiquitously distributed enzyme of the glycolysis pathway. Also: EC 5.3.1.1.	http://www.brenda-enzymes.org/php/result_flat.php4?ecno=5.3.1.1
TI1B	Triosephosphate isomerase 1b	A subunit of an enzyme catalyzes reversibly the conversion of D-glyceraldehyde 3-phosphate to dihydroxyacetone phosphate.	https://www.online-medical-dictionary.org/definitions-t/triose-phosphate-isomerase.html
TPSY	Trypsin	A crystallizable proteolytic enzyme that differs from pepsin in several ways (as in being most active in a slightly alkaline medium and in hydrolyzing esters as well as amides) and that is produced and secreted in the pancreatic juice in the form of inactive trypsinogen and activated in the intestine. Also, EC 3.4.21.4, Alpha-trypsin, Beta-trypsin. Formerly EC 3.4.4.4.	http://www.merriam-webster.com/medical/trypsin and http://enzyme.expasy.org/EC/3.4.21.4
TPS2	Trypsin 208	A proteolytic digestive enzyme.	ECOTOX
TYPT	Tryptase	Tryptase is an enzyme that is released, along with histamine and other chemicals, from mast cells when they are activated as part of a normal immune response as well as in allergic (hypersensitivity) responses. EC 3.4.21.59.	https://labtestsonline.org/understanding/analytes/tryptase/tab/sample/ and http://www.chem.qmul.ac.uk/iubmb/enzyme/EC3/4/21/59.html

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T23D	Tryptophan 2,3-dioxygenase	An oxidoreductase catalyzing the reaction of L-tryptophan and O ₂ to produce L-N-formylkynurenine; an adaptive enzyme, the level (in the liver) being controlled by adrenal hormones; a step in tryptophan catabolism; also, a step in the synthesis of NAD ⁺ from tryptophan. Also, EC 1.13.11.11, Pyrrolase, Tryptophan oxygenase, Tryptophan peroxidase, Tryptophan pyrrolase, Tryptophanase, Indolamine 2,3-dioxygenase, Indoleamine 2,3-dioxygenase, L-tryptophan 2,3-dioxygenase, L-tryptophan pyrrolase, Tryptamin 2,3-dioxygenase, Tryptamine 2,3-dioxygenase.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/1.13.11.11
TPHX	Tryptophan hydroxylase	An enzyme that catalyzes the hydroxylation of tryptophan to 5-hydroxytryptophan in the presence of NADPH and molecular oxygen. It is important in the biosynthesis of serotonin. Also, EC 1.14.16.4, Tryptophan 5-monooxygenase, Indoleacetic acid-5-hydroxylase, L-tryptophan hydroxylase, Tryptophan 5-hydroxylase.	http://www.ncbi.nlm.nih.gov/mesh/68014365 and http://enzyme.expasy.org/EC/1.14.16.4
TPOX	Tryptophan oxidase	An enzyme	
T5D1	Type I iodothyronine deiodinase	Type I iodothyronine deiodinase is one form of thyroxine 5'-deiodinase that renders thyroid hormone more active. The first reaction is a reductive deiodination converting the -Se-H group of the enzyme into an -Se-I group; the reductant then reconverts this into -Se-H, releasing iodide.	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
T5D2	Type II iodothyronine deiodinase	Type II iodothyronine deiodinase is one form of thyroxine 5'-deiodinase that renders thyroid hormone more active by converting the prohormone thyroxine (T4) by outer ring deiodination (ORD).	http://www.ncbi.nlm.nih.gov and http://www.chem.qmul.ac.uk
TYRS	Tyrosinase	An enzyme of the oxidoreductase class that catalyzes the reaction between L-Tyrosine, L-Dopa, and oxygen to yield L-Dopa, dopaquinone, and water.	http://www.online-medical-dictionary.org/definitions-t/tyrosinase.html
TATS	Tyrosine aminotransferase	an enzyme that catalyzes the reversible reaction of l-tyrosine and α-ketoglutarate producing p-hydroxyphenylpyruvate and l-glutamate; this enzyme catalyzes a step in l-phenylalanine and l-tyrosine catabolism; a deficiency of this enzyme is associated with tyrosinemia II. Also, EC 2.6.1.5, tyrosine transaminase, TyrAT.	Farlex Partner Medical Dictionary, 2012 and http://enzyme.expasy.org/EC/2.6.1.5
TYDC	Tyrosine decarboxylase	Catalyzes the removal of the carboxyl group from tyrosine to produce tyramine and carbon dioxide.	http://www.worthington-biochem.com/TYD/default.html

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Measurement Code	Measurement Name	Measurement Definition	Note
TSHX	Tyrosine hydroxylase	Tyrosine hydroxylase or tyrosine 3-monoxygenase is the enzyme responsible for catalyzing the conversion of the amino acid L-tyrosine to L-3,4-dihydroxyphenylalanine (L-DOPA). L-DOPA is a precursor for dopamine, which, in turn, is a precursor for the important neurotransmitters norepinephrine (noradrenaline) and epinephrine (adrenaline). Also, EC 1.14.16.2, Tyrosine 3-monoxygenase, L-tyrosine hydroxylase, Tyrosine 3-hydroxylase.	http://en.wikipedia.org/wiki/Tyrosine_hydroxylase and http://enzyme.expasy.org/EC/1.14.16.2
TKNS	Tyrosine kinases	An enzyme that phosphorylates tyrosyl residues on certain proteins; many are products of viral oncogenes; a number of receptors (for example, receptors for epidermal growth factor, insulin, etc.) have this enzymatic activity; a misnomer, in that the physiologic substrate is not tyrosine but tyrosyl residues in a protein.	Farlex Partner Medical Dictionary, 2012
UCCR	Ubiquinol-cytochrome c reductase	A multi-subunit enzyme complex that contains cytochrome b group; cytochrome c1; and iron-sulfur centers. It catalyzes the oxidation of ubiquinol to ubiquinone, and transfers the electrons to cytochrome c. Also: Ubiquinol Cytochrome c Reductase, Coenzyme Q Cytochrome c Reductase, Electron Transport Complex III, Coenzyme QH ₂ Cytochrome c Reductase, Cytochrome bc ₁ Complex, Ubihydroquinone Cytochrome c Reductase.	https://www.online-medical-dictionary.org/definitions-e/electron-transport-complex-iii.html
USP5	Ubiquitin specific protease 5	Ubiquitin-dependent proteolysis is a complex pathway of protein metabolism implicated in such diverse cellular functions as maintenance of chromatin structure, receptor function, and degradation of abnormal proteins. A late step of the process involves disassembly of the polyubiquitin chains on degraded proteins into ubiquitin monomers. Ubiquitin specific protease 5 (USP5) disassembles branched polyubiquitin chains by a sequential exo mechanism, starting at the proximal end of the chain. Also: Isopeptidase T.	Wilkinson et al., 1995, http://www.omim.org/entry/601447
UDPG	UDP glucose pyrophosphorylase	An enzyme associated with glycogenesis. It synthesizes UDP-glucose from glucose-1-phosphate and UTP. Also, EC 2.7.7.9, UTP-glucose-1-phosphate uridylyltransferase, Glucose-1-phosphate uridylyltransferase, UDP-glucose diphosphorylase.	http://en.wikipedia.org/wiki/UDP-glucose_pyrophosphorylase and http://enzyme.expasy.org/EC/2.7.7.9

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
UCKN	UMP/CMP kinase	A bifunctional enzyme that catalyzes the phosphorylation of both CMP and UMP with similar efficiency. Catalyzes the phosphorylation of pyrimidine nucleoside monophosphates at the expense of ATP. Plays an important role in de novo pyrimidine nucleotide biosynthesis. Also: Cytidine monophosphate kinase 1, CMP kinase, dCMP kinase, Deoxycytidine kinase, Deoxycytidylate kinase, UMP-CMP kinase, Uridine monophosphate-cytidine monophosphate phosphotransferase, EC 2.7.4.14.	http://enzyme.expasy.org/EC/2.7.4.14 and http://www.uniprot.org/uniprot/P30085
URSE	Urease activity	An enzyme that catalyzes the hydrolysis of urea to ammonia and carbon dioxide; it is a nickel protein of microorganisms and plants that is used in clinical assays of plasma urea concentrations. Also, EC 3.5.1.5	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/3.5.1.5

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
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UDPT	Uridine diphosphate (UDP) glucuronyl transferase	The enzymatic addition of sugars to fat-soluble chemicals is an important process that increases their solubility in water and aids in their excretion. The UDP glucuronosyltransferases that carry out this reaction are part of a super family of UDP glycosyltransferases found in animals, plants and bacteria. Other name(s): 1-naphthol glucuronyltransferase; 1-naphthol-UDP-glucuronosyltransferase; 17beta-hydroxysteroid UDP-glucuronosyltransferase; 3alpha-hydroxy steroid UDP-glucuronosyl-transferase; 4-hydroxybiphenyl UDP-glucuronosyltransferase; 4-methylumbellif erone UDP-glucuronosyltransferase; 4-nitrophenol UDP-glucuronosyltransferase; 4-nitrophenol UDPGT; 17-OH steroid UDPGT; 3-OH androgenic UDPGT; bilirubin uridine diphosphoglucuronyltransferase; bilirubin UDP-glucuronosyl-transferase; bilirubin monoglucuronide glucuronyl-transferase; bilirubin UDPGT; bilirubin glucuronyltransferase; ciramadol UDP-glucuronosyl-transferase; estriol UDP-glucurono-syltransferase; estrone UDP-glucuronosyltransferase; uridine diphosphoglucuronate-bili-rubin glucuronoside glucuronyl-transferase; uridine diphosphoglucuronate-bilirubin glucuronosyltrans-ferase; uridine diphosphoglucu-ronate-estriol glucuronyltransfer-ase; uridine diphosphoglucuronate-estradiol glucuronyltransferase; uridine diphosphoglucuronate-4-hydroxybiphenyl glucuronosyltrans-ferase; uridine diphosphoglucuronate-1,2-diacylglycerol glucuronosyl-transferase; uridine diphosphoglu-curonate-estriol 16alpha-glucurono-syltransferase; uridine diphospho-glucuronosyl-transferase; GT; morphine glucu-ronyltransferase; p-hydroxybiphenyl UDP glucuronyl-transferase; p-nitrophenol UDP-glucuronosyl-transferase; p-nitro-phenol UDP-glucuronosyltransferase; p-nitrophenylglucuronosyltransfer-ase; p-phenylphenol glucuronyl-transferase; phenyl-UDP-glucurono-syltrans-ferase; PNP-UDPGT; UDP glucuronate-estradiol-glucuronosyl-transferase; UDP glucuronosyl-transferase; UDP glucuronate-estriol glucuronyltransferase; UDP glucuronic acid transferase; UDP glucuronyltransferase; UDP-glucuronate-4-hydroxybiphenyl glucuronosyltransferase; UDP-glucuronate-bilirubin glucuronyl-transferase; UDP-glucuronosyl-transferase; UDP-glucuronyltrans-ferase; UDPGA transferase; UDPGA-glucuronyltransferase; UDPGT; uridine diphosphoglucu-ronyltransferase; uridine diphospho-glucuronate-bilirubin glucuronosyl-transferase; uridine diphosphate glucuronyltransferase; uridine 5'-diphosphoglucuronosyltransferase; uridine diphosphoglucuronosyl-transferase	www.unisa.edu.au/pharm_medsci/Glc_trans/intro.htm and http://www.chem.qmul.ac.uk
URON	Uronolactonase	Also known as glucuronolactonase, an enzyme involved in the metabolism of L-ascorbic acid.	ECOREF 58373
UPGN	Uroporphyrinogen	Porphyrinogens which are intermediates in Heme biosynthesis. They have four Acetic Acid and four propionic acid side chains attached to the pyrrole rings. Uroporphyrinogen I and III are formed from polypyrryl Methane in the presence of Uroporphyrinogen III Cosynthetase and uroporphyrin I Synthetase, respectively. They can yield Uroporphyrins by autoxidation or Coproporphyrinogens by Decarboxylation.	http://www.online-medical-dictionary.org/definitions-u/uroporphyrinogens.html

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
UPDC	Uroporphyrinogen decarboxylase	Uroporphyrinogen decarboxylase, also known as UROD, is an enzyme. Also: uroporphyrinogen III decarboxylase; porphyrinogen carboxy-lyase; porphyrinogen decarboxylase; uroporphyrinogen-III carboxy-lyase.	http://www.chem.qmul.ac.uk and www.wikipedia.org/wiki/Uroporphyrinogen_decarboxylase
UPIS	Uroporphyrinogen I synthetase	Uroporphyrinogen I synthetase is an enzyme. Also: hydroxymethylbilane synthase, HMB-synthase; porphobilinogen deaminase; pre-uroporphyrinogen synthase; uroporphyrinogen I synthase; uroporphyrinogen synthase; uroporphyrinogen synthetase; porphobilinogen ammonia-lyase (polymerizing); (4-[2-carboxyethyl]-3-[carboxymethyl]pyrrol-2-yl)methyltransferase (hydrolysing)	http://www.chem.qmul.ac.uk
UP3S	Uroporphyrinogen III synthase	Uroporphyrinogen III synthase is an enzyme. Also: porphobilinogenase; uroporphyrinogen isomerase; uroporphyrinogen III cosynthase; URO-synthase; hydroxymethylbilane hydro-lyase (cyclizing)	http://www.chem.qmul.ac.uk
VAAM	Valine aminopeptidase	Any of various enzymes that catalyze the hydrolysis of the terminal peptide bond at the amino end of a polypeptide, in this case, valine.	The American Heritage® Medical Dictionary, 2007, 2004 and ECOTOX
XTDH	Xanthine dehydrogenase	An enzyme that catalyzes the oxidation of Xanthine in the presence of NAD+ to form Uric acid and NADH. It acts also on a variety of other purines and aldehydes. (EC 1.17.1.4). Also known as: NAD-xanthine dehydrogenase, Xanthine oxidoreductase, Xanthine-NAD oxidoreductase, Xanthine/NAD(+) oxidoreductase.	http://www.ncbi.nlm.nih.gov/mesh?term=Xanthine%20Oxidoreductase and http://enzyme.expasy.org/EC/1.17.1.4
XODA	Xanthine oxidase	A flavoprotein enzyme that catalyzes the oxidation of hypoxanthine to xanthine and then to uric acid, the final steps in the degradation of purines. Generates hydrogen peroxide, which can be a generator of free radicals in biological systems through reactions with superoxide ions. Deficiency, an autosomal recessive trait, causes xanthinuria. Also, EC 1.17.3.2, Hypoxanthine oxidase, Hypoxanthine-xanthine oxidase, Schardinger enzyme, Xanthine oxidoreductase.	Dorland's Medical Dictionary for Health Consumers, 2007 and http://enzyme.expasy.org/EC/1.17.3.2
XBME	Xenobiotic metabolizing enzymes	The xenobiotic metabolizing enzymes have a primary role in protection against harmful insult from the environment. Playing a key role in the metabolism and elimination of potentially toxic compounds. They are capable of actively metabolising numerous foreign substances such as chemical pollutants, drugs and other xenobiotics	http://www.irsn.fr/EN/Research/publications-documentation/Aktis/envirhom/xenobiotic/Pages/xeno1.aspx#.VHOkX2f5sdU

ECOTOX Code Appendix

ENZ	Enzyme Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Note
XTAP	Xenobiotic-transporting ATPase	A 170-kDa transmembrane glycoprotein from the superfamily of ATP-Binding cassette transporters. It serves as an ATP-dependent efflux pump for a variety of chemicals, including many Antineoplastic agents. Overexpression of this glycoprotein is associated with multidrug resistance. It is responsible for decreased drug accumulation in multidrug-resistant cells and often mediates the development of resistance to anticancer drugs. Involved in Multixenobiotic resistance mechanism. Also: ATP phosphohydrolase (steroid-exporting), MDR protein, Multidrug-resistance protein, P-glycoprotein, permeability glycoprotein, PDR protein, Pleiotropic-drug-resistance protein, Steroid-transporting ATPase, ATP-binding cassette sub-family B member 1, MDR1 Protein, Multidrug Resistance Protein 1, cluster of differentiation 243, AaeL_AAEL010379, EC 3.6.6.44, previously EC 3.6.3.45.	http://enzyme.expasy.org/EC/3.6.3.44 , http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?mode=&term=P-Glycoprotein , ShowDetailView&TermToSearch=5243">http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd>ShowDetailView&TermToSearch=5243 , http://www.ncbi.nlm.nih.gov/gene/5573277 , http://www.genome.jp/dbget-bin/www_bget?aa:g:AaeL_AAEL010379

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HZ11	(Z)11-Hexadecenal:	(Z)11-Hexadecenal: is an insect pheromone	http://www.pherobase.net
11BA	11 beta-hydroxyandrostenedione	11 beta-hydroxyandrostenedione refers to an Androstenedione without isomeric designation. Also known as: 11-hydroxy-4-androstene-3,17-dione; 11-hydroxyandrostenedione, (11alpha)-isomer; 11-hydroxyandrostenedione, (11beta)-isomer; 11-hydroxyandrostenedione, (9beta,10alpha,11alpha)-isomer; 11-hydroxyandrostenedione, (9beta,10alpha,11beta)-isomer; 11 beta-hydroxyandrost-4-ene-3,17-dione.	http://www.ncbi.nlm.nih.gov
11DC	11-Deoxycortisol	The immediate precursor of cortisol, accumulates in the peripheral circulation when there is a deficiency of adrenal 11b-hydroxylase activity.	http://www.sascentre.org/hormones/hormpages/hormone11deoxycortisol.html

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DECL	11-Deoxycortisol glucuronide	11-Deoxycortisol is the immediate precursor of cortisol, accumulates in the peripheral circulation when there is a deficiency of adrenal 11b-hydroxylase activity. (http://www.sas-centre.org/hormones/hormpages/hormone11deoxycortisol.html) Glucuronide is a substance produced by attaching glucuronic acid to another substance with glycosidic bonds	http://cancerweb.ncl.ac.uk/omd/
KTST	11-Ketotestosterone	A potent androgenic steroid and major product secreted by the Leydig cells of the testis. Its production is stimulated by luteinizing hormone from the pituitary gland. In turn, testosterone exerts feedback control of the pituitary LH and FSH secretion. Depending on the tissues, testosterone can be further converted to dihydrotestosterone or estradiol.	http://www.reference.md/files/C003/mC003600.html
15BH	15 Beta-hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
15AP	15-alpha-Hydroxyprogesterone	15-alpha-Hydroxyprogesterone is an oxidative product of progesterone.	ECOTOX
15AT	15-alpha-Hydroxytestosterone	15-alpha-Hydroxytestosterone is an oxidative product of testosterone.	ECOTOX
16BH	16 beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
16AH	16-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
16AT	16alpha-Testosterone	A potent steroid hormone secreted mainly by the testes. It can be extracted from the testes of animals or synthesized and used to treat androgen deficiency or promote anabolism.	http://www.thefreedictionary.com/testosterone
AHPG	17 alpha-Hydroxyprogesterone	A metabolite of progesterone with a hydroxyl group at the 17-alpha position. It serves as an intermediate in the biosynthesis of hydrocortisone and gonadal steroid hormones. Also known as: 17a-Hydroxy-4-pregnen-3,20-dione.	http://www.reference.md/files/D019/mD019326.html
BDPG	17,20beta-Dihydroxy-4-pregnen-3-one	A female preovulatory hormone.	ECOTOX
DHPT	17alpha,20beta-dihydroxyprogesterone	A maturation-inducing hormone	Pang, Y. and Ge, W., Biol Reprod. (1999) 61(4):987-992
17MT	17alpha-methyl testosterone	A synthetic androgen with affinity for the androgen receptor. 17alpha-methyl testosterone is used widely as a component of hormone replacement therapy. Also: 17alpha-methyltestosterone.	https://www.ncbi.nlm.nih.gov/pubmed/11850230

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ESDL	17-beta Estradiol	Estradiol: Generally refers to the 17-beta-isomer of estradiol, an aromatized C18 steroid with hydroxyl group at 3-beta- and 17-beta-position. Estradiol-17-beta is the most potent form of mammalian estrogenic steroids. In humans, it is produced primarily by the cyclic ovaries and the placenta. It is also produced by the adipose tissue of men and postmenopausal women. Various isomers can be synthesized. Other name: 17 beta-Estradiol	http://www.reference.md/files/D004/mD004958.html
ESKE	17beta-Estradiol:11-Ketotestosterone ratio	The ratio of the amount of 17beta-estradiol to the amount of 11-ketotestosterone in an organism.	ECOTOX
ELTR	17beta-estradiol:Testosterone ratio	The ratio of the amount of 17beta-estradiol to the amount of testosterone in an organism.	
18HD	18-Hydroxy-11-deoxycorticosterone	An analog of desoxycorticosterone which is substituted by a hydroxyl group at the C-18.	http://www.reference.md/files/D015/mD015070.html
HEDS	20-hydroxyecdysone	A steroid hormone that regulates the processes of molting or ecdysis in insects. Also: beta-Ecdysone, crustecdysone.	http://www.ncbi.nlm.nih.gov
2AHT	2-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
2BHT	2-beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
ABBD	4-androstene-3beta,17beta-diol	A steroid	ECOTOX
5AAD	5alpha-Androstene-3alpha(beta),17beta-diol	A steroid metabolite.	ECOTOX
5A3D	5-Androstene-3alpha(beta),17beta-diol	A steroid metabolite.	ECOTOX
6AHT	6-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
6BHT	6-beta-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX
6BTT	6beta-Testosterone	Testosterone is a hormone that is a hydroxy steroid ketone produced especially by the testes or made synthetically and that is responsible for inducing and maintaining male secondary sex characters	http://www.merriam-webster.com/dictionary/testosterone
7AHT	7-alpha-Hydroxytestosterone	An oxidative product of testosterone.	ECOTOX

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
7ATT	7alpha-Testosterone	Testosterone is a hormone that is a hydroxy steroid ketone produced especially by the testes or made synthetically and that is responsible for inducing and maintaining male secondary sex characters	http://www.merriam-webster.com/dictionary/testosterone
ABSA	Abscisic Acid	A lipid hormone that inhibits cell growth in plants, it is associated with fruit drop, leaf death and seed dormancy. It is synthesised in the plastids from carotenoids. This hormone helps plants deal with water loss, and its effects can be reversed with gibberellins. Partly responsible for leaf Abscission in aging or diseased plants and also responsible for promoting dormancy in buds and seeds, abscisic acid is a plant growth substance which is also involved in the induction of dormant buds and seeds.	http://www.biology-online.org/dictionary/Abscisic_acid
ACTH	Adrenocorticotrophic hormone	ACTH: a protein hormone of the anterior lobe of the pituitary gland that stimulates the adrenal cortex —called also adrenocorticotrophic hormone.	http://www.merriam-webster.com/dictionary/acth
ALDS	Aldosterone	A steroid hormone produced by the adrenal cortex, that controls salt and water balance in the kidney. Abnormally high levels of this hormone cause sodium retention, high blood pressure, heart rhythm irregularities and possibly paralysis a corticosteroid hormone that is secreted by the cortex of the adrenal gland; regulates salt (sodium and potassium) and water balance. Aldosterone is a hormone that is involved in regulating sodium and potassium concentration in the body, and is excreted by the adrenal gland. It promotes the re-absorption of sodium back into the body and removes excess potassium.	http://www.biology-online.org/dictionary/Aldosterone
AMSH	Alpha-Melanocyte Stimulating Hormone	Pituitary hormone which causes darkening skin pigmentation from amphibians to humans. In mammals, it can also have behavioral effects on learning, attention, and memory.	http://www.sigmaldrich.com/catalog/product/sigma/m4135?lang=en&region=US

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ANDR	Androgen	Any of a group of hormones that mainly influence the development of the male reproductive system. The main and most active androgen is testosterone, produced by cells in the testes. Androgens produced in smaller quantities, mainly by the adrenal gland but also by the testes, support the functions of testosterone. Androgens cause the normal changes of puberty in boys' bodies and then influence sperm-cell formation, sexual interest and behaviour, and male pattern baldness. Females produce trace quantities of androgens, mostly in the adrenal glands, as well as in the ovaries.	http://www.merriam-webster.com/dictionary/androgen
ABPT	Androgen binding protein	Carrier proteins produced in the Sertoli cells of the testis, secreted into the seminiferous tubules, and transported via the efferent ducts to the epididymis. They participate in the transport of androgens. Androgen-binding protein has the same amino acid sequence as sex hormone-binding globulin. They differ by their sites of synthesis and post-translational oligosaccharide modifications.	http://www.reference.md/files/D000/mD000727.html
ADDL	Androstanediol	An androgen implicated in the regulation of gonadotropin secretion; <i>a. glucuronide</i> , a metabolite of dihydroxytestosterone formed in the peripheral tissues, is used to estimate peripheral androgen activity. Also called: 5alpha-Androstan-3b,17b-diol	Dorland's Medical Dictionary for Health Consumers, 2007
ADDN	Androstenedione	An androgenic steroid produced by the testis, adrenal cortex, and ovary; converted metabolically to testosterone and other androgens.	Dorland's Medical Dictionary for Health Consumers, 2007
ASTN	Androstenone	Androstenone, or 5alpha-androst-16-en-3-one, is a steroid found in both male and female sweat and urine.	http://en.wikipedia.org/wiki
AUXN	Auxin	A group of plant growth substances (often called phytohormones or plant hormones), the most common example being Indole Acetic Acid (IAA), responsible for raising the pH around cells, making the cell wall less rigid and allowing elongation. auxins include indoleacetic acid, phenylacetic acid, and 4-chloro-indoleacetic acid. Commercially, auxins are used to promote root growth, to promote uniform flowering, and to set fruit and prevent premature fruit drop.	http://www.biology-online.org/dictionary/Auxin
<BOES> Code ESDL	beta-Oestradiol (E2)	A hormone (272 D) synthesized mainly in the ovary, but also in the placenta, testis and possibly adrenal cortex. A potent oestrogen.	http://cancerweb.net.ac.uk/omd/

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CCTN	Calcitonin	A protein hormone secreted in humans and other mammals by parafollicular cells (C cells) in the thyroid gland and secreted in birds, fishes, and other nonmammalian vertebrates by cells of the glandular ultimobranchial bodies. Calcitonin lowers the concentration of calcium in the blood when it rises above the normal value. Also: thyrocalcitonin.	http://www.britannica.com/EBchecked/topic/88945/calcitonin
CTCL	Catecholamine	<p>Any of a group of sympathomimetic amines (including dopamine, epinephrine, and norepinephrine), the aromatic portion of whose molecule is catechol.</p> <p>The catecholamines play an important role in the body's physiological response to stress. Their release at sympathetic nerve endings increases the rate and force of muscular contraction of the heart, thereby increasing cardiac output; constricts peripheral blood vessels, resulting in elevated blood pressure; elevates blood glucose levels by hepatic and skeletal muscle glycogenolysis; and promotes an increase in blood lipids by increasing the catabolism of fats.</p>	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
CORT	Corticosterone (Corticoid)	A corticosteroid produced in the adrenal cortex that functions in the metabolism of carbohydrates and proteins.	http://dictionary.reference.com/browse/corticosterone
CRFF	Corticotropin Releasing Factor	<p>A peptide of about 41 Amino Acids that stimulates the release of Adrenocorticotrophic Hormone.</p> <p>Synthesized by neurons in the paraventricular nucleus of the hypothalamus. After being released into the pituitary portal circulation, CRF stimulates the release of ACTH from the Pituitary Gland.</p> <p>CRF can also be synthesized in other tissues, such as placenta, adrenal medulla and testis.</p> <p>Also: Corticotropin Releasing Hormone, CRH.</p>	http://www.online-medical-dictionary.org/definitions-c/corticotropin-releasing-factor.html
CRTS	Cortisol	<p>A major hormone produced by the adrenal cortex, which is the primary glucocorticoid secreted by the adrenal gland in response to ACTH stimulation or stress; cortisol has anti-inflammatory activity, and is involved in gluconeogenesis, glycogen storage in the liver, immune regulation, mediation of physiologic stress responses, Ca²⁺ absorption, secretion of gastric acid and pepsin, conversion of proteins to carbohydrates, and nutrient metabolism. Synthetic cortisol administered as a drug is usually known by the alternative name hydrocortisone.</p>	Farlex Partner Medical Dictionary, 2012
CRCT	Cortisol and cortisone	Amount of both cortisol and cortisone found in a sample.	ECOTOX

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CRSN	Cortisone	A naturally occurring adrenocorticoid hormone that is produced in minute amounts by the adrenal gland.	http://www.medicinenet.com/script/main/art.asp?articlekey=6547
CTKY	Cytokines	Cytokines are small secreted proteins which mediate and regulate immunity, inflammation, and hematopoiesis.	http://microvet.arizona.edu/Courses/MIC419/Tutorials/cytokines.html
CYTK	Cytokinin	Class of plant growth substances (plant hormones) active in promoting cell division. Also involved in cell growth and differentiation and in other physiological processes.	http://www.biology-online.org/dictionary/Cytokinin
DHEA	Dehydroepiandrosterone	A steroid hormone made by the adrenal glands, that acts on the body much like testosterone and is converted into testosterone and estrogen. Also: DHEA.	http://www.medicinenet.com/script/main/art.asp?articlekey=25613
DOCS	Deoxycorticosterone	An adrenocortical steroid, principally a biosynthetic precursor of corticosterone, which occasionally appears in adrenocortical secretions; a potent mineralocorticoid with no appreciable glucocorticoid activity. Synonym(s): 21-hydroxyprogesterone, cortexone, deoxycortone, desoxycortone	Farlex Partner Medical Dictionary, 2012
DHTR	Dihydrotestosterone	The synthetic form is stanolone. (5alpha,17beta)-17-Hydroxyandrostan-3-one	Dorland's medical dictionary
DITS	Diiodotyrosine	An iodinated tyrosine C9H9I2NO3 that is produced in the thyroid gland from monoiodotyrosine and that combines with monoiodotyrosine to form triiodothyronine—called also iodogorgoic acid	http://www.merriam-webster.com/medical/Diiodotyrosine
DOPA	Dopamine	A monoamine C ₈ H ₁₁ NO ₂ that is a decarboxylated form of dopa and occurs especially as a neurotransmitter in the brain and as an intermediate in the biosynthesis of epinephrine. One of the catecholamines, widely distributed in the central nervous system. Through a series of enzymatic reactions, it is formed from levodopa and converted to norepinephrine and then epinephrine. It is a central nervous system neurotransmitter essential to control of motion; it also acts as a hormone. Degeneration of certain dopamine-producing brain cells results in parkinsonism.	http://www.merriam-webster.com/dictionary/dopamine
ECDY	Ecdysone	A steroid hormone that regulates the processes of molting or ecdysis in insects	http://www.ncbi.nlm.nih.gov
ECDS	Ecdysteroids	Ecdysteroids are cholesterol derivatives that control molting and reproduction in insects and crustaceans	ECOREF #86051

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EPIN	Epinephrine	A colorless crystalline feebly basic sympathomimetic hormone C ₉ H ₁₃ NO ₃ that is the principal blood-pressure-raising hormone secreted by the adrenal medulla, is prepared from adrenal extracts or made synthetically, and is used medicinally especially as a heart stimulant, as a vasoconstrictor (as to treat open-angle glaucoma and life-threatening allergic reactions and to prolong the effects of local anesthetics), and as a bronchodilator—called also <i>adrenaline</i>	http://www.thefreedictionary.com/epinephrine
EPNO	Epinephrine to norepinephrine ratio	Ratio of epinephrine to norepinephrine	ECOTOX
ERTP	Erythropoietin	Erythropoietin is a glycoprotein (46 kD) hormone produced by specialised cells in the kidneys that regulates the production of red blood cells in the marrow.	http://www.biology-online.org/dictionary/Erythropoietin
ESTR	Estrogen (Oestrogen)	Any of various natural steroids (as estradiol) that are formed from androgen precursors, that are secreted chiefly by the ovaries, placenta, adipose tissue, and testes, and that stimulate the development of female secondary sex characteristics and promote the growth and maintenance of the female reproductive system; <i>also</i> : any of various synthetic or semisynthetic steroids (as ethinyl estradiol) that mimic the physiological effect of natural estrogens.	http://www.merriam-webster.com/dictionary/estrogen
ESTO	Estrone	A natural estrogenic hormone that is a ketone C ₁₈ H ₂₂ O ₂ found in the body chiefly as a metabolite of estradiol, is also secreted especially by the ovaries, and is used to treat various conditions (as ovarian failure and menopausal symptoms) relating to estrogen deficiency. Also: 3-hydroxyestra-1,3,5(10)-trien-17-one.	http://www.merriam-webster.com/medical/estrone
FOSH	Follicle stimulating hormone (FSH)	One of the most important hormones involved in the natural menstrual cycle as well as in pharmacological (drug-induced) stimulation of the ovaries. It is the main hormone involved in producing mature eggs.	http://www.advancedfertility.com/day3fsh.htm
FHBU	Follicle Stimulating Hormone, beta Subunit	The beta subunit of follicle stimulating hormone. It is a 15-kDa glycopolyptide. Mutation of the FSHB gene causes delayed puberty, or infertility.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FTIX	Free thyroxine index	The amount of unbound, physiologically active thyroxine (T4) in serum. This amount is determined by direct assay or, more frequently, calculated on the basis of an in vitro uptake test. In this test the uptake (by resin or charcoal) of labeled triiodothyronine (T3) is measured; because T3 is less strongly bound by serum, it is used instead of T4. The free T4 index is then obtained by multiplying the T3 uptake by the total concentration of T4 in serum.	Mosby's Medical Dictionary, 8th edition, 2009
GAST	Gastrin	Gastrins belong to a family of gastrointestinal peptide hormones that excite the secretion of gastric juice. They may also occur in the central nervous system where they are presumed to be neurotransmitters.	http://www.ncbi.nlm.nih.gov
GHRL	Ghrelin	A 28-amino acid, acylated, orexigenic peptide that is a ligand for growth hormone secretagogue receptors. Ghrelin is widely expressed but primarily in the stomach in the adults. Ghrelin acts centrally to stimulate growth hormone secretion and food intake, and peripherally to regulate energy homeostasis.	http://www.ncbi.nlm.nih.gov
GIBB	Gibberellin	Plant hormones that regulate growth and influence various developmental processes, including stem elongation, germination, dormancy, flowering, sex expression, enzyme induction, and leaf and fruit senescence.	http://www.plant-hormones.info/giberellins.htm
GCRT	Glucocorticoid	Any of a group of corticosteroids (as cortisol or dexamethasone) that are involved especially in carbohydrate, protein, and fat metabolism, that tend to increase liver glycogen and blood sugar by increasing gluconeogenesis, that are anti-inflammatory and immunosuppressive, and that are used widely in medicine (as in the alleviation of the symptoms of rheumatoid arthritis).	http://www.merriam-webster.com/medical/glucocorticoid
GBDP	Glucoronidated 17,20beta-Dihydroxy-4-pregnen-3-one	17, 20-beta-dihydroxy-4-pregnen-3-one: Metabolites or derivatives of progesterone with hydroxyl group substitution at various sites; a maturation-inducing hormone.	http://www.reference.md/files/C007/mC007433.html
G11K	Glucuronidated 11-Ketotestosterone	A metabolite of 11-Ketotestosterone	ECOTOX

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GHAU	Glycoprotein Hormones, alpha Subunit	The alpha chain of pituitary glycoprotein hormones (thyrotropin; follicle stimulating hormone; luteinizing hormone) and the placental chorionic gonadotropin. Within a species, the alpha subunits of these four hormones are identical; the distinct functional characteristics of these glycoprotein hormones are determined by the unique beta subunits. Both subunits, the non-covalently bound heterodimers, are required for full biologic activity.	http://www.ncbi.nlm.nih.gov
GNTP	Gonadotropin	A hormone that stimulates the growth and activity of the gonads, especially any of several pituitary hormones that stimulate the function of the ovaries and testes. Also called <i>gonadotropic hormone</i> .	http://medical-dictionary.thefreedictionary.com/Gonadotropins
GRHM	Gonadotropin releasing hormone	A hormone secreted by the hypothalamus that stimulates the anterior lobe of the pituitary gland to release gonadotropins (as luteinizing hormone and follicle-stimulating hormone). Abbreviation GnRH; called also luteinizing hormone-releasing hormone.	http://www.merriam-webster.com/dictionary/gonadotropin-releasing%20hormone
GTHH	Growth hormone	Any substance that stimulates or controls the growth of an organism, especially a species-specific hormone, as the human hormone somatotropin, secreted by the anterior pituitary gland. Abbreviation: GH	http://dictionary.reference.com/browse/growth+hormone
GHRM	Hormone, General Changes in	Unspecified or multiple growth measurements	ECOTOX
HCHH	Hyperglycemic hormone, crustacean	Crustacean hyperglycemic hormone is a neuropeptide primarily synthesized within the eyestalk which controls glucose concentration. Also: CHH	ECOREF#116681 and http://www.ncbi.nlm.nih.gov/
IPTH	Immunoreactive parathyroid hormone	No definition available.	
INHI	Inhibin	A glycoprotein hormone that is secreted by the pituitary gland and in the male by the Sertoli cells and in the female by the granulosa cells and that inhibits the secretion of follicle-stimulating hormone.	http://www.merriam-webster.com/medlineplus/Inhibin
INHB	Inhibin B	Inhibin B is a form of inhibin that suppresses the secretion of pituitary follicle stimulating hormone.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
INSL	Insulin	A protein hormone that is synthesized in the pancreas from proinsulin and secreted by the beta cells of the islets of Langerhans, that is essential for the metabolism of carbohydrates, lipids, and proteins, that regulates blood sugar levels by facilitating the uptake of glucose into tissues, by promoting its conversion into glycogen, fatty acids, and triglycerides, and by reducing the release of glucose from the liver, and that when produced in insufficient quantities results in diabetes mellitus.	http://www.merriam-webster.com/medlineplus/Insulin
LPTN	Leptin	A peptide hormone that is produced by fat cells and plays a role in body weight regulation by acting on the hypothalamus to suppress appetite and burn fat stored in adipose tissue.	http://www.merriam-webster.com
4TO3	L-thyroxine outer ring 5'-monodeiodination	The conversion of L-Thyroxine (T4) to triiodothyrosine (T3) where the T4 enters target cells where it undergoes outer ring 5'-monodeiodination to T3.	ECOREF#73485
LUTH	Luteinizing hormone (LH)	A glycoprotein hormone that is secreted by the adenohypophysis and that in the female stimulates ovulation and the development of the corpora lutea and together with follicle-stimulating hormone the secretion of estrogen from developing ovarian follicles and in the male the development of interstitial tissue in the testis and the secretion of testosterone—abbreviation LH; called also interstitial-cell stimulating hormone, lutropin.	http://www.merriam-webster.com/medlineplus/Luteinizing%20hormone%20
LHBU	Luteinizing Hormone, beta Subunit	The beta subunit of luteinizing hormone. It is a 15-kDa glycopolypeptide with structure similar to the beta subunit of the placental chorionic gonadotropin. Mutation of the LHB gene causes hypogonadism and infertility.	http://decs.bvs.br/cgi-bin/wxis1660.exe/decsserver/?IsisScript=../cgi-bin/decsserver/decsserver.xis&task=exact_term&previous_page=homepage&interface_language=i&search_language=i&search_expl=Luteinizing%20Hormone,%20beta%20Subunit
MELA	Melatonin	A vertebrate hormone C ₁₃ H ₁₆ N ₂ O ₂ that is derived from serotonin, is secreted by the pineal gland especially in response to darkness, and has been linked to the regulation of circadian rhythms.	http://www.merriam-webster.com/medlineplus/Melatonin

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MTSR	Melatonin to Serotonin ratio	The ratio of Melatonin to Serotonin in a sample.	ECOTOX
MITS	Monoiodotyrosine	An iodinated tyrosine C ₉ H ₁₀ INO ₃ that is produced in the thyroid gland by the substitution of one iodine atom in the amino acid for an atom of hydrogen, that undergoes further iodination to produce diiodotyrosine, and that combines with diiodotyrosine to form triiodothyronine.	http://www.merriam-webster.com/medlineplus/Monoiodotyrosine
IAIA	N6(delta2-Isopentenyl)adenine to N6(delta2-Isopentenyl)adenoside ratio	The ratio of N6(delta2-Isopentenyl)adenine to N6(delta2-Isopentenyl)adenoside	ECOTOX
NORE	Norepinephrine	A catecholamine C ₈ H ₁₁ NO ₃ that is the chemical means of transmission across synapses in postganglionic neurons of the sympathetic nervous system and in some parts of the central nervous system, is a vasopressor hormone of the adrenal medulla, and is a precursor of epinephrine in its major biosynthetic pathway—called also arterenol, noradrenaline.	http://www.merriam-webster.com/medlineplus/Norepinephrine
OBCL	Orobanchol	A germination stimulant for root parasitic weeds.	http://www.ncbi.nlm.nih.gov/mesh/67472678
PTHH	Parathyroid hormone (PTH)	A polypeptide hormone secreted by the parathyroid glands which performs the essential role of maintaining intracellular calcium levels in the body. Parathyroid hormone increases intracellular calcium by promoting the release of calcium from bone, increases the intestinal absorption of calcium, increases the renal tubular reabsorption of calcium, and increases the renal excretion of phosphates. Alternate names: parathormone, parathyrin	http://www.ncbi.nlm.nih.gov
PHRM	Pheromone	A chemical substance that is usually produced by an animal and serves especially as a stimulus to other individuals of the same species for one or more behavioral responses.	http://www.merriam-webster.com/dictionary/pheromone
PRGN	Pregnenolone	An unsaturated hydroxy steroid ketone C ₂₁ H ₃₂ O ₂ that is formed by the oxidation of steroids (as cholesterol) and yields progesterone on dehydrogenation.	http://www.merriam-webster.com
PRGS	Progesterone	A female steroid sex hormone C ₂₁ H ₃₀ O ₂ that is secreted by the corpus luteum to prepare the endometrium for implantation and later by the placenta during pregnancy to prevent rejection of the developing embryo or fetus; <i>also</i> : a synthetic steroid resembling progesterone in action, progestogen, progestogen, progestin.	http://www.merriam-webster.com/medlineplus/Progesterone

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PRLC	Prolactin	A protein hormone of the adenohypophysis of the pituitary gland that induces and maintains lactation in the postpartum mammalian female—abbreviation PRL; called also luteotropic hormone, luteotropin, mammotropin	http://www.merriam-webster.com/medlineplus/Prolactin
SRTN	Serotonin	A phenolic amine neurotransmitter C ₁₀ H ₁₂ N ₂ O that is a powerful vasoconstrictor and is found especially in the brain, blood serum, and gastric mucous membrane of mammals—called also 5-HT, 5-hydroxytryptamine	http://www.merriam-webster.com/medlineplus/Serotonin
SMTC	Somatomedin C (or IGF-1)	Somatotropin or human growth hormone is secreted by the pituitary gland under the influence of growth hormone releasing hormone. IGF-I is the main effector of growth hormone activity. ³ IGF-I or Somatomedin C is the major member of a family of proteins synthesized by the liver in response to growth hormone stimulus. It circulates in the peripheral blood bound on a tertiary complex with IGFBP-3 and acid labile subunit (ALS)	http://www.aal.xohost.com/IGF-1.htm
SMMD	Somatomedins	Insulin-like polypeptides made by the liver and some fibroblasts and released into the blood when stimulated by somatotropin. They cause sulfate incorporation into collagen, RNA, and DNA synthesis, which are prerequisites to cell division and growth of the organism. Also known as: Insulin Like Growth Factors (I & II), Sulfation Factor.	http://www.ncbi.nlm.nih.gov
SRIF	Somatostatin	A polypeptide hormone that is produced by the hypothalamus and inhibits the release of growth hormone by the anterior pituitary. It is also produced in the delta cells of the endocrine pancreas where it inhibits the secretion of insulin and glucagon and decreases intestinal motility and absorption.	www.harcourt.com/dictionary
STRD	Steroids	Any of a large class of organic compounds having as a basis 17 carbon atoms arranged in four rings fused together. Steroids include many biologically important compounds, including cholesterol and other sterols, the sex hormones (such as testosterone and estrogen), bile acids, adrenal hormones, plant alkaloids, and certain forms of vitamins.	The American Heritage Science Dictionary, 2005
S11K	Sulfated 11-Ketotestosterone	A metabolite of 11-Ketotestosterone	ECOTOX
SBDP	Sulfated 17,20-beta-Dihydroxy-4-pregnen-3-one	Metabolite of 17,20-beta-Dihydroxy-4-pregnen-3-one	ECOTOX

ECOTOX Code Appendix

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
STST	Sulfated Testosterone	A metabolite of testosterone	http://www.ncbi.nlm.nih.gov/pubmed/19051232
TSTR	Testosterone	The principal androgenic hormone, produced by the interstitial (Leydig) cells of the testes in response to stimulation by the luteinizing hormone of the anterior pituitary gland; it is thought to be responsible for regulation of gonadotropic secretion, spermatogenesis, and wolffian duct differentiation. It is also responsible for other male characteristics after its conversion to dihydrotestosterone. In addition, testosterone possesses protein anabolic properties..	Dorland's Medical Dictionary for Health Consumers, 2007
TGLD	Testosterone glucuronide	A metabolite of testosterone. Testosterone glucuronide comes from the hepatic transformation of testosterone, DHT and androstenedione.	http://www.estetik.com/datamed/Anti_Aging/male_hormones.htm
TSER	Testosterone to estradiol ratio	The ratio of testsosterone to estradiol (T/E2) in a sample.	ECOTOX
TSHT	Thyrotropin	A thyroid-stimulating hormone; a recombinant form of thyroid-stimulating hormone used especially as a diagnostic agent (as in the detection of thyroid cancer). Also: TSH, thyrotropic hormone, thyrotropin alfa, thyroid stimulating hormone.	http://www.merriam-webster.com/medical/Thyrotropin and http://www.merriam-webster.com/dictionary/thyroid-stimulating%20hormone
TRHH	Thyrotropin Releasing Hormone	Thyrotropin Releasing Hormone is a tripeptide that stimulates the release of thyrotropin and prolactin. It is synthesized by the neurons in the paraventricular nucleus of the hypothalamus. Also: Protirelin, Thyroliberin, TRH, TRF	http://www.ncbi.nlm.nih.gov
THYR	Thyroxine	An iodine containing hormone C ₁₅ H ₁₁ I ₄ NO ₄ that is an amino acid produced by the thyroid gland as a product of the cleavage of thyroglobulin, increases the metabolic rate, and is used to treat thyroid disorders. Also: T4, 3,5,3',5'-tetraiodothyronine, and tetraiodothyronine.	http://www.merriam-webster.com/dictionary/thyroxine
T4T3	Thyroxine:Triiodothyronine	The ratio of Thyroxine (T4) and Triiodothyronine (T3).	ECOTOX
TZRS	trans-Zeatin riboside	A cytokinin plant growth regulator that induces cell division and shoot fomation.	http://www.tokue.com/product/trans-zeatin_riboside/
T3T4	Triiodothyronine (T3) to thyroxine (T4)	The ratio of Triiodothyronine (T3) to Thyroxine (T4).	ECOTOX

HRM	Hormone Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TRII	Triiodothyronine	A crystalline iodine-containing hormone $C_{15}H_{12}I_3NO_4$ that is an amino acid derived from thyroxine and is used especially in the form of its soluble sodium salt $C_{15}H_{11}I_3NNaO_4$ in the treatment of hypothyroidism and metabolic insufficiency—called also <i>triiodothyronine</i> , <i>T3</i>	http://www.merriam-webster.com/medical/triiodothyronine
TT34	Triiodothyronine and Thyroxine	The total amount of the Triiodothyronine (T3) and Thyroxine (T4) found in a sample.	ECOTOX
VASO	Vasopressin	A peptide hormone released from the posterior pituitary lobe but synthesised in the hypothalamus. There are 2 forms, differing only in the amino acid at position 8: arginine vasopressin is widespread, while lysine vasopressin is found in pigs. Have antidiuretic and vasoconstrictor actions. Used in the treatment of diabetes insipidus.	http://www.biology-online.org/dictionary/Vasopressin
ZZRR	Zeatin to Zeatin riboside ratio	The ratio of zeatin to zeatin riboside.	ECOTOX

CEL Cellular Group

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AGGR	Aggregation/Adhesion	Massing of materials together as in clumping or the binding of a cell to another cell, or a cell to a surface, via specific cell adhesion molecules.	http://www.biology-online.org/dictionary/Aggregation and http://www.biology-online.org/dictionary/Adhesion
AGLT	Agranulocyte	A leukocyte category characterized by the absence of cytoplasmic granules. Lymphocytes and plasma cells are agranulocytic.	http://medical-dictionary.thefreedictionary.com/agranulocyte
ANGR	Androgen Receptors	Proteins, generally found in the cytoplasm, that specifically bind androgens and mediate their cellular actions. The complex of the androgen and receptor migrates to the cell nucleus where it induces transcription of specific segments of DNA.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AREA	Area	A particular extent of space or surface or one serving a special function.	http://www.merriam-webster.com/dictionary/area Use CEL (Cellular) AREA when measuring the area of a single cell in a multiple celled organism.
ARGY	Argyrophilic cells	Enterochromaffin cells that require exposure to a reducing substance before their granules will react with silver; they are located in the fundic and pyloric glands in the walls of the stomach.	http://www.encyclo.co.uk/define/argyrophilic%20cells
BASO	Basophil	A type of white blood cell (leukocyte) with coarse, bluish-black granules of uniform size within the cytoplasm. Basophils are so named because their cytoplasmic granules stain with basic dyes. Basophils normally constitute 0.5 to 3 percent of the peripheral blood leukocytes, and contain histamine and serotonin. Also known as a basophilic leukocyte.	http://www.medterms.com/script/main/article.asp?articlekey=33464
BCEL	B-cell	Any of the lymphocytes that have antigen-binding antibody molecules on the surface, that comprise the antibody-secreting plasma cells when mature, and that in mammals differentiate in the bone marrow—called also B lymphocyte	http://www.merriam-webster.com/medlineplus/B-cell
BADR	Beta-adrenergic receptor	Any of various cell membrane receptors that can bind with epinephrine and related substances that activate or block the actions of cells containing such receptors. These cells initiate physiological responses such as increasing the rate and force of contraction of the heart as well as relaxing bronchial and vascular smooth muscle. Also called beta-receptor.	The American Heritage® Medical Dictionary, 2007, 2004
BPCL	Bipolar Cell	A class of retinal interneurons, named after their morphology that receive input from the photoreceptors and send it to the ganglion cells.	http://www.biology-online.org/dictionary/Bipolar_cell
BWDD	Blood-water diffusion distance	The distance between the lamellar epithelium to the nearest erythrocytic surface	ECOREF 16098

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CCHG	Cell Changes	Cytology, change in organelle structure, cell size or cell volume. Used when more than one measurement is coded.	(do not use GRO), phagocytosis. For algae, use for change in optical density, location of pigments, cell shape, size. Another example of where it might be appropriate to initiate use of a morph code.
CDRT	Cell division rate	Cell division = The process by which living cells multiply; may be mitotic or amitotic.	McGraw-Hill, 1994
CMGR	Cell migration	Implies movement of a population of cells from one place to another as in the movement of neural crest cells during morphogenesis.	http://www.biology-online.org/dictionary/Cell_migration
CTRV	Cell Turnover	The replacement of old cells with newly generated ones	http://en.wikipedia.org/wiki/Turnover
CVIA	Cell Viability	The number of healthy cells in a sample.	http://www.bionity.com/en/whitepapers/83226/helpcorner-cell-proliferation-and-viability.html
CLFF	Cellular differentiation	The process by which a cell becomes specialized in order to perform a specific function, as in the case of a liver cell, a blood cell, or a neuron.	https://www.dictionary.com/browse/cellular-differentiation
CLCE	Chloride Cell	No definition available.	
CIRC	Choline acetyltransferase (ChAT) immunoreactive cells	Cell exhibiting an immunologic reaction to Choline acetyltransferase which is an enzyme that controls the production of acetylcholine.	partial definition: http://cancerweb.ncl.ac.uk/omd/
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference
CESR	Cytosolic Estrogen Receptor	When the cytosolic estrogen receptor binds hormone, the complex moves into the nucleus where it acts as a transcription factor, binding to estrogen responsive elements (ERE) in the DNA and thereby modulating a myriad of cellular functions.	http://www.invitrogen.com/downloads/FP4.pdf

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CYTO	Cytotoxicity	Toxic to cells	http://www.merriam-webster.com/medlineplus/cytotoxicity
DEND	Dendrite Receptors	No definition available.	
DNSY	Density	The quantity per unit volume, unit area, or unit length: as <i>a</i> : the mass of a substance per unit volume	http://www.merriam-webster.com/dictionary/density
DPTH	Depth	The perpendicular measurement downward from a surface or the direct linear measurement from front to back.	http://www.merriam-webster.com
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.merriam-webster.com/dictionary/diameter (Used when measuring a single cell in an organism)
DIVC	Dividing Cells	Cell division is the process by which a parent cell divides into two or more daughter cells. All cell divisions, regardless of organism, are preceded by a single round of DNA replication.	http://en.wikipedia.org/wiki/Cell_division
EOSN	Eosinophil	A white blood cell or other granulocyte with cytoplasmic inclusions readily stained by eosin	http://www.merriam-webster.com/medlineplus/Eosinophil
ERTH	Erythoroblasts	A polychromatic nucleated cell of red marrow that synthesizes hemoglobin and that is an intermediate in the initial stage of red blood cell formation; broadly : a cell ancestral to red blood cells	http://www.merriam-webster.com/medlineplus/Erythroblasts
ERTC	Erythroid cell	The series of cells in the red blood cell lineage at various stages of differentiation.	https://www.ncbi.nlm.nih.gov/mesh/?term=Erythroid%20Cells
ESRS	Estradiol receptor sites	Proteins that bind estradiol	ECOTOX
FLEX	Flexibility	Capable of being flexed : capable of being turned, bowed, or twisted without breaking .	http://www.nlm.nih.gov/medlineplus/mpusdictionary.html
GABR	gamma aminobutyric acid receptor	A class of receptors that respond to the neurotransmitter gamma-aminobutyric acid (GABA), the chief inhibitory neurotransmitter in the vertebrate central nervous system.	http://en.wikipedia.org/wiki/GABA_receptor

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GGTF	Gamma-glutamyl transpeptidase foci	A cell surface enzyme that hydrolyzes GSH to yield glutamate and cysteinylglycine (CG) that can more readily enter cells. Also: GGT positive foci, gamma glutamyl transferase foci.	https://www.sciencedirect.com/topics/biochemistry-genetics-and-molecular-biology/gamma-glutamyl-transpeptidase
GHAX	gamma-H2AX foci	The phosphorylated form of H2AX that results in response to DNA damage.	https://www.bethyl.com/antibody/pca_az/gamma-H2AX
GTIM	Generation time	Time taken for a cell population to double in numbers and thus equivalent to the average length of the cell cycle.	http://www.biology-online.org/dictionary/Generation_time
GRCN	Germinal Center	The activated center of a lymphoid follicle in secondary lymphoid tissue where B-Lymphocytes are stimulated by antigens and helper T cells (T-Lymphocytes, Helper-Inducer) are stimulated to generate memory cells.	http://www.ncbi.nlm.nih.gov/mesh/68018858
GLCL	Gland Cells	No definition available.	
GLCR	Glucocorticoid receptor	The glucocorticoid receptor (GR) or nuclear receptor subfamily 3, group C, member 1 is a ligand-activated intracytoplasmatic transcription factor that interacts with high affinity to cortisol and other glucocorticoids.	Wikipedia
GBLT	Goblet Cells	A mucus-secreting epithelial cell (as of columnar epithelium) that is distended with secretion or its precursors at the free end. Also known as Chalice cell.	http://www.merriam-webster.com/medlineplus/Goblet%20Cells
GNDT	Gonadotrophs	The cells of the anterior pituitary that regulate reproduction are known as gonadotrophs and make the gonadotrophins- luteinizing hormone and follicle-stimulating hormone.	mumus.med.monash.edu.au
GRAN	Granulocyte	A polymorphonuclear white blood cell (as a basophil, eosinophil, or neutrophil) with granule-containing cytoplasm	http://www.merriam-webster.com/medlineplus/Granulocyte
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height
HMPS	Hematopoiesis	the formation of blood or of blood cells in the living body	http://www.merriam-webster.com/dictionary/hematopoiesis

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HSCS	Hematopoietic stem cells	Hematopoietic Stem Cells are progenitor cells from which all blood cells derive. Also hemocytoblast.	http://www.ncbi.nlm.nih.gov/ and http://en.wikipedia.org/wiki
HCYT	Hemocyte	A blood cell especially of an invertebrate animal (as an insect).	http://www.merriam-webster.com/dictionary/hemocyte
HTCY	Heterocyst frequency	Frequency of large, transparent, thick-walled cell found in the filaments of certain blue-green algae and in certain fungi.	http://www.merriam-webster.com/dictionary/heterocyst
HLCR	Heterophil to lymphocyte cell ratio	Ratio of heterophil to lymphocyte cells.	ECOTOX
HYAL	Hyalinocyte	Hyalinocytes are haemocytes that contain few or no granules, and a round well-centred nucleus.	Auffret M. Bivalve hemocyte morphology. In: Fisher, W.S. (Ed). Disease processes in marine bivalve mollusks. Bethesda: MD American Fisheries Society; 1988. p. 169e77.
ILDS	Interlamellar distance	The distance between lamellae	Farlex Partner Medical Dictionary, 2012
LMFI	Lamellar fusion index	An index related to the fusion of the lamellae which is an area of the gills where exchange of gasses / waste products takes place.	partial definition http://www.aquatext.com/list-l.htm#Lamellae
LGTH	Length	A distance determined by the extent of something specified.	https://www.dictionary.com/browse/length
LEUK	Leukocytes	A colorless blood corpuscle capable of ameboid movement, whose chief function is to protect the body against microorganisms causing disease and which may be classified in two main groups: granular and nongranular.	Dorland's Medical Dictionary for Health Consumers, 2007

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LYPB	Lymphoblast	A lymphocyte that has enlarged following stimulation by an antigen, has the capacity to recognize the stimulating antigen, and is undergoing proliferation and differentiation either to an effector state in which it functions to eliminate the antigen or to a memory state in which it functions to recognize the future reappearance of the antigen. Also: lymphocytoblast.	http://www.merriam-webster.com/dictionary/lymphoblast
LMPH	Lymphocyte	Any of the colorless weakly motile cells that originate from stem cells and differentiate in lymphoid tissue (as of the thymus or bone marrow), that are the typical cellular elements of lymph, that include the cellular mediators of immunity, and that constitute 20 to 30 percent of the white blood cells of normal human blood—see b cell, t cell	http://www.merriam-webster.com/medlineplus/Lymphocyte
LRBR	Lymphocyte to Red blood cell ratio	The ratio of Lymphocytes to Red blood cells found in a sample.	ECOTOX
LMDC	Lymphoid cell	Any of the cells responsible for the production of immunity mediated by cells or antibodies.	https://www.merriam-webster.com/medical/lymphoid%20cell
MPGC	Macrophage	A phagocytic tissue cell of the immune system that may be fixed or freely motile, is derived from a monocyte, functions in the destruction of foreign antigens (as bacteria and viruses), and serves as an antigen-presenting cell—see histiocyte, mononuclear phagocyte system	http://www.merriam-webster.com/medlineplus/Macrophage
MAST	Mast Cells	Granulated cells that are found in almost all tissues, most abundantly in the skin and the gastrointestinal tract. Like the basophils, mast cells contain large amounts of histamine and heparin. Unlike basophils, mast cells normally remain in the tissues and do not circulate in the blood. Mast cells, derived from the bone marrow stem cells, are regulated by the stem cell factor	http://www.ncbi.nlm.nih.gov
MMFD	Membrane Fluidity	The relative diffusional motion of molecules within membranes. Fluidity is used rather than viscosity, because membranes are planar, asymmetric structures, and their properties are not comparable to bulk phases.	https://www.sciencedirect.com/topics/neuroscience/membrane-fluidity
MMIN	Membrane Integrity	The quality or state of the complete membrane in perfect condition.	https://www.sciencedirect.com/topics/engineering/membrane-integrity

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MTMC	Metamyelocyte	A granulocytic cell intermediate in development between the myelocyte and granular leukocyte; characterized by a full complement of cytoplasmic granules and a bean-shaped nucleus. Also: metagranulocyte.	https://encyclopedia2.thefreedictionary.com/metamyelocyte
NCPC	Micronucleated Normochromatic cell to micronucleated Polychromatic cell ratio	Ratio of micronucleated Normochromatic cells to micronucleated polychromatic cells	ECOTOX
MONO	Monocyte	A large white blood cell with finely granulated chromatin dispersed throughout the nucleus that is formed in the bone marrow, enters the blood, and migrates into the connective tissue where it differentiates into a macrophage	http://www.merriam-webster.com/medlineplus/Monocyte
MCYC	Monocytoid cell	A cell having morphologic characteristics of a monocyte but which is nonphagocytic.	https://medical-dictionary.thefreedictionary.com/monocytoid+cell
MUCR	Muscarinic Cholinergic Receptor	One of the two major classes of cholinergic receptors. Muscarinic receptors were originally defined by their preference for muscarine over nicotine. There are several subtypes (usually M1, M2, M3....) that are characterized by their cellular actions, pharmacology, and molecular biology. Also: Muscarinic receptor, Muscarinic Acetylcholine Receptors, or mAChR	www.wikipedia.org/en and http://www.ncbi.nlm.nih.gov
MYLO	Myelocyte	A bone marrow cell; especially : a motile cell with cytoplasmic granules that gives rise to the blood granulocytes and occurs abnormally in the circulating blood (as in myelogenous leukemia)	http://www.merriam-webster.com/medlineplus/myelocyte
MYCT	Myocyte	A contractile cell; specifically : a muscle cell	http://www.merriam-webster.com/medlineplus/myocyte
NEUT	Neutrophil	A type of white blood cell (leukocyte) that is characterized histologically by its ability to be stained by neutral dyes and functionally by its role in mediating immune responses against infectious microorganisms.	http://www.britannica.com/EBchecked/topic/410999/neutrophil
NTRR	Neutrophil and Thrombocyte to Red blood cell ratio	The ratio of Neutrophils and Thrombocytes to Red blood cells in a sample.	ECOTOX
NLCR	Neutrophil Lymphocyte cell ratio	Ratio of Neutrophil to lymphocyte cells.	ECOTOX

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NCRC	Nicotinic receptors	Cholinergic receptors that are stimulated initially and blocked at high doses by the alkaloid nicotine and blocked by tubocurarine; they are found on automatic ganglion cells, on striated muscle cells, and on spinal central neurons.	Dorland's Medical Dictionary for Health Consumers, 2007
NMDR	NMDA Receptor	A brain receptor activated by the amino acid glutamate, which when excessively stimulated may cause cognitive defects in Alzheimer's disease. Also called N-methyl-d-aspartate receptor.	The American Heritage Medical Dictionary 2007, 2004
NCCM	Normochromatic cells, micronucleated	Micronucleated cells being of normal color.	ECOTOX
NESR	Nuclear Estrogen Receptor	Nuclear hormone receptor proteins form a class of ligand activated proteins that, when bound to specific sequences of DNA serve as on-off switches for transcription within the cell nucleus. These switches control the development and differentiation of skin, bone and behavioral centers in the brain, as well as the continual regulation of reproductive tissues.	http://www.ks.uiuc.edu/Research/pro_DNA/ster_horm_rec/
NRBC	Nucleated red blood cells	Nucleated red blood cells, (nrbc's or normoblasts), represent the stages of a red blood cell before it matures. Cells of this stage are usually seen in newborn infants, and in patients with responses to hemolytic crises, such as in megaloblastic anemia and iron deficiency anemia. The average size of the normoblast is 7-12 μ m in diameter. The cytoplasm is pink. The nucleus is pyknotic (a homogeneous blue-black mass with no structure).	http://www.wadsworth.org/chemheme/heme/microscope/nrbc.htm
NLEI	Nuclei	A cellular organelle of eukaryotes that is essential to cell functions (as reproduction and protein synthesis), is composed of nucleoplasm and a nucleoprotein-rich network from which chromosomes and nucleoli arise, and is enclosed in a definite membrane	http://www.merriam-webster.com/dictionary/nuclei
NCEL	Number/Frequency of Cells	No definition available.	
OGNL	Organelle	A specialized cellular part (as a mitochondrion, lysosome, or ribosome) that is analogous to an organ	http://www.merriam-webster.com/dictionary/organelle

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
OCNC	Orthochromatic normoblast (erythroblast)	The final stage of the nucleated, immature erythrocyte, before nuclear loss. Typically the cytoplasm is described as acidophilic, but it still shows a faint polychromatic tint. The nucleus is small and initially may still have very coarse, clumped chromatin, as in its precursor, the polychromatic normoblast, but ultimately it becomes pyknotic, and appears as a deeply staining, blue-black, homogeneous structureless mass. The nucleus is often eccentric and is sometimes lobulated. Called also late , acidophilic , oxyphilic , or eosinophilic normoblast ; late , orthochromatic , acidophilic , oxyphilic , or eosinophilic erythroblast ; and metarubricyte	http://www.ndif.org/public/terms/13590-orthochromatic_normoblast
OSCT	Osteoclast	A large multinuclear cell associated with the absorption and removal of bone...A cell that dissolves the fibers and matrix of bone. An odontoclast, also called cementoclast, is cytomorphologically the same as an osteoclast and is involved in cementum resorption.	http://www.biology-online.org/dictionary/Osteoclasts
PRKY	Perikarya, perikaryon	The cytoplasm around the nucleus, such as that of the cell body of nerve cells; the body of the odontoblast, excluding the odontoblastic process; the cell body of the nerve cell, as distinguished from its axon and dendrites.	http://medical-dictionary.thefreedictionary.com/perikarya
GSTP	Placental glutathione S-transferase foci	Placental glutathione S-transferase (GST-P), a member of glutathione S-transferase, is known for its specific expression during rat hepatocarcinogenesis and has been used as a reliable tumor marker for experimental rat hepatocarcinogenesis.	https://www.mblintl.com/products/311
PSMC	Plasma cells	A type of immune cell that makes large amounts of a specific antibody. Plasma cells develop from B cells that have been activated. A plasma cell is a type of white blood cell. Also called plasmacyte.	http://www.cancer.gov/dictionary?cdrid=46230
PLAS	Plasmolysis	The shrinking of protoplasm away from the cell wall of a plant or bacterium due to water loss from osmosis, thereby resulting in gaps between the cell wall and cell membrane.	http://www.biology-online.org/dictionary/Plasmolysis
PCRC	Polychromatic cells	A primitive erythrocyte in bone marrow, with basophilic material as well as hemoglobin (acidophilic) in the cytoplasm. Synonym(s): polychromatophil cell	Farlex Partner Medical Dictionary 2012
PCCM	Polychromatic cells, micronucleated	A primitive erythrocyte in bone marrow, with basophilic material as well as hemoglobin (acidophilic) in the cytoplasm that has been damaged by a genotoxin	Farlex Partner Medical Dictionary 2012 and http://en.wiktionary.org/wiki/micronucleated

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PCNC	Polychromatic to normochromatic micronucleated cells ratio	Ratio of polychromatic micronucleated cells to normochromatic micronucleated cells	ECOTOX
PMNC	Polymorphonuclear cells	A leukocyte with a multilobed nucleus, such as a neutrophil	Mosby's Medical Dictionary 2009
PGRC	Progesterone Receptor	A specific protein bound to progesterone that moves with the hormone into the nucleus and forms a transcription factor.	http://users.rcn.com/jkimball.ma.ultranet/BiologyPages/P/Progesterone.html
PLCE	Prolymphocyte	A cell in an intermediate stage of development between a lymphoblast and a lymphocyte.	https://www.merriam-webster.com/medical/prolymphocyte
PRMC	Promonocyte	Parent cells in the lineage that gives rise to monocytes and macrophages. Also: Monocyte Macrophage Precursor Cells, Monocyte-Macrophage Precursor Cell, Monoblast.	https://www.ncbi.nlm.nih.gov/mesh/?term=Promonocyte
PMYC	Promyelocyte	A cell in bone marrow that is in an intermediate stage of development between a myeloblast and a myelocyte and has the characteristic granulations but lacks the specific staining reactions of a mature granulocyte of the blood. Also: promyelocyte, programulocyte.	https://www.merriam-webster.com/medical/promyelocyte
PKNJ	Purkinje cells	Largest brain neuron involved synaptic processing.	www.omnimag.com/live_science/purknerld
PKNS	Pyknosis	A degenerative condition of a cell nucleus marked by clumping of the chromosomes, hyperchromatism, and shrinking of the nucleus.	http://www.merriam-webster.com/medical/pyknosis
ROXB	Reactive oxygen species scavenging capacity	Reactive oxygen species scavenging capacity related to the conversion or consumption of reactive oxygen species, including both radicals and non-radicals. Oxidative stress is the imbalance between the production of reactive oxygen and a biological system's ability to convert the reactive intermediates or repair the resulting damage.	http://en.wikipedia.org/wiki/Oxidative_stress and ECOTOX
RSBC	Receptor site, binding capacity	No definition available.	
RBCE	Red Blood Cell	A disk-shaped, biconcave cell in the blood that contains hemoglobin lacks a nucleus, and transports oxygen and carbon dioxide to and from the tissues. Also called erythrocyte, red cell, red corpuscle or abbreviated as RBC	The American Heritage® Medical Dictionary Copyright, 2007, 2004

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RDCP	Relative diffusing capacity	The gas exchange area over the blood-water diffusion distance of the experiment organism divided by the gas exchange area over the blood-water diffusion distance of the experiment organism.	ECOREF 89704
RETI	Reticulocytes	A young red blood cell showing a basophilic reticulum under vital staining.	Dorland's Medical Dictionary for Health Consumers, 2007
NROD	Rods	One of the two photoreceptor cell types of the vertebrate retina. In rods the photopigment is in stacks of membranous disks separate from the outer cell membrane. Rods are more sensitive to light than cones, but rod mediated vision has less spatial and temporal resolution than cone vision.	http://www.biology-online.org/dictionary/Rods
SRTL	Sertoli cells	Any of the elongated cells located in the seminiferous tubules of the testis, and whose main function is to nourish the spermatids attached to it. Also called: nurse cell	http://www.biology-online.org/dictionary/Sertoli_cell
SGDN	Signal Density	No definition available.	
SIZE	Size	The physical magnitude, extent, or bulk: relative or proportionate dimensions of a cell.	http://www.merriam-webster.com/dictionary/size
SPLO	Splenocytes	The monocyte characteristic of the spleen.	http://medical-dictionary.thefreedictionary.com/splenocyte
STCL	Stippled cells	Cells that have an appearance of being engraved by means of dots and flicks.	partial definition: http://www.merriam-webster.com
STRC	Structural Changes	No definition available.	
TCEL	T-cell	A principal type of white blood cell that completes maturation in the thymus and that has various roles in the immune system, including the identification of specific foreign antigens in the body and the activation and deactivation of other immune cells. Also called T lymphocyte.	The American Heritage Medical Dictionary. 2007, 2004 by Houghton Mifflin Company.

ECOTOX Code Appendix

CEL	Cellular Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
THRM	Thrombocytes	An irregularly shaped, disc-like cytoplasmic fragment of a megakaryocyte that is shed in the marrow sinus and subsequently found in the peripheral blood, where it functions in clotting. A platelet contains granules in its central part (granulomere) and, peripherally, clear protoplasm (hyalomere), but no nucleus, is about one third to one half the size of an erythrocyte, and contains no hemoglobin. Synonym(s): Bizzozero corpuscle, blood disc, elementary bodies, third corpuscle, thrombocyte, thromboplastid, Zimmermann corpuscle	Farlex Partner Medical Dictionary, Farlex 2012
THHC	Thyroid Hormone Receptor	The thyroid hormone receptors (TRs) are members of the nuclear receptor superfamily that exhibit a dual role as activators or repressors of gene transcription in response to thyroid hormone (T3) and provide a model system for investigating complex networks of cellular trafficking and gene expression.	https://www.sciencedirect.com/topics/neuroscience/thyroid-hormone-receptor
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
TWBC	White Blood Cell Count, Total	The number of white blood cells (leukocytes) in the blood	ECOTOX
WBCI	White blood cell index	White blood cell count multiplied by the percentage of immature white blood cells called marrow blasts	http://patient.cancerconsultants.com/leukemia_cancer_news.aspx?id=17792
UBWB	White Blood Cell, Undifferentiated Blasts	Absence of normal differentiation of white blood cell blasts.	
WDTH	Width	The horizontal measurement taken at right angles to the length.	(The width of a single cell within an organism) (The width of a single cell within an organism)

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BHSM	11beta-Hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 11beta-Hydroxysteroid dehydrogenase.	ECOTOX			
HD2M	11-beta-Hydroxysteroid dehydrogenase type 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 11-beta-hydroxysteroid dehydrogenase type 2 (hsd11b2).	ECOTOX			
12SM	12S ribosomal RNA gene mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 12S ribosomal RNA.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/EF012280.1	175068	EF012280	GenBank
33ZM	14-3-3 protein zeta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 14-3-3 protein zeta. Also: 14-3-3zeta, 14-3-3 protein z, 14-3-3, 14-3-3EZ, leo, THAP, 14-3-3-like protein, Protein Leonardo.	ECOTOX and http://www.uniprot.org/uniprot/P29310	166650	P29310	GenBank
16SM	16S ribosomal RNA	rRNA (ribosomal RNA) is a molecule in cells that forms part of the protein-synthesizing organelle known as a ribosome, in this case specific to 16S rRNA.	http://www.britannica.com/science/ribosomal-RNA and https://www.ncbi.nlm.nih.gov/nucleotide/U66113.1/	179291	U66113	GenBank
E17M	17 beta-hydroxysteroid dehydrogenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase 1. Also: HSD17b1, EDH17b1, Estradiol 17-beta-dehydrogenase 1.	ECOTOX and https://www.uniprot.org/uniprot/P51657	177251	none given	
HS7M	17 beta-hydroxysteroid dehydrogenase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase 4. Also: 17beta-HSD4, 17 β -HSD4 and 17-beta-hydroxysteroid dehydrogenase type 4.	ECOTOX and http://www.uniprot.org/uniprot/Q8AYH1	176165	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BHMR	17 beta-hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase	ECOTOX			
17BR	17 beta-hydroxysteroid dehydrogenase type 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase type 11. Also: 17beta-HSD-11.	ECOTOX and http://www.uniprot.org/uniprot/E7EIH3	170739	HQ699520	GenBank
12BR	17 beta-hydroxysteroid dehydrogenase type 12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 17 beta-hydroxysteroid dehydrogenase type 12. Also: 17beta-HSD-12.	ECOTOX and http://www.uniprot.org/uniprot/D6PW91	170739	GU984783	GenBank
18RM	18S ribosomal RNA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 18S rRNA.	ECOTOX			
1A3M	1-acylglycerol-3-phosphate O-acyltransferase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-acylglycerol-3-phosphate O-acyltransferase 4. Also: Lysophosphatidic acid acyltransferase, delta, agpat4.	ECOTOX and http://www.uniprot.org/uniprot/Q6PGY2	176978	NM_212992	GenBank
1O1M	1-aminocyclopropane-1-carboxylate oxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate oxidase 1. Also: ACO1, ACC oxidase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZUN4	176649	none given	
1O2M	1-aminocyclopropane-1-carboxylate oxidase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate oxidase 2. Also: ACO2, ACC oxidase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q41931	176649	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
1O3M	1-aminocyclopropane-1-carboxylate oxidase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate oxidase 3. Also: ACO3, ACC oxidase 3.	ECOTOX and http://www.uniprot.org/uniprot/P54847	176649	none given	
1C1M	1-aminocyclopropane-1-carboxylate synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate synthase 1. Also: ACS1, ACS-1, S-adenosyl-L-methionine methylthioadenosine-lyase.	ECOTOX and http://www.uniprot.org/uniprot/P37821	176649	none given	
1C2M	1-aminocyclopropane-1-carboxylate synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate synthase 2. Also: ACS2, ACS-2, S-adenosyl-L-methionine methylthioadenosine-lyase 2.	ECOTOX and http://www.uniprot.org/uniprot/P18485	176649	none given	
1C3M	1-aminocyclopropane-1-carboxylate synthase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate synthase 3. Also: ACS3, ACS-3, S-adenosyl-L-methionine methylthioadenosine-lyase 3.	ECOTOX and http://www.uniprot.org/uniprot/Q42881	176649	none given	
1C4M	1-aminocyclopropane-1-carboxylate synthase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate synthase 4. Also: ACS4, ACS-4, S-adenosyl-L-methionine methylthioadenosine-lyase 4.	ECOTOX and http://www.uniprot.org/uniprot/Q43309	176649	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
1C5M	1-aminocyclopropane-1-carboxylate synthase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-aminocyclopropane-1-carboxylate synthase 5. Also: ACS5, ACS-5, S-adenosyl-L-methionine methylthioadenosine-lyase 5, Ethylene-overproduction protein 2.	ECOTOX and http://www.uniprot.org/uniprot/Q37001	176649	none given	
TP5M	1-Cys thioredoxin peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 1-Cys thioredoxin peroxidase. Also: tpx5,acctpx5.	ECOTOX and http://www.uniprot.org/uniprot/W8Q918	170902		
20BM	20 beta-hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 20 beta-hydroxysteroid dehydrogenase	ECOTOX			
SA5M	20S proteasome alpha5 subunit, partial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 20S proteasome alpha5 subunit, partial. Also: 20S Proteasome a5.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/51968292	166650	BAD42871	GenBank
28RM	28S ribosomal RNA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 28S ribosomal RNA. Also: 28S rRNA.	ECOTOX			
HM2M	2-domain Hemoglobin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-domain hemoglobin. Also: dhb2, dmag-Hb7, dhb3, dmag-Hb5.	ECOTOX, http://www.uniprot.org/uniprot/Q9XTL1 and http://www.uniprot.org/uniprot/Q9XTM2			
2ODM	2-Oxoglutarate dehydrogenase, mitochondrial-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-Oxoglutarate dehydrogenase, mitochondrial-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413768			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
2PSM	2-Pyrone synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 2-Pyrone synthase. Also: G2ps1, 2-PS, CHS2.	ECOTOX and http://www.uniprot.org/uniprot/P48391	171794		
HHMR	3B-Hydroxysteroid dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3 beta-Hydroxysteroid dehydrogenase. Also: hsbd3, 3B-Hydroxysteroid dehydrogenase, 3beta-HSD.	ECOTOX and http://www.uniprot.org/uniprot/Q91381			
3HMM	3-Hydroxy-3-methylglutaryl coenzyme A reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-hydroxy-3-methylglutaryl coenzyme A reductase. Also: HMG-CoA reductase.	ECOTOX			
HMAM	3-Hydroxy-3-methylglutaryl-Coenzyme A reductase a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-Hydroxy-3-methylglutaryl-Coenzyme A reductase a. Also: HMGRA.	ECOTOX and http://www.uniprot.org/uniprot/A9JSZ0			
HMBM	3-Hydroxy-3-methylglutaryl-Coenzyme A reductase b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-hydroxy-3-methylglutaryl-Coenzyme A reductase b. Also: HMGRB.	ECOTOX and http://www.uniprot.org/uniprot/Q58ER2			
3KTM	3-ketoacyl-CoA thiolase 2, peroxisomal mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 3-ketoacyl-CoA thiolase 2, peroxisomal. Also: PED1, KAT2, Acetyl-CoA acyltransferase 2, Beta-ketothiolase 2, Peroxisomal 3-oxoacyl-CoA thiolase 2, Peroxisome defective protein 1.	ECOTOX and http://www.uniprot.org/uniprot/Q56WD9	176597	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
L49M	39S ribosomal protein L49 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 39S ribosomal protein L49. Also: MRPL49, MRP-L49, L49MT, 39S ribosomal protein L49, mitochondrial.	ECOTOX and https://www.uniprot.org/uniprot/Q9CQ40	178199	none given	
4AAM	4-aminobutyrate aminotransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 4-aminobutyrate aminotransferase. Also: abat.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=378968	179291	none given	
R18M	40S ribosomal protein S18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S18. Also: rps18.	ECOTOX and http://www.uniprot.org/uniprot/P41094			
RP3M	40S ribosomal protein S3a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S3a. Also: RpS3.	ECOTOX and http://www.uniprot.org/uniprot/B2ZSF2			
RP6M	40S ribosomal protein S6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein S6. Also: RpS6.	ECOTOX and http://www.uniprot.org/uniprot/I0CC08			
RPSM	40S ribosomal protein SA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 40S ribosomal protein SA. Also: rpsa	ECOTOX and http://www.uniprot.org/uniprot/I3JN34	174559	I3JN34	GenBank
5RMR	5alpha-reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5alpha-reductase.	ECOTOX			
5R2M	5alpha-reductase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5alpha-reductase 2.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
5ASM	5-Aminolevulinate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-Aminolevulinate synthase. Also: 5-aminolevulinic acid synthase, ALAS, ALAS1, ALAS-H, Delta-ALA synthetase, Delta-aminolevulinate synthase, 5-aminolevulinate synthase nonspecific mitochondrial, 5-aminolevulinic acid synthase 1, Delta-ALA synthase 1, Delta-aminolevulinate synthase 1, EC 2.3.1.37.	ECOTOX, http://enzyme.expasy.org/EC/2.3.1.37 and http://www.uniprot.org/uniprot/P13195			
5HAM	5-Hydroxytryptamine receptor 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-hydroxytryptamine receptor 1A. Also: Serotonin receptor 1A, 5-HT1A.	ECOTOX and http://www.uniprot.org/uniprot/Q64264			
5HTM	5-Hydroxytryptamine receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5-Hydroxytryptamine receptor. Also Serotonin receptor, 5-HT receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q25414			
5NTM	5'-Nucleotidase, ecto (CD73) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 5'-nucleotidase, ecto (CD73). Also: 5'-nucleotidase precursor.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/393906	166599	BC055243.1	GenBank
R13M	60S ribosomal protein L13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L13. Also: rpL13.	ECOTOX and http://www.uniprot.org/uniprot/A2IA72			
R32M	60S ribosomal protein L32 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L32. Also: rpl32, Ribosomal protein L32.	ECOTOX, http://www.ncbi.nlm.nih.gov/ncbi/NM_001200127 and http://www.uniprot.org/uniprot/Q90YT6	169101	NM_001200127	NCBI/UNIPROT

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RL5M	60S ribosomal protein I5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein I5. Also: rpl5, RL5.	ECOTOX and http://www.uniprot.org/uniprot/E3TG98	169101	GU589384	NCBI/UNIPROT
RP7M	60S ribosomal protein L7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 60S ribosomal protein L7.	ECOTOX			
6PGM	6-Phosphogluconate dehydrogenase, decarboxylating mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 6-phosphogluconate dehydrogenase, decarboxylating. Also: 6PGD, 6-PGD, Phosphogluconate dehydrogenase (NADP(+) -dependent, decarboxylating), 6-phosphogluconic carboxylase, 6-phosphogluconic dehydrogenase, Phosphogluconic acid dehydrogenase, EC 1.1.1.44.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.44 and http://www.uniprot.org/uniprot/O60037			
72CM	72 kDa type IV collagenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 72 kDa type IV collagenase. Also: MMP-2, MMP 2, 72 kDa gelatinase, Gelatinase A, Matrix metalloproteinase-2, EC 3.4.24.24.	ECOTOX and http://www.uniprot.org/uniprot/P33434			
MCIM	76 kDa mitochondrial complex I subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 76 kDa mitochondrial complex I subunit. Also: NADH-ubiquinone oxidoreductase 75 kDa subunit, mitochondrial.	ECOTOX and http://www.uniprot.org/uniprot/Q8W317	176653	AK071307	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
7DRM	7-Dehydrocholesterol reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 7-dehydrocholesterol reductase. Also: dhcr7, 7-DHC reductase, Sterol Delta(7)-reductase, 7-dehydrocholesterol dehydrogenase/cholesterol oxidase, Delta(7)-sterol reductase, EC 1.3.1.21.	ECOTOX, http://enzyme.expasy.org/EC/1.3.1.21 and http://www.uniprot.org/uniprot/Q7ZXH1			
OG1R	8-oxoguanine DNA glycosylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 8-oxoguanine DNA glycosylase. Also: OGG1, HMMH, MUTM, OGH1	ECOTOX, http://www.uniprot.org/uniprot/H2CP63 and https://www.ncbi.nlm.nih.gov/gene/4968	174446		
9EDM	9-cis-epoxycarotenoid dioxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to 9-cis-epoxycarotenoid dioxygenase. Also: NCED.	ECOTOX and http://www.uniprot.org/uniprot/C3VEQ3	176551	none given	
ABMM	ABC transporter ATP-binding protein McyH mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter ATP-binding protein McyH. Also: mcyH.	ECOTOX and http://www.uniprot.org/uniprot/L8NNW2			
AB1M	ABC transporter B family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 1. Also: ABCB1, Multidrug resistance protein 1, P-glycoprotein 1, ABC transporter ABCB.1, AtABCB1, MDR1, PGP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZR72			
AB2M	ABC transporter B family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 2. Also: ABCB2, Multidrug resistance protein 2, P-glycoprotein 2, ABC transporter ABCB.2, AtABCB2, MDR2, PGP2.	ECOTOX and http://www.uniprot.org/uniprot/Q8LPK2			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AB3M	ABC transporter B family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 3. Also: ABCB3, Putative multidrug resistance protein 3, P-glycoprotein 3, ABC transporter ABCB.3, AtABCB3, MDR3, PGP3.	ECOTOX and http://www.uniprot.org/uniprot/Q9SYI2			
AB4M	ABC transporter B family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 4. Also: ABCB4, Multidrug resistance protein 4, P-glycoprotein 4, ABC transporter ABCB.4, AtABCB4, MDR4, PGP4.	ECOTOX and http://www.uniprot.org/uniprot/O80725			
AB5M	ABC transporter B family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 5. Also: ABCB5, ABC transporter ABCB.5, AtABCB5, P-glycoprotein 5, Putative multidrug resistance protein 5, MDR5, PGP5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SYI3			
AB6M	ABC transporter B family member 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 6. Also: ABCB6, Multidrug resistance protein 6, P-glycoprotein 6, ABC transporter ABCB.6, AtABCB6, MDR6, PGP6.	ECOTOX and http://www.uniprot.org/uniprot/Q8LPT1			
AB7M	ABC transporter B family member 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter B family member 7. Also: ABCB7, Multidrug resistance protein 7, P-glycoprotein 7, ABC transporter ABCB.7, AtABCB7, MDR7, PGP7.	ECOTOX and http://www.uniprot.org/uniprot/Q9HF1			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TC1M	ABC transporter C family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 1. Also: ABCC1, ABC transporter ABCC.1, AtABCC1, ATP-energized glutathione S-conjugate pump 1, Glutathione S-conjugate-transporting ATPase 1, Multidrug resistance-associated protein 1, EST1, MRP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9C8G9			
TC2M	ABC transporter C family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 2. Also: ABCC2, ABC transporter ABCC.2, AtABCC2, ATP-energized glutathione S-conjugate pump 2, Glutathione S-conjugate-transporting ATPase 2, Multidrug resistance-associated protein 2, MRP2.	ECOTOX and http://www.uniprot.org/uniprot/Q42093			
TC3M	ABC transporter C family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 3. Also: ABCC3, ABC transporter ABCC.3, AtABCC3, ATP-energized glutathione S-conjugate pump 3, Glutathione S-conjugate-transporting ATPase 3, Multidrug resistance-associated protein 3, MRP3.	ECOTOX and http://www.uniprot.org/uniprot/Q9LK64			
TC4M	ABC transporter C family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 4. Also: ABCC4, ABC transporter ABCC.4, AtABCC4, ATP-energized glutathione S-conjugate pump 4, Glutathione S-conjugate-transporting ATPase 4, Multidrug resistance-associated protein 4, EST4, MRP4.	ECOTOX and http://www.uniprot.org/uniprot/Q7DM58			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TC5M	ABC transporter C family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter C family member 5. Also: ABCC5, ABC transporter ABCC.5, AtABCC5, ATP-energized glutathione S-conjugate pump 5, Glutathione S-conjugate-transporting ATPase 5, Multidrug resistance-associated protein 5, MRP5.	ECOTOX and http://www.uniprot.org/uniprot/Q7GB25			
AF1M	ABC transporter F family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter F family member 1. Also: ABCF1, ABC transporter ABCF.1, AtABCF1, GCN20-type ATP-binding cassette protein GCN1, GCN1.	ECOTOX and http://www.uniprot.org/uniprot/Q9FJH6			
AG1M	ABC transporter G family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 1. Also: ABCG1, ABC transporter ABCG.1, AtABCG1, White-brown complex homolog protein 1, AtWBC1, WBC1.	ECOTOX and http://www.uniprot.org/uniprot/O80946			
G10M	ABC transporter G family member 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 10. Also: ABCG10, ABC transporter ABCG.10, AtABCG10, Probable white-brown complex homolog protein 10, AtWBC10, WBC10.	ECOTOX and http://www.uniprot.org/uniprot/Q9MAH4			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
G11M	ABC transporter G family member 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 11. Also: ABCG11, ABC transporter ABCG.11, AtABCG11, Protein Cuticular Defect AND Organ Fusion 1, Protein Desperado, Protein Permeable Leaves 1, White-brown complex homolog protein 11, AtWBC11, COF1, DSO, PEL1, WBC11.	ECOTOX and http://www.uniprot.org/uniprot/Q8RXN0			
G12M	ABC transporter G family member 12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 12. Also: ABCG12, ABC transporter ABCG.12, AtABCG12, Protein Eceriferum 5, White-brown complex homolog protein 12, AtWBC12, CER5, D3, WBC12.	ECOTOX and http://www.uniprot.org/uniprot/Q9C8K2			
G13M	ABC transporter G family member 13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 13. Also: ABCG13, ABC transporter ABCG.13, AtABCG13, White-brown complex homolog protein 13, AtWBC13, WBC13,	ECOTOX and http://www.uniprot.org/uniprot/Q9C8J8			
AG2M	ABC transporter G family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 2. Also: ABCG2, ABC transporter ABCG.2, AtABCG2, White-brown complex homolog protein 2, AtWBC2, WBC2.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZUT0			
AG3M	ABC transporter G family member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 3. Also: ABCG3, ABC transporter ABCG.3, AtABCG3, White-brown complex homolog protein 3, AtWBC3, WBC3.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZUU9			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AG4M	ABC transporter G family member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 4. Also: ABCG4, ABC transporter ABCG.4, AtABCG4, White-brown complex homolog protein 4, AtWBC4, WBC4.	ECOTOX and http://www.uniprot.org/uniprot/Q9SW08			
AG5M	ABC transporter G family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 5. Also: ABCG5, ABC transporter ABCG.5, AtABCG5, White-brown complex homolog protein 5, AtWBC5, WBC5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SIT6			
AG6M	ABC transporter G family member 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 6. Also: ABCG6, ABC transporter ABCG.6, AtABCG6, White-brown complex homolog protein 6, AtWBC6, WBC6.	ECOTOX and http://www.uniprot.org/uniprot/Q9FNB5			
AG7M	ABC transporter G family member 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 7. Also: ABCG7, ABC transporter ABCG.7, AtABCG7, White-brown complex homolog protein 7, AtWBC7, WBC7.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZU35			
AG8M	ABC transporter G family member 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 8. Also: ABCG8, ABC transporter ABCG.8, AtABCG8, Probable white-brown complex homolog protein 8, AtWBC8, WBC8.	ECOTOX and http://www.uniprot.org/uniprot/Q9FLX5			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AG9M	ABC transporter G family member 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter G family member 9. Also: ABCG9, ABC transporter ABCG.9, AtABCG9, Probable white-brown complex homolog protein 9, AtWBC9, WBC9.	ECOTOX and http://www.uniprot.org/uniprot/Q9SZR9			
ABTM	ABC transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABC transporter. Also: abcc1/3.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/EFX72783	172260	EFX72783	GenBank
ACCM	ABCB/ABCC transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ABCB/ABCC transporter activity.	ECOTOX	173580		
ACRD	Abnormal chromosomal distribution	Abnormal chromosomal distribution. Aneuploidy is the chromosomal constitution of cells which deviate from the normal by the addition or subtraction of chromosomes, chromosome pairs, or chromosome fragments.	http://www.ncbi.nlm.nih.gov			
AC4M	Abscisic acid 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to abscisic acid 4 . Also: ABA4, abscisic acid-deficient 4.	ECOTOX and http://www.uniprot.org/uniprot/A0A1P8AQ81	176551	none given	
ACLM	Acetoacetyl-CoA synthetase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetoacetyl-CoA synthetase-like.	ECOTOX and http://www.uniprot.org/uniprot/J3S8F5			
ACHR	Acetylcholinesterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ACHE (acetylcholinesterase). Also: Ace, ACE1, ACHE1, ACHE2, Choline esterase I, Cholinesterase, true cholinesterase, EC 3.1.1.7.	ECOTOX, http://enzyme.expasy.org/EC/3.1.1.7 and http://www.uniprot.org/uniprot/Q869C3			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AACM	Acetyl-CoA acetyltransferase, cytosolic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA acetyltransferase, cytosolic. Also: Cytosolic acetoacetyl-CoA thiolase, Acetyl-CoA acetyltransferase, ACAT2.	ECOTOX and http://www.uniprot.org/uniprot/Q8CAY6			
P3AR	Acetyl-CoA acyltransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA acyltransferase 1. Also: ACAA1, peroxisomal 3-oxoacyl-coenzyme A thiolase, peroxisomal 3-ketoacyl-CoA thiolase A.	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/24157 and http://www.uniprot.org/uniprot/F1NB64	175187	NM001197288	GenBank
ACCR	Acetyl-CoA carboxylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA carboxylase 1. Also: Acetyl-CoA carboxylase alpha, acaca.	ECOTOX and http://www.uniprot.org/uniprot/Q13085	173197		
ACBR	Acetyl-CoA carboxylase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acetyl-CoA carboxylase 2. Also: Acetyl-CoA carboxylase beta, acacb.	ECOTOX and http://www.uniprot.org/uniprot/Q13085	173197		
A1CM	Actin, alpha, cardiac muscle 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Actin, alpha, cardiac muscle 1a. Also: actc1a, actc1l, actcl, alpha cardiac actin	ECOTOX and http://zfin.org/ZDB-GENE-040520-4	174562	NM_001001409	GenBank
AF4R	Activating transcription factor 4 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activating transcription factor 4 alpha. Also: ATF4.	ECOTOX	170196	XM_004066069.1	Unknown
AF6R	Activating transcription factor 6 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activating transcription factor 6 alpha. Also: atf6a, ATF6.	http://www.ncbi.nlm.nih.gov/genetics/?term=NM_001278901.1 and http://www.uniprot.org/uniprot/G5ELX0	170196	NM_001278901.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ABAM	Activin beta A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin beta A.	ECOTOX			
VBAM	Activin beta A isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin beta A isoform 2. Also: inhbab.	ECOTOX and https://www.uniprot.org/uniprot/Q56E97	119302	AY962560	GenBank
ABBM	Activin beta B subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to activin beta B subunit	ECOTOX			
ARBM	Activin receptor IIB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin receptor IIB.	ECOTOX			
CRTM	Activin receptor type-2A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Activin receptor type-2A. Also: Activin Type II Receptor A, ActRIIA, ACVR2A.	ECOTOX and https://www.uniprot.org/uniprot/P27037	119302	none given	
ACDM	Acyl-CoA dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-CoA dehydrogenase. Also: Acyl-CoA dehydrogenase medium chain, acadm.	ECOTOX and http://www.uniprot.org/uniprot/A2CG95	175649	none given	
AADM	Acyl-CoA Delta(11) desaturase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-CoA Delta(11) desaturase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=100576797			
SBFM	Acyl-CoA synthetase bubblegum family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to acyl-CoA synthetase bubblegum family member 2. Also: ACSBG2, long-chain-fatty-acid--CoA ligase ACSBG2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=NM_001012846	175777	NM_001012846	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SLFM	Acyl-CoA synthetase long chain family member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to acyl-CoA synthetase long chain family member 1. Also: ACSL1, long-chain-fatty-acid--CoA ligase 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=NM_001012578	175777	NM_001012578	GenBank
ASLM	Acyl-CoA synthetase long-chain family member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-CoA synthetase long-chain family member 5. Also: ACSL5, long-chain-fatty-acid--CoA ligase 5.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=ACSL5+AND+gallus%5BOrganism%5D	177255	none given	
LCDM	Acyl-Coenzyme A dehydrogenase, long chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to long chain acyl-CoA dehydrogenase. Also: acadl, lcad.	ECOTOX and http://www.uniprot.org/uniprot/Q6IQN8	113672	BC071366	GenBank
VLCM	Acyl-Coenzyme A dehydrogenase, very long chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Very long-chain acyl-CoA dehydrogenase. Also: vlcad, acadvl.	ECOTOX and http://www.uniprot.org/uniprot/Q7T2C2	113672	NM_212611	GenBank
AAOR	Acyl-coenzyme A oxidase 1 hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Acyl-coenzyme A oxidase 1. Also: Acyl-CoA oxidase, ACOX-1,acox1.	ECOTOX and http://www.uniprot.org/uniprot/D1MER5	176568	none given	
AE1M	Acyl-coenzyme A oxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-coenzyme A oxidase 1. Also: Acyl-CoA oxidase, ACOX-1,acox1.	ECOTOX and http://www.uniprot.org/uniprot/D1MER5			
ACOM	Acyl-coenzyme A oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-coenzyme A oxidase. Also: AOX1, Acyl-CoA oxidase.	ECOTOX and http://www.uniprot.org/uniprot/A9XLN5	152159	EF525541	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AY1M	Acyl-coenzyme A thioesterase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Acyl-coenzyme A thioesterase 1. Also: Acyl-CoA thioesterase 1, CTE-I, Inducible cytosolic acyl-coenzyme A thioester hydrolase, LACH2, ACH2, Long chain acyl-CoA thioester hydrolase, Long chain acyl-CoA hydrolase, Acot1.	ECOTOX and http://www.uniprot.org/uniprot/O88267			
A21M	Adenosine deaminase CECR1-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase CECR1-A. Also: ADA2.1, Cat eye syndrome critical region protein 1 homolog A, cecr1a, cecr1.	ECOTOX and http://www.uniprot.org/uniprot/P58781			
ADAM	Adenosine deaminase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase. Also: Adenosine aminohydrolase, ADA, ADA1, EC 3.5.4.4.	ECOTOX, http://www.uniprot.org/uniprot/Q6DG22 and http://www.uniprot.org/uniprot/P00813			
ADPM	Adenosine deaminase-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine deaminase-like protein. Also: adal.	ECOTOX and http://www.uniprot.org/uniprot/Q4V9P6	166599	NP_001028916	GenBank
ATNR	Adenosine triphosphatase Na/K pump mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenosine triphosphatase Na/K pump. Also: Sodium/potassium-transporting ATPase subunit alpha-1 and ATP1A1.	ECOTOX and http://www.uniprot.org/uniprot/M1QVN2	166306	JX137275	GenBank
AH2M	Adenosylhomocysteinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to adenosylhomocysteinate 2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/106335699	177317	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AC1R	Adenylate cyclase type 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adenylate cyclase type 1. Also: adcy1, ac1.	ECOTOX and http://www.uniprot.org/uniprot/O88444	170801		
ABPM	Adipocyte fatty acid-binding protein 11b hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Adipocyte fatty acid-binding protein. Also: FABP11b, Fatty acid binding protein 11b.	ECOTOX and http://www.uniprot.org/uniprot/Q503X5	176568	none given	
AFBM	Adipocyte fatty acid-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adipocyte fatty acid-binding protein. Also: FABP11b, Fatty acid binding protein 11b.	ECOTOX and http://www.uniprot.org/uniprot/Q503X5			
ARFM	ADP ribosylation factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ADP ribosylation factor.	ECOTOX and http://www.uniprot.org/uniprot/P22274			
B2AM	Adrenoceptor beta 2, surface a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenoceptor beta 2, surface a. Also: adrb2a.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=nm_001102652	170323	NM_001102652	GenBank
B2BM	Adrenoceptor beta 2, surface b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenoceptor beta 2, surface b. Also: zgc:162188, adrb2b, beta-2b-adrenergic receptor.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=NM_001089471	170323	NM_001089471	Genbank
AHRM	Adrenocorticotropic hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Adrenocorticotropic hormone receptor. Also: ACTH receptor, ACTH-R, Adrenocorticotropin receptor, Melanocortin receptor 2, MC2-R, MC2R.	ECOTOX and http://www.uniprot.org/uniprot/P70115			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ASMR	Agrin, SEA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Agrin, SEA.	ECOTOX			
AH1M	Alcohol dehydrogenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alcohol dehydrogenase 1. Also: alcohol dehydrogenase 1C (class I), gamma polypeptide, ADH1C, ADH1, ADH-1, ADH1B, alcohol dehydrogenase 1 beta polypeptide.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=X54612	175777	X54612	RefSeq
ADHR	Alcohol dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alcohol dehydrogenase	ECOTOX			
AD1M	Aldehyde dehydrogenase 1a1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 1a1. (Aldh1a1)	ECOTOX			
ADBM	Aldehyde dehydrogenase 1b1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 1b1. (Aldh1b1)	ECOTOX			
AD2M	Aldehyde dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 2. (Aldh2)	ECOTOX			
A2BM	Aldehyde dehydrogenase 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 2b.	ECOTOX			
AD3M	Aldehyde dehydrogenase 3a1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase 3a1. (Aldh3a1)	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AD5M	Aldehyde dehydrogenase family 5,subfamily A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aldehyde dehydrogenase family 5,subfamily A1 (Aldh5a1).	ECOTOX and http://www.uniprot.org/uniprot/G3V945			
ADHD	Aldehyde dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aldehyde dehydrogenase	ECOTOX			
APSR	Alkaline phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alkaline phosphatase.	ECOTOX and https://www.uniprot.org/uniprot/P83456	177317	none given	
ALFR	Allele frequency	The frequency of any one of a series of two or more different genes that occupy the same position (locus) on a chromosome.	http://cancerweb.ncl.ac.uk/omd/			
A2GM	Alpha 2-HS glycoprotein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha 2-HS glycoprotein. Also: AHSG.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/1390125368/	175777	XM_42276 4.2	RefSeq
AAGR	Alpha globin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Alpha globin. Also: si:ch211-5k11.6, bY187G17.5, zgc:112086, si:xx-187g17.5, si:xx-by187g17.5.	ECOTOX, http://www.ncbi.nlm.nih.gov/genbank/497166 and http://www.uniprot.org/uniprot/Q6ZM13	163503		
AVMR	alpha vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha vitelline envelope protein.	ECOTOX			
AATM	alpha,alpha-Trehalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha,alpha-Trehalase. Also: Trehalase, alpha,alpha-Trehalose glucohydrolase, Trehalase 1, TRE1, AtTRE1, EC 3.2.1.28.	ECOTOX, http://enzyme.expasy.org/EC/3.2.1.28 and http://www.uniprot.org/uniprot/Q9SU50			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
A2MM	alpha-2 Microglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-2 Microglobulin.	ECOTOX			
A2MR	Alpha-2-macroglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Alpha-2-macroglobulin. Also: A2M, alpha2m.	ECOTOX and http://www.uniprot.org/uniprot/P01023	166302		
N67M	alpha-7 Nicotinic acetylcholine receptor subunit mRNA to alpha-6 Nicotinic acetylcholine receptor subunit mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of alpha-7 Nicotinic acetylcholine subunit to alpha-6 Nicotinic acetylcholine subunit.	ECOTOX			
AATR	alpha-Actin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Actin. Also: Actin muscle.	ECOTOX and http://www.uniprot.org/uniprot/P86700			
AMLM	alpha-Amylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Amylase. Also: AMY1.1, 1,4-alpha-D-glucan glucanohydrolase, Alpha-amylase isozyme 1B, AMY1A, EC 3.2.1.1.	ECOTOX and http://www.uniprot.org/uniprot/P17654			
AEDM	alpha-Enolase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-Enolase. Also: Eno1, Eno-1, Endolase 1, 2-phospho-D-glycerate hydrolyase, Non-neural enolase, NNE, phosphopyruvate hydratase.	ECOTOX and http://www.uniprot.org/uniprot/P17182	166650	P17182	GenBank
ATRN	Alpha-induced tumor necrosis factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to alpha-induced tumor necrosis factor	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ATPR	Amino acid-polyamine transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Amino acid-polyamine transporter.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest /CO729459	171021	CO729459	GenBank
ATPM	Ammonium transport protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transport protein. Also: amtP.	ECOTOX and http://www.uniprot.org/uniprot/B0JT37			
AMTM	Ammonium transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter. Also: amt.	ECOTOX and http://www.uniprot.org/uniprot/B0JQV5			
RHAM	Ammonium transporter Rh type A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type A. Also: Rhag, Erythrocyte membrane glycoprotein Rh50, Rhesus blood group family type A glycoprotein.	ECOTOX and http://www.uniprot.org/uniprot/Q7TNK7			
RHBM	Ammonium transporter Rh type B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type B. Also: Rhbg, Rhesus blood group family type B glycoprotein.	ECOTOX and http://www.uniprot.org/uniprot/Q8BUX5			
RC1M	Ammonium transporter Rh type C 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type C 1. Also: Rhcg1, Rhesus blood group family type C glycoprotein 1, FRhcg1.	ECOTOX and http://www.uniprot.org/uniprot/Q18PF5			
RC2M	Ammonium transporter Rh type C 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ammonium transporter Rh type C 2. Also: Rhcg2, FRhcg2, Rhesus blood group family type C glycoprotein 2.	ECOTOX and http://www.uniprot.org/uniprot/Q7T3R4			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
APHM	Amphiregulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to amphiregulin. Also: AREG, AREGB, Schwannoma-derived growth factor, amphiregulin B.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=NM_001031537	175777	NM_001031537	GenBank
AA2M	Amylase alpha 2A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to amylase alpha 2A. Also: AMY2A, alpha amylase 2a, alpha-amylase 2a, and amylase alpha 2a (pancreatic).	ECOTOX and http://zfin.org/ZDB-GENE-040426-2393	175217	none given	
AP2M	Amyloid beta (A4) precursor-like protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Amyloid beta (A4) precursor-like protein 2. Also: aplp2, si:dkey-11k4.3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/796801	170801		
ARAM	Androgen receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor alpha, ARalpha.	ECOTOX			
AREM	Androgen receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor beta.	ECOTOX			
ARMR	Androgen receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to androgen receptor.	ECOTOX			
ANTM	Annetocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annetocin.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/GU177859	176302	GU177859	GenBank
A10M	Annexin A10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A10. Also: anxa10, annexin a10, annexin max2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=Y11253	177316	Y11253	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
A11M	Annexin A11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A11. Also: Annexin XI, 56 kDa autoantigen, Annexin-11, Calcyclin-associated annexin 50.	ECOTOX and http://www.uniprot.org/uniprot/P50995			
AX1M	Annexin A1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A1a.	ECOTOX			
A1BM	Annexin A1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A1b. Also: anxa1b.	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/clust.cgi?ORG=Dr&CID=159442			
AX3M	Annexin A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin A3. Also: Annexin A3a, anxa3a, anxa3.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=anxa3a	177606	none given	
AX4M	Annexin IV mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Annexin IV. Also: Annexin A4, Anxa4, Anx4, Xanx-4.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/11746	110754		
AN3M	Anoctamin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Anoctamin 3. Also: ano3, tmem16c.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=553392	170801		
RG1M	Anterior gradient 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to anterior gradient 1. Also: agr1, ag1, fl24a12, and dag1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=agr1+AND+danio%5BOrganism%5D	177606	none given	
RG2M	Anterior gradient 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to anterior gradient 2. Also: agr2, anterior gradient protein 2 homolog, anterior gradient homolog 2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=agr2+AND+danio%5BOrganism%5D	177606	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
APMR	Antimicrobial peptides mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Antimicrobial peptides.	ECOTOX			
AMHR	Anti-mullerian hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Anti-mullerian hormone. Also: amh, mullerian inhibiting substance, mis, mullerian inhibiting factor, mif.	ECOTOX, http://www.uniprot.org/uniprot/Q6B6Q2 and http://medical-dictionary.thefreedictionary.com/Mullerian+inhibiting+factor			
ACSM	AP complex subunit sigma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to AP complex subunit sigma mRNA. Also: ap1s1, adaptor related protein complex 1 subunit sigma 1.	ECOTOX, https://www.uniprot.org/uniprot/A0A2R8Q9P3 and https://www.uniprot.org/uniprot/A0A2R8Q9P3	178562	NM_200309.2	GenBank
A14M	Apidaecins type 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apidaecins type 14. Also: APID14.	ECOTOX and http://www.uniprot.org/uniprot/Q06601			
14AM	Apolipoprotein 14 kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein 14 kDa. Also: apo14, apo-14 kDa.	ECOTOX and http://www.uniprot.org/uniprot/B3VTP7			
AA1M	Apolipoprotein A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein A1. Also: ApoA1, ApoA-I, apo1a, apo1, cb49, apo1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/30355)			
AA4M	Apolipoprotein A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein A4 (Apolipoprotein A-IV, apoA-IV, apoAIV, or apoA4).	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
APAM	Apolipoprotein A-IVb.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein A-IVb.1. Also: apolipoprotein A-IV b, tandem duplicate 1, Apo A-IV, apo4b.1.	ECOTOX and http://zfin.org/ZD-B-GENE-030131-1263	176978	NM_001079861	GenBank
AABM	Apolipoprotein B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein B (ApoB). Also: Apolipoprotein B-100.	ECOTOX			
APBM	Apolipoprotein Bb.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein Bb.1. Also: apolipoprotein Bb, tandem duplicate 1, apobb.1.	ECOTOX and http://www.uniprot.org/uniprot/Q5TZ29	176978	NM_001030062	GenBank
AC1M	Apolipoprotein C1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein C1 (Apolipoprotein C-I, ApoC1 or ApoC-I).	ECOTOX			
AC2M	Apolipoprotein C2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein C2 (Apolipoprotein C-II, ApoC2 or ApoC-II).	ECOTOX			
AAEM	Apolipoprotein E mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein E (ApoE).	ECOTOX			
APEM	Apolipoprotein Ea mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein Ea. Also: apoea, Zgc:110064.	ECOTOX and http://www.uniprot.org/uniprot/Q503V2	176978	NM_001020565	GenBank
PTEM	Apolipoprotein Eb	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to apolipoprotein Eb. Also: apoeb, cb82, zeh1311, ApoE-2, apo-eb.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/30314	177606	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AALM	Apolipoprotein L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein L (ApoL).	ECOTOX			
APMM	Apolipoprotein M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein M (ApoM).	ECOTOX			
AAOM	Apolipoprotein O mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apolipoprotein O (ApoO).	ECOTOX			
BL2M	Apoptosis regulator Bcl-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to apoptosis regulator Bcl-2. Also: bcl2.	ECOTOX and https://www.uniprot.org/uniprot/P10417	177130	none given	
ARXM	Apoptosis regulator Bcl-X mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis regulator Bcl-X. Also: BCLX.	ECOTOX and http://www.uniprot.org/uniprot/B5XAY3	168528	NM_001141086	GenBank
APOP	Apoptosis, Programmed Cell Death, DNA Fragmentation	A genetically determined process of cell self-destruction that is marked by the fragmentation of nuclear DNA, is activated either by the presence of a stimulus or by the removal of a stimulus or suppressing agent, is a normal physiological process eliminating DNA-damaged, superfluous, or unwanted cells (as immune cells targeted against the self in the development of self-tolerance or larval cells in amphibians undergoing metamorphosis), and when halted (as by genetic mutation) may result in uncontrolled cell growth and tumor formation—called also programmed cell death	http://www.merriam-webster.com/medical/apoptosis			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AI3M	Apoptosis-inducing factor 3-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis-inducing factor 3-like protein. Also: accaif3, aif3, aifm3.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF745895.1	170896		
AIFM	Apoptosis-inducing factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptosis-inducing factor. Also: AIF.	ECOTOX			
APFM	Apoptotic protease-activating factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apoptotic protease-activating factor 1 (Apaf1).	ECOTOX and http://www.uniprot.org/uniprot/Q9I9H8			
AIIM	Apovitellenin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Apovitellenin 1. Also: Apolipoprotein II, APO-II, APOVLDLII, APO-VLDL-II , apovitellenin-1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=Apoll	177255	none given	
AQPR	Aquaporin-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aquaporin-9. Also: aqp9, aqp-9, Aquaglyceroporin-9.	ECOTOX, http://www.uniprot.org/uniprot/P56627 and https://www.ncbi.nlm.nih.gov/gene/65054	173808		
PRCM	Anticoagulant protein C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to anticoagulant protein C. Also: PROC, protein C, inactivator of coagulation factors Va and VIIIa, vitamin K-dependent protein C.	ECOTOX, https://www.uniprot.org/uniprot/Q804X5 , and https://www.ncbi.nlm.nih.gov/gene/?term=NM_20441	177175	NM_20441	GenBank
AVTM	Arginine vasotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arginine vasotocin. Also: AVT.	ECOTOX			
AAMR	Aromatase A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aromatase A	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ABMR	Aromatase B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aromatase B.	ECOTOX			
ALDM	Aromatic-L-amino-acid decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aromatic-L-amino-acid decarboxylase. Also: AADC, DDC, Ddc, 5-hydroxytryptophan decarboxylase, Aromatic amino acid decarboxylase, DOPA decarboxylase, Hydroxytryptophan decarboxylase, L-DOPA decarboxylase, Tryptophan decarboxylase, EC 4.1.1.28.	ECOTOX, http://www.uniprot.org/uniprot/P14173 and http://enzyme.expasy.org/EC/4.1.1.28			
ARHM	Arrestin homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arrestin homolog.	ECOTOX and http://www.uniprot.org/uniprot/P32122	168274	P32122	UniProt
ARCM	Arrestin-C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Arrestin-C. Also: ARR3, Arrestin 3 retinal, Cone arrestin, Retinal cone arrestin-3.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQP6			
ACPM	Arthrodial cuticle protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to arthrodial cuticle protein.	ECOTOX	177317	none given	
AHYM	Aryl hydrocarbon receptor 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor 1a. Also: ahr1a, ahr1, ahra	ECOTOX and https://www.ncbi.nlm.nih.gov/geo/246224	174547		
AR1R	Aryl hydrocarbon receptor 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor 1b. Also: ahr1b.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/NM_001024816 and http://www.uniprot.org/uniprot/Q4U3K9	170323	NM_001024816	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AR2M	Aryl hydrocarbon receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor 2. Also: AhR2.	ECOTOX and http://www.uniprot.org/uniprot/E4W694			
ARIR	Aryl hydrocarbon receptor interacting protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor interacting protein. Also: aip, aryl hydrocarbon receptor interacting protein.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_214712 and http://www.uniprot.org/uniprot/Q90ZC5	170323	NM_214712	GenBank
AR2R	Aryl hydrocarbon receptor nuclear translocator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator 2. Also: arnt2, arnt protein 2, zfarnt2.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_131674 and http://www.uniprot.org/uniprot/Q9DG12	170323	NM_131674	GenBank
ARNM	Aryl hydrocarbon receptor nuclear translocator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator. Also: ARNT protein, Dioxin receptor nuclear translocator, Hypoxia-inducible factor 1-beta, HIF-1-beta, HIF1-beta, Arnt.	ECOTOX and http://www.uniprot.org/uniprot/P53762			
A1AR	Aryl hydrocarbon receptor nuclear translocator-like 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator-like 1a. Also: arntl1a, bmal1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_131577 and http://www.uniprot.org/uniprot/Q9I879	170323	NM_131577	GenBank
A2BR	Aryl hydrocarbon receptor nuclear translocator-like 1B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl hydrocarbon receptor nuclear translocator-like 1b. Also: arntl1b, BHLH-PAS transcription factor, zfbmal3.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_178300 and http://www.uniprot.org/uniprot/Q8JIG1	170323	NM_178300	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AT2M	Aryl Hydrocarbon receptor nuclear translocator-like protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl Hydrocarbon receptor nuclear translocator-like protein 2. Also: ARNTL2, Brain and muscle ARNT-like 2.	ECOTOX and http://www.uniprot.org/uniprot/Q2VPD4			
AHMR	Aryl Hydrocarbon Receptor protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aryl Hydrocarbon Receptor protein (AhR)	ECOTOX			
AHRR	aryl hydrocarbon receptor repressor (AhRR) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor (AhRR)	ECOTOX			
AHAM	Aryl hydrocarbon receptor repressor a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor a (AhRRA).	ECOTOX			
AHBM	Aryl hydrocarbon receptor repressor b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to aryl hydrocarbon receptor repressor b (AhRRB).	ECOTOX			
ASXR	Ascorbate peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ascorbate peroxidase mRNA. Also: APX.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F3			
ASCM	Aspartoacylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Aspartoacylase. Also: Aminoacylase-2.	ECOTOX and http://www.uniprot.org/uniprot/A8KB34			
ABCR	ATP binding cassette subfamily C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the ATP binding cassette subfamily C gene family. Also: ABCC.	ECOTOX and http://www.gene-names.org/cgi-bin/genefamilies/set/807	172259		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ASSM	ATP synthase CF1 alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase CF1 alpha subunit. Also: atpA	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/4524631	174382		
ASFM	ATP synthase F1 subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase F1 subunit alpha. Also: atp5fa1.	ECOTOX and http://zfin.org/ZDB-GENE-060201-1	156137	NM_001077355	GenBank
YF1M	ATP synthase F1 subunit gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase F1 subunit gamma. Also: atp5f1c, atp5c1, ATP synthase subunit gamma, mitochondrial.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank?term=(%2315)%20AND%20dianio%5BOrganism%5D	177606	none given	
APSM	ATP synthase peripheral stalk-membrane subunit b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase peripheral stalk-membrane subunit b. Also: atp5pb.	ECOTOX and http://zfin.org/ZDB-GENE-041010-33	156137	NM_001005960	GenBank
ASAM	ATP synthase subunit a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase subunit a. Also: ATP synthase F0 subunit 6, F-ATPase protein 6, mt-atp6, atp6, atpase6, mtatp6.	ECOTOX and http://www.uniprot.org/uniprot/Q9MIY5			
ASBM	ATP synthase subunit beta, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP synthase subunit beta, mitochondrial. Also: ATPsyn-beta, ATP5B, ATP2.	ECOTOX and http://www.uniprot.org/uniprot/Q05825	166650	Q05825	GenBank
ANKA	ATPase Na+/K+ alpha 1a.4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATPase Na+/K+ alpha 1a.4.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
A2AM	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATPase, Ca++ transporting, cardiac muscle, slow twitch 2a. Also: atp2a2a, atp2a2, serca2	ECOTOX and http://zfin.org/ZDB-GENE-040426-702	174562	NM_131421	
2ABM	ATPase, Ca++ transporting, cardiac muscle, slow twitch 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATPase, Ca++ transporting, cardiac muscle, slow twitch 2b. Also: atp2a2b, fb51e04, fb80c02	ECOTOX and http://zfin.org/ZDB-GENE-030131-867	174562	NM_001030277	
B11M	ATP-binding cassette sub-family B member 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette sub-family B member 11. Also: ABCB11.	ECOTOX and https://www.uniprot.org/uniprot/E5FG33	177087	HM467813	GenBank
ABCM	ATP-binding cassette sub-family F member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette sub-family F member 2. Also: Iron-inhibited ABC transporter 2, ABCF2.	ECOTOX and http://www.genecards.org/cgi-bin/carddisp.pl?gene=ABCF2&search=ABCF2			
ACBM	ATP-binding cassette transporter subfamily B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette transporter subfamily B. Also: abcb.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/NM_001257054.1			
ALDR	ATP-binding cassette, sub-family D, member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ATP-binding cassette, sub-family D, member 2. Also: abcd2, ald1, ald1l.	ECOTOX, http://zfin.org/ZDB-GENE-050517-28 and http://www.ncbi.nlm.nih.gov/genbank/26874	170801		
CRNR	Atrial natriuretic peptide-converting enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Atrial natriuretic peptide-converting enzyme. Also: corin.	ECOTOX and http://www.uniprot.org/uniprot/Q80YN4	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AX2M	Axis inhibition protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to axis inhibition protein 2 mRNA. Also: axin-2, axn2.	ECOTOX and https://www.uniprot.org/uniprot/P57095	178030	none given	
APHY	Autophagy	The segregation and degradation of damaged or unwanted cytoplasmic constituents by autophagic vacuoles (cytolyosomes) composed of lysosomes containing cellular components in the process of digestion. Autophagic cell death (also known as Type II programmed cell death to distinguish it from apoptosis or Type I programmed cell death) has been described as a distinct form of cell death that differs from other death mechanisms such as apoptosis and necrosis.	http://www.online-medical-dictionary.org/definitions-a/autophagy.html and http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2601595/	170832		
AIPM	Auxin-induced protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Auxin-induced protein. Also: auxin-induced protein AUX22-like, Aux/IAA protein, IAA1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=CslAA1	176650	none given	
BA1M	B(0, +)-type amino acid transporter 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to B(0, +)-type amino acid transporter 1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=409932			
B22M	Balbiani repeat gene 2.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Balbiani repeat gene 2.2. Also: CrBR2.2.	ECOTOX			
BLZM	Basic leucine zipper ATF-like transcription factor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to basic leucine zipper ATF-like transcription factor 3. Also: BATF3, Basic leucine zipper transcription factor, ATF-like 3.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=BATF3+AND+gallus%5BOrganism%5D	177255	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BAXR	bax mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-2-associated X protein, or BAX	ECOTOX			
BXBC	bax mRNA to Bcl-2 mRNA ratio	Ratio of bax mRNA to Bcl-2 mRNA	ECOTOX			
LL2M	B-cell lymphoma/leukemia 2-gene mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to B-cell lymphoma/leukemia 2-gene. Also: bcl-2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/12043			
B23M	Bcl-2-binding component 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-2-binding component 3. Also: Bbc3, p53 up-regulated modulator of apoptosis, PUMA.	ECOTOX and http://www.uniprot.org/uniprot/Q99ML1	163146		
BX1M	Bcl-XL-like protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bcl-XL-like protein 1. Also:bcl2l1, bcl2l, Blp1, Bcl2l protein.	ECOTOX and http://www.uniprot.org/uniprot/Q90Z98			
NG2M	BDNF/NT-3 growth factors receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to BDNF/NT-3 growth factors receptor. Also: GP145-TrkB, Neurotrophic tyrosine kinase receptor type 2, TrkB tyrosine kinase, Tropomyosin-related kinase B, NTRK2.	ECOTOX and https://www.uniprot.org/uniprot/Q16620	173779	KP728108	GenBank
BCLM	Beclin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Beclin-1 . Also: BECN-1.	ECOTOX and http://www.uniprot.org/uniprot/Q5ZKS6	173841	NM_001006332.1	GenBank
BVMR	beta vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta vitelline envelope protein.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
B1AM	Beta-1 adrenergic receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Beta-1 adrenergic receptor. Also: adrb1, Adrenoceptor beta 1, Beta-1 adrenoreceptor, Aдрb1r.	ECOTOX and http://www.uniprot.org/uniprot/P18090	168060	NM_001128689	GenBank
B2MM	beta-2 Microglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-2 Microglobulin.	ECOTOX and http://www.uniprot.org/uniprot/Q9DD37			
BADF	beta-Actin cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein beta-actin.	http://cancerweb.ncl.ac.uk/omd/			
ACMR	beta-Actin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Beta-Actin is a muscle protein that is the chief constituent of the Z-band myofilaments of each sarcomere. Also: Actin, cytoplasmic 1, Actb.	ECOTOX and http://www.uniprot.org/uniprot/P60710			
BC1M	Beta-carotene hydroxylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-carotene hydroxylase 1. Also: CRTR-beta 1.	ECOTOX and http://www.uniprot.org/uniprot/O49815	176551	none given	
B2CM	Beta-carotene hydroxylase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-carotene hydroxylase 2. Also: CRTR-beta 2.	ECOTOX and http://www.uniprot.org/uniprot/D5M910	176551	none given	
BDFM	beta-Defensin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-Defensin. Also: b-Defensin.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BGLM	Beta-galactosidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Beta-galactosidase. Also: Lactase, Exo-(1->4)-beta-D-galactanase, beta-Lactosidase, Maxilact, Hydrolact, beta-D-lactosidase, S 2107, Lactozym, Trilactase, beta-D-galactanase, Oryzatym, Sumiklat, EC 3.2.1.23.	ECOTOX, http://www.genome.jp/dbget-bin/www_bget?ec:3.2.1.23 , and http://enzyme.expasy.org/EC/3.2.1.23			
BGDM	beta-Glucuronidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to beta-Glucuronidase. Also: GusB, EC 3.2.1.31.	ECOTOX and http://www.uniprot.org/uniprot/P12265			
BHTR	betaine homocysteine S-methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to betaine homocysteine S-methyltransferase mRNA	ECOTOX			
BIEM	Bifunctional enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bifunctional enzyme. Also: pgl1n.pk003.d11	ECOTOX and https://www.ncbi.nlm.nih.gov/nucest/bg713425	176554	bg713425	GenBank
BGPM	Biogenesis protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Biogenesis protein. Also: sync_1495.	ECOTOX and http://www.uniprot.org/uniprot/Q0IA22	167909		
BM2M	Bone morphogenetic protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bone morphogenetic protein 2. Also: bmp2, bmp-2, Bone morphogenetic protein 2A.	ECOTOX and http://www.uniprot.org/uniprot/P21274			
BM4M	Bone morphogenetic protein 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Bone morphogenetic protein 4. Also: bmp4, bmp-4, Bone morphogenetic protein 2B.	ECOTOX and http://www.uniprot.org/uniprot/P21275			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BMLR	Brain and muscle ARTN-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain and muscle ARTN-like protein. Also: bmal, bmal1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956101	170524	KF956101	GenBank
BNFM	Brain-derived neurotrophic factor mRNA	Small basic protein purified from pig brain, a member of the family of neurotrophic factors that also includes Nerve Growth Factor and neurotrophin 3. In contrast to nerve growth factor, brain-derived neurotrophic factor is predominantly (though not exclusively) localized in the CNS. It supports the survival of primary sensory neurons originating from the neural crest and ectodermal placodes that are not responsive to NGF. In the brain brain-derived neurotrophic factor has a trophic action on retinal, cholinergic, and dopaminergic neurons, and in the peripheral nervous system it acts on both motor and sensory neurons. Messenger RNA	http://cancerweb.ncl.ac.uk/omd/			
BAI2	Brain-specific angiogenesis inhibitor 2 (BAI2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-specific angiogenesis inhibitor 2 (BAI2).	ECOTOX			
BAI3	Brain-specific angiogenesis inhibitor 3 (BAI3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-specific angiogenesis inhibitor 3 (BAI3).	ECOTOX			
BTPM	Brain-type fatty acid binding protein hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Brain-type fatty acid binding protein. Also: FABP7a, Brain-type fatty-acid binding protein, Fatty acid binding protein 7 brain a.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8N9	176568	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BFAM	Brain-type fatty acid binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-type fatty acid binding protein. Also: FABP7a, Brain-type fatty-acid binding protein, Fatty acid binding protein 7 brain a.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8N9			
BTPR	Brain-type fatty acid-binding protein b hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Brain-type fatty acid-binding protein b. Also: FABP7b, Fatty acid binding protein 7 brain b.	ECOTOX and http://www.uniprot.org/uniprot/Q6U1J7	176568	none given	
BFBM	Brain-type fatty acid-binding protein b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Brain-type fatty acid-binding protein b. Also: FABP7b, Fatty acid binding protein 7 brain b.	ECOTOX and http://www.uniprot.org/uniprot/Q6U1J7			
BR8M	Bromodomain containing 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to bromodomain containing 8. Also: brd8.	ECOTOX and http://zfin.org/ZD-B-GENE-030722-10	178023	none given	
CL1R	C-C motif chemokine 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-C motif chemokine 1. Also: ccl1, chemokine (C-C motif) ligand 1.	ECOTOX, https://www.uniprot.org/uniprot/P10146 , and https://www.ncbi.nlm.nih.gov/geo/6346	177130	none given	
C1DR	C1D nuclear receptor corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C1D nuclear receptor corepressor. Also: c1d, zgc:103509, nuclear nucleic acid-binding protein c1d.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/nm_001007059 and http://www.uniprot.org/uniprot/Q5XJ97	170323	NM_001007059	GenBank
CEFM	Ca2+ binding protein (EF-hand domain) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+ binding protein (EF-hand domain)	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CK1M	Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 1 (Camk1g1)	ECOTOX			
CK2M	Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ca2+/Calmodulin-dependent protein kinase 1-gamma splice 2 (Camk1g2)	ECOTOX			
CBP9	CaBP-9K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CaBP-9K. (Calbindin-D9K)	ECOTOX			
C28M	Calbindin-D28K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calbindin-D28K. Also calbindin-28kD.	ECOTOX			
CC2M	Calcium/calmodulin-dependent protein kinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calcium/calmodulin-dependent protein kinase 2. Also:CaMK2.	ECOTOX and http://www.uniprot.org/uniprot/B5AMP2			
CBPM	Calcyclin-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to calcyclin-binding protein. Also: CacyBP.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=GU722329	175432	GU722329	GenBank
CMTR	Calmodulin binding transcription activator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calmodulin binding transcription activator 2. Also: camta2, si:ch1073-98b4.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100307072	170801		
CAMM	Calmodulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calmodulin. Also CaM.	ECOTOX and http://www.uniprot.org/uniprot/B5AS02			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CL1M	Calponin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calponin-1. Also: Calponin smooth muscle, calponin basic smooth muscle, Basic calponin.	ECOTOX, http://www.ncbi.nlm.nih.gov/genbank/101688825 and http://www.uniprot.org/uniprot/P26932	163520		
CLRM	Calreticulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Calreticulin. Also: Calr, CALBP, CRP55, Calcium-binding protein 3, CABP3, Calregulin, Endoplasmic reticulum resident protein 60, ERp60, HACBP.	ECOTOX and http://www.uniprot.org/uniprot/P18418	166557	AJ624756	GenBank
CRBM	cAMP response element binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cAMP response element binding protein. Also: creb.	ECOTOX and http://www.uniprot.org/uniprot/A7LCL2			
CPKM	CAMP-dependent protein kinase A catalytic subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CAMP-dependent protein kinase A catalytic subunit. Also: cPKA.	ECOTOX, http://www.uniprot.org/uniprot/Q9UUS9 and https://www.ncbi.nlm.nih.gov/nucleotide/AJ243654	173773	AJ243654	GenBank
CSPM	cAMP-specific phosphodiesterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cAMP-specific phosphodiesterase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/CO729450	171021	CO729450	GenBank
CCBM	Carbohydrate components binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carbohydrate components binding protein. Also: carbohydrate-responsive element-binding protein-like, chrebp, mlxpl.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001328694.1	176978	NM_001328694.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CH2M	Carbonic anhydrase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carbonic anhydrase 2. Also: CA2, Carbonate dehydratase II, Carbonic anhydrase C, Carbonic anhydrase II.	ECOTOX and http://www.uniprot.org/uniprot/P00918			
CR1R	Carbonyl reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to carbonyl reductase 1. Also: cbr1, hsd20b, carbonyl reductase [NADPH] 1, 20-beta-hydroxysteroid dehydrogenase.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=EU159462	177316	EU159462	GenBank
CI1M	Carboxylesterase clade I, member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carboxylesterase clade I, member 1. Also: CCE-I1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413247			
CPBR	Carboxypeptidase B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carboxypeptidase B1. Also: cpb1, cpb-1, carboxypeptidase b.	ECOTOX, http://www.uniprot.org/uniprot/A0A0K2VI44 and http://zfin.org/ZDB-GENE-030131-1132	173808		
C2PM	Carboxypeptidase B2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to carboxypeptidase B2. Also: CPB2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/418851	177172	none given	
CY2M	Carnitine O-palmitoyltransferase 2, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine O-palmitoyltransferase 2, mitochondrial. Also: Carnitine palmitoyltransferase II, CPT II, cpt2.	ECOTOX and http://www.uniprot.org/uniprot/Q5U3U3			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CPTM	Carnitine O-palmitoyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine O-palmitoyltransferase. Also: Carnitine palmitoyltransferase-1, Carnitine palmitoyl transferase-1, Cpt1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AYL4			
CPTR	Carnitine palmitoyltransferase 1a, liver mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Carnitine palmitoyltransferase 1a, liver. Also: cpt1a, cpt1, cpt1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/12894	171290	GmE10021 5i04260	GenBank
CIMM	Carotenoid isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to carotenoid isomerase. Also: Protein tangerine, Prolycopene isomerase, CrtISO.	ECOTOX and http://www.uniprot.org/uniprot/Q8S4R4	176551	none given	
CN2M	Casein kinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Casein kinase 2.	ECOTOX			
CRPM	Caspase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to caspase 1. Also: CASP1, caspase 1, apoptosis-related cysteine peptidase (interleukin 1, beta, convertase).	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=CASP1+AND+gallus%5BOrganism%5D	177255	none given	
C3BM	Caspase 3B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 3B. Also: casp3b.	ECOTOX and http://www.uniprot.org/uniprot/Q0PKX2			
CP6M	Caspase 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 6.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/kc479074	166007	KC479074	GenBank
CP8M	Caspase 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase 8.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/kc479075	166007	KC479075	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CP3R	Caspase-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase-3 mRNA.	ECOTOX and http://www.uniprot.org/uniprot/Q1KZF6			
CP9M	Caspase-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caspase-9 (Cas9).	ECOTOX and http://www.uniprot.org/uniprot/I3XLC7			
A22M	Cat eye syndrome chromosome region, candidate 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cat eye syndrome chromosome region, candidate 1b. Also: cecr1b, Adenosine deaminase 2.2, ADA2.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/XM_682627.2			
CTLM	Catalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase.	ECOTOX			
CT1M	Catalase-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase-1. Also: CAT1, Catalase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q96528			
CT2M	Catalase-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase-2. Also: ctl-1, cat-2.	ECOTOX and http://www.uniprot.org/uniprot/O61235			
CT3M	Catalase-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Catalase-3. Also: CAT3, Catalase 3.	ECOTOX and http://www.uniprot.org/uniprot/Q42547	174967		
CN1M	Catenin beta 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to catenin beta 1. Also: CTNNB1, CHBCAT, beta catenin, catenin beta-1, catenin (cadherin-associated protein), beta 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/395964	175777	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SN2M	Catenin, beta 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to catenin, beta 2mRNA. Also: ctnnb2, beta-catenin 2, beta catenin 2, ichabod.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/324004	178030	none given	
CTBM	Cathepsin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin B. Also: Cathepsin B1, RSG-2, EC 3.4.22.1.	ECOTOX and http://www.uniprot.org/uniprot/P00787			
CBLM	Cathepsin b-like precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin b-like precursor.	ECOTOX			
CTDM	Cathepsin D mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin D. Also: ctsd.	ECOTOX and http://www.uniprot.org/uniprot/P24268	170513		
CPLM	Cathepsin L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cathepsin L. Also: Cysteine proteinase 1, CathL, EC 3.4.22.15.	ECOTOX and http://www.uniprot.org/uniprot/Q95029			
CT4M	Caudal type homeobox 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Caudal type homeobox 4. Also: cdx4, caudal type homeo box transcription factor 4, cb546.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131109 and http://zfin.org/ZDB-GENE-980526-330	170520	NM_131109	GenBank
CVRM	Cavortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cavortin.	ECOTOX and http://www.uniprot.org/uniprot/Q86FW9			
CHKM	C-C Chemokine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-C Chemokine.	ECOTOX	163146		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CPAM	CCAAT/enhancer binding protein alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein alpha. Also: CCAAT/enhancer binding protein (C/EBP), alpha.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVZ1			
CPBM	CCAAT/enhancer binding protein beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein beta. Also: CCAAT/enhancer binding protein (C/EBP), beta.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZU07			
CPDM	CCAAT/enhancer binding protein delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein delta. Also: CCAAT/enhancer binding protein (C/EBP), delta.	ECOTOX and http://www.uniprot.org/uniprot/Q00322			
CPGM	CCAAT/enhancer binding protein gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAAT/enhancer binding protein gamma. Also: CCAAT/enhancer binding protein (C/EBP), gamma.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVY8			
CEBM	CCAATT/Enhancer binding proteins mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CCAATT/Enhancer binding proteins.	ECOTOX			
CHAM	CD166 antigen homolog A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CD166 antigen homolog A. Also: alcama, activated leukocyte cell adhesion molecule A, DM-GRASP homolog, Neurolin, alciam, cd166.	ECOTOX and https://www.uniprot.org/uniprot/Q90460	179291	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C36M	CD36 molecule mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CD36 molecule. Also: CD36 molecule (thrombospondin receptor), platelet glycoprotein 4, fatty acid translocase.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/417730	177255	none given	
C13M	CED-13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CED-13. Also: ced13.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/191625	178025	none given	
CDLM	Cell death inducing DFFA like effector c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cell death inducing DFFA like effector c. Also: CIDEc, cell death activator CIDE-3, cell death activator CIDE-3-like, fat-specific protein FSP27-like protein.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=LOC100859733+AND+gallus%5BOrganism%5D	17255	none given	
CD1M	Cell differentiation protein RCD1 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cell differentiation protein RCD1 homolog. Also: rcd1, rqcd1.	ECOTOX and http://www.uniprot.org/uniprot/Q6NWL4			
C42M	Cell division control protein 42 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cell division control protein 42 homolog. Also: cdc42.	ECOTOX and http://www.uniprot.org/uniprot/Q05062			
CDPM	Cell division protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cell division protein. Also: ftsH.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/4524632	174382		
CR1M	Cellular retinoic acid binding protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cellular retinoic acid binding protein 1a. Also: crabp1a, crabp1, Cellular retinoic acid-binding protein, Crabp1a protein.	ECOTOX, http://www.uniprot.org/uniprot/Q7T0F4 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_182858	166633	NM_182858	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CR2R	Cellular retinoic acid binding protein 2, a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cellular retinoic acid binding protein 2, a. Also: Cellular retinoic acid binding protein type II, Crabp2a protein, crabp2a, cb432, cb434, crabp2.	ECOTOX, http://www.uniprot.org/uniprot/Q801Y4 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_182859	166633	NM_182859	GenBank
CNTM	Centractin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centractin. Also: ARP1, Actin-like protein, Actin-related protein 1, ACT3, ACT5.	ECOTOX and http://www.uniprot.org/uniprot/P38696			
CE1M	Centrin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centrin-1. Also: Centrin 1, Caltractin isoform 2.	ECOTOX and http://www.uniprot.org/uniprot/Q12798			
CE2M	Centrin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Centrin-2. Also: Centrin 2, Caltractin isoform 1.	ECOTOX and http://www.uniprot.org/uniprot/P41208			
CFSM	c-fos mRNA	Retrovirus-associated DNA sequences (fos) originally isolated from the Finkel-Biskis-Jinkins (FBJ-MSV) and Finkel-Biskis-Reilly (FBR-MSV) murine sarcoma viruses. The proto-oncogene protein c-fos codes for a nuclear protein which is involved in growth-related transcriptional control. The insertion of c-fos into FBJ-MSV or FBR-MSV induces osteogenic sarcomas in mice. The human c-fos gene is located at 14q21-31 on the long arm of chromosome 14.	http://cancerweb.ncl.ac.uk/omd/			
CGCM	CG1399, isoform C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CG1399, isoform C.	ECOTOX and http://www.uniprot.org/uniprot/E1JGZ8			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CGMR	CG30344 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CG30344. Also: CG8054, Dmel\CG30344, Multidrug efflux transporter.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=DetailsSearch&Term=246552			
CG2M	cGMP-dependent protein kinase, isozyme 2 forms cD4/T1/T3A/T3B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cGMP-dependent protein kinase, isozyme 2 forms cD4/T1/T3A/T3B. Also: cGK, Foraging protein, for, DG2, PGK2, Pkg24A.	ECOTOX and http://www.uniprot.org/uniprot/Q03043	169087	FJ816699	GenBank
CCCM	Chain A, 2.0 Å Crystal Structure Of The Cav1.2 Ig Domain-CaCAM COMPLEX mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chain A, 2.0 Å Crystal Structure Of The Cav1.2 Ig Domain-CaCAM COMPLEX.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/83754384	166650	2BE6_A	GenBank
CLSM	Chalcone synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chalcone synthase. Also: Naringenin-chalcone synthase, Protein TRANSPARENT TESTA 4, CHS, TT4, 6'-Deoxychalcone synthase, Flavonone synthase, EC 2.3.1.74.	ECOTOX, http://enzyme.expasy.org/EC/2.3.1.74 and http://www.uniprot.org/uniprot/P13114	171790	At5g13930	GenBank
C34R	Chemokine (C-C motif) ligand 34a, duplicate 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chemokine (C-C motif) ligand 34a, duplicate 4. Also: ccl34a.4, Si:ch211-122I24.4 protein.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=BC162421.1 and http://www.uniprot.org/uniprot/B3DGJ7	170393	BC162421.1	GenBank
CX1M	Chemokine CXCL-C1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chemokine CXCL-C1c. Also: cxcl18b, cxcl-c1c, si:ch73-6k14.1.	ECOTOX and http://www.uniprot.org/uniprot/A9ZPF8	163146		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CP1R	Chemosensory protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chemosensory protein 1. Also: CSP1	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/?term=AK385783 and http://www.uniprot.org/uniprot/Q3LBA0	174580		
CBPR	Chitin binding peritrophin-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chitin binding peritrophin-A. Also: CBP.	ECOTOX and https://www.uniprot.org/uniprot/T1PFD2	177317	none given	
CT5M	Chitinase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chitinase 5. Also: Cht5, Class IV chitinase a, OsChia4a, Pathogenesis related (PR)-3 chitinase 5.	ECOTOX, http://www.uniprot.org/uniprot/Q7Y1Z0 and http://www.ncbi.nlm.nih.gov/gene/?term=551600			
CHSM	Chitinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chitinase.	ECOTOX			
CLBM	chlB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chlB.	ECOTOX			
CABM	Chlorophyll A-B binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chlorophyll A-B binding protein. Also: F7H2.16 protein, Lhcb6 protein, Light harvesting complex photosystem II subunit 6, Putative chlorophyll binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q9LMQ2	171768		
CHLM	Chlorophyll Mutation/Albino Mutants	Mutation: a change in form, quality or some other characteristic; in genetics - a permanent transmissible change in the genetic material.				
HP1M	Chlorophyllase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chlorophyllase 1. Also: chlase1, CLH1.	ECOTOX and http://www.uniprot.org/uniprot/O22527	176551	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HP2M	Chlorophyllase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chlorophyllase 2. Also: chlase2, CLH2.	ECOTOX and http://www.uniprot.org/uniprot/Q9M7I7	176551	none given	
HP3M	Chlorophyllase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chlorophyllase 3. Also: chlase3.	ECOTOX and http://www.uniprot.org/uniprot/A1IGR4	176551	none given	
CCKM	Cholecystokinin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholecystokinin. Also: CCK8.	ECOTOX and http://www.uniprot.org/uniprot/O93464			
C7AM	Cholesterol 7-alpha-monoxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholesterol 7-alpha-monoxygenase. Also: cyp7a1, cypvii, Cholesterol 7-alpha-hydroxylase mRNA, Cytochrome P450 7A1, cytochrome P450 family 7 subfamily A member 1.	ECOTOX, https://www.uniprot.org/uniprot/P18125 and https://www.ncbi.nlm.nih.gov/genie/?term=Cyp7a1	177129	ENSGMO G00000015644	
CETM	Cholesterol ester transfer protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholesterol ester transfer protein. Also: cetp.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=NM_001007360.1	176978	NM_001007360.1	GenBank
CKAR	Choline kinase alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choline kinase alpha. Also: chka.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=nm_001044865	170520	NM_001044865	GenBank
COAM	Choline O-acetyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to choline O-acetyltransferase. Also: CHOACtase, ChAT, Choline acetylase.	ECOTOX and https://www.uniprot.org/uniprot/B2ZGJ1	118453	NM_001130719.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CPCM	Choline-phosphate cytidylyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choline-phosphate cytidylyltransferase. Also: CTP:phosphocholine cytidylyltransferase, Phosphorylcholine transferase, CTP, EC 2.7.7.15.	ECOTOX and http://www.uniprot.org/uniprot/P49587			
CHDF	Choriogenin H cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein Choriogenin H.	ECOTOX			
CHMM	Choriogenin H minor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin H minor. Also: chghm.	ECOTOX and http://www.uniprot.org/uniprot/D5MRY5			
CHMR	Choriogenin H mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin H.	ECOTOX and http://www.uniprot.org/uniprot/A3FK62			
CLDF	Choriogenin L cDNA fragments	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein Choriogenin L.	ECOTOX			
CLMR	Choriogenin L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Choriogenin L. Also: 1-sf, L-SF precursor.	ECOTOX, http://www.uniprot.org/uniprot/Q8JI23 and https://www.ncbi.nlm.nih.gov/genbank/?term=AF500194			
CPMR	Chorion protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chorion protein.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CMTN	Chromatin	The nucleoprotein material of chromosomes. Chromatin is essentially the substance of chromosomes. It is made up of DNA attached to a protein structure, together with chromosomal RNA. Chromatin exists in two states, euchromatin and heterochromatin, with different staining and functional properties.	http://www.medterms.com/script/main/art.asp?articlekey=26409			
CH9R	Chromodomain helicase DNA binding protein 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Chromodomain helicase DNA binding protein 9. Also: chd9, wu:fb08b06, wu:fb34c12.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=572355[uid]	170801		
CABR	Chromosomal aberrations	Modification of the normal chromosome complement due to deletion, duplication, or rearrangement of genetic material.				
BRAK	Chromosomal breaks	Chromosome breakage - A type of chromosomal aberration which may result from spontaneous or induced breakage. Alkylating agents, various types of irradiation and chemical mutagens have been found to cause induced chromosomal breakage. Breakage can induce base pair translocations, deletions, or chromatid breakage.				
CGAP	Chromosomal gap	A localized area of thinning in a chromatid which may simulate a complete break.	Steadman's Medical Dictionary 2006, Lippincott Williams & Wilkins			
POLY	Chromosomal Polyploidy	The state or condition of having more than two complete sets of chromosomes.	Mosby's Medical Dictionary, 8th edition, 2009			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CY1M	Chymotrypsinogen B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chymotrypsinogen B1. Also: ctrb1.	ECOTOX and http://zfin.org/ZD-B-GENE-030131-1171	175217	none given	
CSMR	Citrate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Citrate synthase. Also: Citrate (S)-synthase, (R)-citrate synthase, Citrogenase, EC 2.3.3.1.	ECOTOX, http://www.uniprot.org/uniprot/Q7ZVY5 and http://enzyme.expasy.org/EC/2.3.3.1			
CM2M	C-C motif chemokine 20 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-C motif chemokine 20. Also: CCL20.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KC138559	176956	KC138559	GenBank
JTKM	c-Jun NH(2)-terminal kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to c-Jun NH(2)-terminal kinase. Also: JNK.	ECOTOX			
CLTM	Cla transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cla transcript.	ECOTOX			
MHCM	Classical MHC class I molecule, alpha-chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Classical MHC class I molecule, alpha-chain. Also: Orla-UAA.	ECOTOX and http://www.uniprot.org/uniprot/Q9XR30	173763	NP_001098573.1	GenBank
C1EM	Claudin 10e mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Claudin 10e. Also: cldn10e.	ECOTOX and http://www.uniprot.org/uniprot/Q6E5P5			
C1DM	Claudin 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Claudin 11. Also: Cldn11, Oligodendrocyte transmembrane protein, Oligodendrocyte-specific protein.	ECOTOX and http://www.uniprot.org/uniprot/Q60771	175651	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C30M	Claudin 30 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Claudin 30.	ECOTOX			
CLOM	CLOCK mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CLOCK.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucore/EU867504	170524	EU867504	GenBank
CIPR	CLOCK-interacting pacemaker mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CLOCK-interacting pacemaker. Also: cipc, kiaa1737.	ECOTOX and http://www.uniprot.org/uniprot/Q8R0W1	170801		
C5MR	clone CDA56-A07, 5'end mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to clone CDA56-A07, 5'end. Also: EST CD502323.	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/seq.cgi?ORG=Gac&SID=24327545			
CD3M	Cluster of differentiation 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cluster of differentiation 3.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/KC138558.1/	176956	KC138558	GenBank
CATM	Cocaine and amphetamine regulated transcript protein type I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cocaine and amphetamine regulated transcript protein type I.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVZ2			
CFAM	Cofilin-1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cofilin-1A. Also: cofA, cof1, dcof1.	ECOTOX and http://www.uniprot.org/uniprot/P0DJ26	166650	P0DJ26	GenBank
CCDM	Coiled coil domain containing 106 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Coiled coil domain containing 106 protein. Also: CCDC106	ECOTOX and http://www.uniprot.org/uniprot/H2SP96	174559	H2SP96	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C21M	Collagen alpha-1(II) chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Collagen alpha-1(II) chain. Also: Alpha-1 type II collagen, Collagen type 2 alpha, col2a1.	ECOTOX and http://www.uniprot.org/uniprot/Q91717			
CG3M	Collagenase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Collagenase 3. Also: MMP-13, MMP 13, Matrix metalloproteinase-13, EC3.4.24.-.	ECOTOX and http://www.uniprot.org/uniprot/Q10835			
CSFM	Colony stimulating factor 1, macrophage, mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Colony stimulating factor 1 (macrophage). Also: MCSF, CSF-1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/1435			
GMC2	Colony stimulating factor 2, Granulocyte-macrophage, mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Granulocyte-macrophage Colony stimulating factor 2.	ECOTOX			
GCS3	Colony stimulating factor 3. Granulocyte , mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Granulocyte Colony stimulating factor 3.	ECOTOX			
CC3M	Complement C3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement C3. Also: Complement 3.	ECOTOX and http://www.uniprot.org/uniprot/P98093			
CC3R	Complement component c3a, duplicate 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component c3a, duplicate 2 mRNA. Also: c3a.2, C3B, C3-1, C3-2.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=AF047414 and http://www.uniprot.org/uniprot/O73758	170393	AF047414	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CC7M	Complement component C7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component C7. Also: C7.	ECOTOX and http://www.uniprot.org/uniprot/P10643			
CC8M	Complement component C8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component C8.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KC138554	176956	KC138554	GenBank
CC9M	Complement component C9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement component C9. Also: c9, Complement component 9.	ECOTOX and http://www.uniprot.org/uniprot/P06682			
CFHM	Complement factor H mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement factor H. Also: cfh.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/AJ627206.1	173763	AJ627206.1	GenBank
CFPM	Complement factor properdin-like precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Complement factor properdin-like precursor. Also: si:dkeyp-22b2.3.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/NP_001153598.1	173763	NP_001153598.1	GenBank
CDNA	Complementary DNA (cDNA)	cDNA. DNA that is synthesised from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form.	http://cancerweb.ncl.ac.uk/omd/			
CARM	Constitutive androstane receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Constitutive androstane receptor. Also: CAR	ECOTOX and http://www.uniprot.org/uniprot/A4UVN5	174468		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CUTR	Copper transporter I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Copper transporter I. Also: Copper transporter 1, CTR type copper ion transporter, COPT1, CTR1, Transmembrane copper transporter CTR1, Copper transport protein CTR1, High affinity copper uptake protein 1, SLC31A1, Solute carrier family 31 member 1.	ECOTOX, http://www.uniprot.org/uniprot/P49573 , http://www.uniprot.org/uniprot/Q4U0V9 and http://www.uniprot.org/uniprot/O15431)			
CTAM	Copper-transporting ATPase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Copper-transporting ATPase 1. Also: atp7a, Menkes syndrome.	ECOTOX and http://www.geneCards.org/cgi-bin/carddisp.pl?gene=ATP7A&search=atp7a			
CAPM	Cortactin binding protein-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cortactin binding protein-like protein.	ECOTOX and http://www.uniprot.org/uniprot/Q56UE7	164140	AY577343	GenBank
CRFA	Corticotropin releasing factor mRNA to Acidic ribosomal phosphoprotein P0 mRNA ratio	Ratio of Corticotropin releasing factor mRNA to Acidic ribosomal phosphoprotein P0 mRNA.	ECOTOX			
CRMR	Corticotropin-releasing factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to corticotropin-releasing factor	ECOTOX			
CFBM	Corticotropin-releasing factor-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Corticotropin-releasing factor-binding protein. Also: Corticotropin-releasing hormone-binding protein, CRHBP, CRF-BP, CRF-binding protein, CRH-BP, crhbp.	ECOTOX and http://www.uniprot.org/uniprot/Q91653			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CRHM	Corticotropin releasing hormone b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Corticotropin releasing hormone b. Also: Corticotropin releasing hormone, CRH, CRHB, CRH1B.	ECOTOX, https://www.uniprot.org/uniprot/Q5U3N6 and http://zfin.org/ZDB-GENE-041114-75	176816	NM_001007379	GenBank
CX1R	Cox1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cox1. Also: Prostaglandin G/H synthase 1, Cyclooxygenase-1, Prostaglandin H2 synthase 1, PGH synthase 1, PGHS-1, PHS 1, Prostaglandin-endoperoxide synthase 1, PTGS1.	ECOTOX and http://www.uniprot.org/uniprot/P05979			
CX2R	COX2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to COX2. Also: Prostaglandin G/H synthase 2, Cyclooxygenase-2, COX-2, PHS II, Prostaglandin H2 synthase 2, PGH synthase 2, PGHS-2, Prostaglandin-endoperoxide synthase 2.	ECOTOX and http://www.uniprot.org/uniprot/P35355			
CHBM	CR/20beta-HSD B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CR/20beta-HSD B (Carbonyl reductase/20beta-hydroxysteroid dehydrogenase B).	ECOTOX			
CRKM	Creatine kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Creatine kinase.	ECOTOX			
CY1R	Cryptochrome 1-like 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 1-like 1. Also: cry1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956103	170524	KF956103	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CY2R	Cryptochrome 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 2. Also: cry2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/KF956107	170524	KF956107	GenBank
C2BM	Cryptochrome 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cryptochrome 2b. Also: CRY2b, zcry2b.	ECOTOX and http://www.uniprot.org/uniprot/Q9I914			
CC5M	Cryptochrome 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cryptochrome 5. Also: CRY5, 6-4 Photolyase, z64phr.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_131788.1 and http://zfin.org/actin/marker/view/ZDB-GENE-010426-8			
C1TM	CTRT1 transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CTRT1 transcript.	ECOTOX			
CLLM	C-type Lectin like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to C-type Lectin like (CLECT).	ECOTOX			
CTLR	C-Type Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to c-type lysozyme. Also: clyz, lycs.	ECOTOX http://www.uniprot.org/uniprot/B0LVZ3	172685		
C17R	Cuticular protein 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cuticular protein 17. Also: CPR17.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=724556			
C28R	Cuticular protein 28 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cuticular protein 28. Also: CPR28.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412202			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CPRM	Cuticular protein 65Az mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cuticular protein 65Az mRNA. Also: cpr65az.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/NP_648031.1/	175700	NP_648031.1	GenBank
CNCM	Cyclic nucleotide-gated cation channel mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclic nucleotide-gated cation channel. Also: tax-4, tax4, tax 4, Abnormal chemotaxis protein 4.	ECOTOX and http://www.uniprot.org/uniprot/Q03611	166810		
CBMR	Cyclin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin B	ECOTOX			
CB2M	Cyclin B2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin B2.	ECOTOX			
CD1R	Cyclin D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin D1. Also: ccnd1, cb161, cycd1, etID37810.7, fb52e01, fc45c08, fc83a12, id:ibd1198, wu:fb52e01, wu:fc45c08, wu:fc83a12.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/NM_131025	170323	NM_131025	Genbank
CG2R	Cyclin G2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin G2. Also: ccng2, cb438, zgc:77125, wu:fa08f07, wu:fk28c06, wu:fk91a03.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=Q6NZ31	156369		
CDKM	Cyclin-dependent kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin-dependent kinase 1.	ECOTOX and http://www.uniprot.org/uniprot/E3UP93			
CK5M	Cyclin-dependent kinase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cyclin-dependent kinase 5 (CDK5).	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/NM_131719	175189	NM_131719	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CB1M	Cyclin-dependent kinase B1-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclin-dependent kinase B1-1. Also: Cell division control protein 2 homolog B, CDKB1;1, CDKB1-1, CDC2B.	ECOTOX and http://www.uniprot.org/uniprot/P25859			
COXM	Cyclooxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclooxygenase (COX).	ECOTOX			
CYPM	Cyclophilin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyclophilin. Also: Peptidylprolyl isomerase, Peptidyl-prolyl cis-trans isomerase, Peptidylprolyl cis-trans isomerase, PPIase, Rotamase, Peptidyl-prolyl cis-trans isomerase FKBP4, PPIase FKBP4, 52 kDa FK506-binding protein, 52 kDa FKBP, FKBP-52, 59 kDa immunophilin, p59, FK506-binding protein 4, FKBP-4, FKBP59, HSP-binding immunophilin, HBI, Immunophilin FKBP52, <i>Fkbp52</i> , EC 5.2.1.8.	ECOTOX, http://enzyme.expasy.org/EC/5.2.1.8 and http://www.uniprot.org/uniprot/Q9VC8			
C11A	CYP11A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP11A.	ECOTOX			
11BR	CYP11beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP11beta. Also: CYP11B1.	ECOTOX			
C17M	CYP17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP17.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
17BM	CYP17B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP17B.	ECOTOX			
C19M	CYP19 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19	ECOTOX			
C9AM	CYP19A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A.	ECOTOX			
C1A1	CYP19A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A1. Also:, Aromatase, CYPXIX, Cytochrome P-450AROM, Cytochrome P450 19A1, Estrogen synthase, Arom, CYP19, Cytochrome P450 19A1a, cyp19a1a, EC 1.14.14.14.	ECOTOX, http://www.uniprot.org/uniprot/O42145 and http://www.uniprot.org/uniprot/P2443			
C9A2	CYP19A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19A2. Also: Aromatase 2, CYPXIXA2, Cytochrome P450 19 Type II.	ECOTOX and http://www.uniprot.org/uniprot/P79430			
C19B	CYP19b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP19b. Also: cytochrome P450, family 19, subfamily A, polypeptide 1b, cyp19a1b protein, cyp19a1b, P450aromB, zgc:92614.	ECOTOX, http://www.uniprot.org/uniprot/Q6DH75 and http://zfin.org/act ion/marker/view/ZDB-GENE-001103-4			
CA1M	CYP1A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A1.				
CA3M	CYP1A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A3.				

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CYRN	Cytochrome P450, family 1, subfamily B, polypeptide 1 mRNA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450, family 1, subfamily B, polypeptide 1. Also: cyp1b1, cyp1b.	ECOTOX and https://www.ncbi.nlm.nih.gov/geo/100150054)		NM_001045256.1	GenBank
C212	CYP2B1/2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2B1/2	ECOTOX			
CB10	Cyp2b10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp2b10	ECOTOX			
2E1R	CYP2E1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2E1.	ECOTOX			
2KMR	Cyp2K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp2K.				
2K1R	CYP2K1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2K1	ECOTOX			
2M1R	CYP2M1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP2E1	ECOTOX			
336M	CYP336A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP336A1.	ECOTOX and http://www.uniprot.org/uniprot/A0A140DJT3	172664		
C32M	CYP342A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP342A1	ECOTOX and http://www.uniprot.org/uniprot/Q6SPQ5	176554	AAR88242	GenBank
57AM	CYP357A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP357A1.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
58AM	CYP358A1i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP358A1i.	ECOTOX			
3A27	CYP3A27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP3A27	ECOTOX			
C4BM	CYP4BB1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BB1.	ECOTOX and https://www.ncbi.nlm.nih.gov/prot ein/AAR88241.2/	176554	AAR88241	GenBank
4S1M	CYP4BS1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS1.	ECOTOX			
4S2M	CYP4BS2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS2.	ECOTOX			
4S3M	CYP4BS3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BS3.	ECOTOX			
4T1M	CYP4BT1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BT1.	ECOTOX			
4U1M	CYP4BU1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BU1.	ECOTOX			
4U2M	CYP4BU2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BU2.	ECOTOX			
4V1M	CYP4BV1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4BV1.	ECOTOX			
G38M	CYP4G38 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4G38.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
G39M	CYP4G39 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4G39.	ECOTOX			
C4TM	CYP4T11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP4T11.	ECOTOX			
6F1M	CYP6CF1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CF1.	ECOTOX			
6G1M	CYP6CG1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG1.	ECOTOX			
6G2M	CYP6CG2i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG2i.	ECOTOX			
6G4M	CYP6CG4i mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CG4i.	ECOTOX			
6J1M	CYP6CJ1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP6CJ1.	ECOTOX			
CP2R	CYP9A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP9A2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/AF172278	176591	AF172278	GenBank
CP4R	CYP9A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP9A4.	ECOTOX and http://www.uniprot.org/uniprot/Q9U9C1	176591	AF172279	GenBank
CP5R	CYP9A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP9A5.	ECOTOX and http://www.uniprot.org/uniprot/Q9U9B9	176591	AF172281	GenBank
C92M	CYP9AT2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to CYP9AT2.	ECOTOX and http://www.uniprot.org/uniprot/J9PI83			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C61R	Cysteine-rich, angiogenic inducer, 61 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cysteine-rich, angiogenic inducer, 61. Also: cyr61, cyr61-I2, zgc:158158, zcyr61-c8.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_001080987 and http://zfin.org/ZDB-GENE-060404-5	169181	NM_001080987	GenBank
CFTM	Cystic Fibrosis Transmembrane Conductance Regulator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cystic Fibrosis Transmembrane Conductance Regulator.	ECOTOX			
JR2M	Cystine lyase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cystine lyase. Also: CORI3, JR2.	ECOTOX and http://www.uniprot.org/uniprot/Q9SUR6	176597	none given	
COBM	Cytochrome b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome b. Also: cytochrome b, mitochondrial, mt-cyb.	ECOTOX and http://zfin.org/ZDB-GENE-011205-17	156137	AJ388456	GenBank
CB5M	Cytochrome b5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome b5.	ECOTOX			
CB6M	Cytochrome b6/f complex subunit 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome b6/f complex subunit 4. Also: petD.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/4524677	174382		
CC1R	Cytochrome b-c1 complex subunit 1, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome b-c1 complex subunit 1, mitochondrial. Also: Complex III subunit 1, Core protein I, Ubiquinol-cytochrome-c reductase complex core protein 1, Uqcrc1.	ECOTOX and http://www.uniprot.org/uniprot/Q9CZ13	166650	Q9CZ13	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CCOI	Cytochrome C oxidase chain I mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome C oxidase chain I. Also: Cytochrome c oxidase, cco-1, Cytochrome C oxidase chain 1, Cytochrome-c oxidase, Complex IV (mitochondrial electron transport), Cytochrome a3, Cytochrome aa3, Warburg's respiratory enzyme, EC 1.9.3.1.	ECOTOX, http://www.uniprot.org/uniprot/W8S178 and http://enzyme.expasy.org/EC/1.9.3.1			
CO1M	Cytochrome c oxidase copper chaperone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase copper chaperone 1. Also: Cytochrome c oxidase-17, COX-17, Cytochrome c oxidase 17 copper chaperone, AtCOX17, COX17-1.	ECOTOX and http://www.uniprot.org/uniprot/Q9LJQ9			
CO1R	Cytochrome c oxidase subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit 1. Also, COI.	ECOTOX and http://www.uniprot.org/uniprot/A3DVC3	171802	HO056265	GenBank
CCIM	Cytochrome c oxidase subunit IV isoform 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit IV isoform 1. Also: cox4i1.	ECOTOX and https://www.uniprot.org/uniprot/Q6TNV0	156137	NM_214701	GenBank
CVBM	Cytochrome c oxidase subunit Vb 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c oxidase subunit Vb 2. Also: cox5b2.	ECOTOX and http://zfin.org/ZDB-GENE-060825-71	170518		
CC6M	Cytochrome c6, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome c6, chloroplastic. Also: Cytochrome c6, petJ, Cytochrome c-552, Cytochrome c-553, Cytochrome c553, Soluble cytochrome f.	ECOTOX and http://www.uniprot.org/uniprot/P08197	166194	M67448	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CS3R	Cytochrome oxidase subunit 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome oxidase subunit 3. Also: cox3	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=11542544	174382		
CO2M	Cytochrome oxidase subunit II mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome oxidase subunit II.	ECOTOX			
COSM	Cytochrome oxidase subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome oxidase.	ECOTOX			
CPRN	Cytochrome P1A Messenger RNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cyp1A.				
CA2M	Cytochrome P-450 1A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P-450 1A2. Also: CYP1A2 mRNA	ECOTOX			
1A4M	Cytochrome P450 1A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 1A4. Also: CYPIA4, CYP1A4, Cytochrome P450 TCDDAHH.	ECOTOX and http://www.uniprot.org/uniprot/P79760			
1A5M	Cytochrome P450 1A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 1A5. Also: CYP1A5, CYPIA5, Cytochrome P450 TCDDAA	ECOTOX and http://www.uniprot.org/uniprot/P79761	174468		
8A1M	Cytochrome P450 18a1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 18a1. Also: Cyp18a1.	ECOTOX and https://www.uniprot.org/uniprot/Q95078	177258	none given	
CYPR	Cytochrome P450 21A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 21A. Also: CYP21.	ECOTOX and http://www.uniprot.org/uniprot/W0GJ50	170535	KF742614	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
26AM	Cytochrome P450 26A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 26A1. Also: cyp26a1, cb24, CYP26, P450RA1, Cytochrome P450 subfamily XXVIA polypeptide 1.	ECOTOX, http://www.uniprot.org/uniprot/Q7SXV4 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131466	166633	NM_131146	GenBank
C2BR	Cytochrome P-450 2B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P-450 2B .	ECOTOX			
2B3M	Cytochrome P450 2B3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 2B3. Also: CYPIIB3, Cyp2b3, Cyp2b-3.	ECOTOX and https://www.uniprot.org/uniprot/P13107	104399	NM_173294	GenBank
C18M	Cytochrome P450 2C18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 2C18. Also: CYP2C18	ECOTOX and http://www.uniprot.org/uniprot/A7M7D3	174468		
2D6M	Cytochrome P450 2D6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 2D6. Also: CYP2D6	(ECOTOX and http://www.uniprot.org/uniprot/P0635	174468		
C2HM	Cytochrome P450 2H1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 2H1. Also: cyp2h1, cypih1, p450 pb15, p450 pchp3	ECOTOX and http://www.uniprot.org/uniprot/P05180	174730	NM_001001616	GenBank
C2KM	Cytochrome P450 2K5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 2K5.	ECOTOX			
3A1M	Cytochrome P450 301A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 301A1. Also: CYP301A1.	ECOTOX and http://www.uniprot.org/uniprot/D2A102			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
YP2M	Cytochrome P450 3024A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3024A2. Also: CYP3024A2.	ECOTOX and http://www.uniprot.org/uniprot/A0A088DJU6	175656	KF639994	GenBank
YP3M	Cytochrome P450 3024A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3024A3. Also: CYP3024A3.	ECOTOX and http://www.uniprot.org/uniprot/A0A088DIA2	175656	KF639992	GenBank
YC2M	Cytochrome P450 3027C2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3027C2. Also: CYP3027C2.	ECOTOX and http://www.uniprot.org/uniprot/A0A088DIB0	175656	KF640002	GenBank
32AM	Cytochrome P450 321A7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 321A7 mRNA. Also: CYP321A7.	ECOTOX and http://www.uniprot.org/uniprot/S4VAR3	175055	KC789750	GenBank
31AM	Cytochrome P450 321A8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 321A8 mRNA. Also: CYP321A8.	ECOTOX and http://www.uniprot.org/uniprot/S4VGT0	175055	KC789751	GenBank
319M	Cytochrome P450 321A9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 321A9 mRNA. Also: CYP321A9.	ECOTOX and http://www.uniprot.org/uniprot/S4VDQ6	175055	KC789752	GenBank
321M	Cytochrome P450 332A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 332A1 mRNA. Also: CYP332A1.	ECOTOX and http://www.uniprot.org/uniprot/A0A068F0U3	175055	FP340417	GenBank
333M	Cytochrome P450 333B3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 333B3 mRNA. Also: CYP333B3.	ECOTOX and http://www.uniprot.org/uniprot/J7FIT7	175055	none given	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
33BM	Cytochrome P450 333B4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 333B4 mRNA. Also: CYP333B4.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/1226074518	175055	none given	GenBank
37BM	Cytochrome P450 337B5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 337B5 mRNA. Also: CYP337B5.	ECOTOX and http://www.uniprot.org/uniprot/A0A068EVD6	175055	KJ671580	GenBank
P3AM	Cytochrome P450 3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 3A. Also: CYP3A, Cytochrome P3A, CYP3, cytochrome P450, subfamily IIIA (naphedipine oxidase), CYP3A43.	ECOTOX			
312M	Cytochrome P450 3A12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A12. Also: CYP3A12, Cytochrome P450-PBD-1, CYPIIIA12	ECOTOX and http://www.uniprot.org/uniprot/P24463	174468		
3A2M	Cytochrome P450 3A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 3A2. Also: Cytochrome P450, family 3, subfamily a, polypeptide 23/polypeptide 1, Cytochrome P450/6 beta B, Cytochrome P450III A23, Testosterone-6-beta hydroxylase, Cyp3a23/3a1, Cyp3a2.	ECOTOX and https://www.uniprot.org/uniprot/Q06884	104399	NM_013105	GenBank
C3AR	Cytochrome P450 3A37 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A37. Also: cyp3A37	ECOTOX and http://www.uniprot.org/uniprot/Q9PU44	174730	NM_001001751	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
A38M	Cytochrome P450 3A38 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A38. Also: CYP3A38.	http://www.uniprot.org/uniprot/R9S3I6	107227		
3A4M	Cytochrome P450 3A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A4. Also: CYP3A4	ECOTOX and http://www.uniprot.org/uniprot/P08684	174468		
A40M	Cytochrome P450 3A40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A40. Also: CYP3A40	http://www.uniprot.org/uniprot/Q98T91	107227		
3A7M	Cytochrome P450 3A7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A7. Also: CYP3A7, CYP3A7, Cytochrome P450-HFLA	ECOTOX and http://www.uniprot.org/uniprot/P24462	174468		
3A9M	Cytochrome P450 3A9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 3A9. Also: CYP3A9	ECOTOX and http://www.uniprot.org/uniprot/P51538	174468		
4A1M	Cytochrome P450 4A14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 4A14. Also: CYP4A14, Cytochrome P450-LA-omega 3, Lauric acid omega-hydroxylase, Long-chain fatty acid omega-monooxygenase, cyp4a-3, cyp4a3.	ECOTOX and https://www.uniprot.org/uniprot/P20817	104399	M33936	GenBank
4B1M	Cytochrome P450 4B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4B1. Also: CYP4B1	ECOTOX and http://www.uniprot.org/uniprot/P13584	174468		
CY4M	Cytochrome P450 4B1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 4B1-like.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=GU046698	175050	GU046698	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C4EM	Cytochrome P450 4e2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4e2. Also: Cyp4e2, CYPIVE2.	ECOTOX and http://www.uniprot.org/uniprot/Q27606			
C4FM	Cytochrome P450 4F-similar mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4F-similar. Also: cyp4f.	ECOTOX			
412M	Cytochrome P450 4L12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4L12 mRNA. Also: CYP4L12.	ECOTOX and http://www.uniprot.org/uniprot/J7FJF5	175055	none given	
413M	Cytochrome P450 4L13 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4L13 mRNA. Also: CYP4L13.	ECOTOX	175055	none given	
4L9M	Cytochrome P450 4L9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4L9 mRNA. Also: CYP4L9.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/1226074485	175055	none given	
4M1M	Cytochrome P450 4M14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4M14 mRNA. Also: CYP4M14.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/1226074489	175055	none given	
4M5M	Cytochrome P450 4M15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4M15 mRNA. Also: CYP4M15.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/KX443467.1	175055	none given	
4M7M	Cytochrome P450 4M17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4M17 mRNA. Also: CYP4M17.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/1226074493	175055	none given	
4M8M	Cytochrome P450 4M18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4M18 mRNA. Also: CYP4M18.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/1226074495	175055	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C4PM	Cytochrome P450 4p1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 4p1. Also: Cyp4p1, CYPIVP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9V558			
C62M	Cytochrome P450 6a2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6a2. Also: Cyp6a2, CYPVIA2, Cytochrome P450-B1, CYT-P450-B1.	ECOTOX and http://www.uniprot.org/uniprot/P33270			
C68M	Cytochrome P450 6a8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6a8. Also: Cyp6a8, CYPVIA8.	ECOTOX and http://www.uniprot.org/uniprot/Q27593			
6ABM	Cytochrome P450 6AB12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6AB12 mRNA. Also: CYP6AB12.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/KC789747.1	175055	KC789747	GenBank
C6AM	Cytochrome P450 6AE12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6AE12 (CYP6AE12).	ECOTOX			
6ANM	Cytochrome P450 6AN4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6AN4 mRNA. Also: CYP6AN4.	(ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/KC789748.1)	175055	KC789748	GenBank
6B3M	Cytochrome P450 6B39 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6B39 mRNA. Also: CYP6B39.	ECOTOX	175055	none given	
6B4M	Cytochrome P450 6B40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6B40 mRNA. Also: CYP6B40.	ECOTOX	175055	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
6B5M	Cytochrome P450 6B50 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6B50 mRNA. Also: CYP6B50.	ECOTOX and http://www.uniprot.org/uniprot/S4VA93	175055	KC789749	GenBank
6D1M	Cytochrome P450 6D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 6d1. Also: CYP6D1, CYPVID1, Cytochrome P450 lpr, Pyrethroid resistance cytochrome P450.	ECOTOX and http://www.uniprot.org/uniprot/Q27698	175663		
9A2M	Cytochrome P450 9A24 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A24 mRNA. Also: CYP9A24.	ECOTOX	175055	none given	
9A5M	Cytochrome P450 9A25 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A25 mRNA. Also: CYP9A25.	ECOTOX	175055	none given	
9A6M	Cytochrome P450 9A26 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A26 mRNA. Also: CYP9A26.	ECOTOX	175055	none given	
9A7M	Cytochrome P450 9A27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A27 mRNA. Also: CYP9A27.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/1226074435	175055	none given	
9A8M	Cytochrome P450 9A28 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A28 mRNA. Also: CYP9A28.	ECOTOX	175055	none given	
930M	Cytochrome P450 9A30 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A30 mRNA. Also: CYP9A30.	ECOTOX	175055	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
931M	Cytochrome P450 9A31 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A31 mRNA. Also: CYP9A31.	ECOTOX	175055	none given	
932M	Cytochrome P450 9A32 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A32 mRNA. Also: CYP9A32.	ECOTOX	175055	none given	
958M	Cytochrome P450 9A58 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A58 mRNA. Also: CYP9A58.	ECOTOX and http://www.uniprot.org/uniprot/A0A068EXP4	175055	KJ671577	GenBank
959M	Cytochrome P450 9A59 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A59 mRNA. Also: CYP9A59.	ECOTOX and http://www.uniprot.org/uniprot/A0A068EUU6	175055	KJ671578	GenBank
960M	Cytochrome P450 9A60 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9A60 mRNA. Also: CYP9A60.	ECOTOX and http://www.uniprot.org/uniprot/A0A068EWN1	175055	KJ671579	GenBank
9E2M	Cytochrome P450 9e2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 9e2. Also: cytochrome P450 9AG1, CYP9AG1, cytochrome P450 9AG2, CYP9AG2.	ECOTOX, http://www.genome.jp/dbget-bin/www_bget?nvi:100124147 and http://www.ncbi.nlm.nih.gov/genie/100124146			
CAAM	Cytochrome P450 aromatase A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 aromatase A	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AMRN	Cytochrome P450 aromB mRNA	Cytochrome P450 aromatase messenger RNA. Part of an enzyme which converts androgens to oestrogens by desaturating ring A of the steroid. mRNA (messenger RNA) is the mediating template between DNA and proteins. P450arom is a major player in estrogen signaling. Also known as Cytochrome P450 aromatase mRNA and Estrogen synthetase mRNA				
CALM	Cytochrome P450 c17 alpha hydroxylase/17,20 lyase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 c17 alpha hydroxylase/17,20 lyase	ECOTOX			
314M	Cytochrome P450 CYP314 family-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 CYP314 family-like protein. Also: CYP314.	ECOTOX and http://www.uniprot.org/uniprot/D3KSX2			
C24M	Cytochrome P450 family 24 subfamily A member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 family 24 subfamily A member 1. Also: cyp24a1, 1,25-dihydroxyvitamin D(3) 24-hydroxylase, mitochondrial, 24-OHase, Vitamin D(3) 24-hydroxylase.	ECOTOX and https://www.uniprot.org/uniprot/Q09128	177129	ENSGMO G00000015644	
S27R	Cytochrome P450 family 27 subfamily A member 1 mRNA	RNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitochondrial sterol 26-hydroxylase. Also: cholestanetriol 26-monooxygenase, cytochrome P-450C27/25, cytochrome P450 27, sterol 27-hydroxylase, vitamin D(3) 25-hydroxylase	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/1593	175050	CF660988	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
CF4M	Cytochrome P450 family 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450 family 4. Also: CYP4.	ECOTOX and http://www.uniprot.org/uniprot/D3JTH3			
C4GM	Cytochrome p450 family 4 subfamily G mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome p450 family 4 subfamily G. Also: CYP4G.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/JN162670.1	170188		
4V2M	Cytochrome P450 family 4 subfamily V member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 family 4 subfamily V member 2. Also: cyp4v2, cytochrome P450, family 4, subfamily V, polypeptide 2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie?term=(CYP4V2)%20AND%20GALLUS%5BOrganism%5D	177147	none given	
CF7M	Cytochrome P450 family 7 subfamily B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 family 7 subfamily B member 1. Also: CYP7B1, 25-hydroxycholesterol 7-alpha-hydroxylase, cytochrome P450, family 7, subfamily B, polypeptide 1, oxysterol 7alpha-hydroxylase.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie?term=CYP7B1+AND+gallus%5BOrganism%5D	177255	none given	
CP3M	Cytochrome P450 family 3, subfamily c, polypeptide 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutaminase a. Also: cyp3c3, Cytochrome P450, family 3, subfamily c, polypeptide 1 like 2, cyp3c112.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/NM_001007400	118453	NM_001007400.1	GenBank
Y21M	Cytochrome P450 precursor 2x1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450 precursor 2x1. Also: CYP2X1, EC:1.14.14.1.	ECOTOX and http://www.uniprot.org/uniprot/Q9DEW9	176562	AF315346	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C3AM	Cytochrome P450, CYP3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, CYP3A. Also: Cytochrome P450, family 3, subfamily a, polypeptide 44, MCG115423, Protein Cyp3a44, cyp3a.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQW4			
CC1M	Cytochrome P450, family 1, subfamily C, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 1, subfamily C, polypeptide 1. Also: CYP1C1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001020610 and http://www.uniprot.org/uniprot/A0PJ31			
P1CM	Cytochrome P450, family 1, subfamily C, polypeptide 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450, family 1, subfamily C, polypeptide 2. Also: cyp1c2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/100137725	177971	none given	
C11M	Cytochrome P450, family 11, subfamily C, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 11, subfamily C, polypeptide 1. Also: cyp11c1.	ECOTOX and http://zfin.org/act ion/marker/sequence/view/ZDB-GENE-070828-1			
CP1M	Cytochrome P450, family 2, subfamily AA, polypeptide 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 2, subfamily AA, polypeptide 1. Also: cyp2aa1.	ECOTOX and http://zfin.org/ZDB-GENE-070424-33			
C22M	Cytochrome P450, family 2, subfamily AA, polypeptide 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 2, subfamily AA, polypeptide 2. Also: cyp2aa2.	ECOTOX and http://zfin.org/ZDB-GENE-061027-232			
C2KR	Cytochrome P450, family 2, subfamily K, polypeptide 22 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytochrome P450, family 2, subfamily K, polypeptide 22. Also: cyp2k22.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=cyp2k22	176943	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
C2XM	Cytochrome P450, family 2, subfamily X, polypeptide 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 2, subfamily X, polypeptide 7. Also: cyp2x7.	ECOTOX, https://www.ncbi.nlm.nih.gov/genie/?term=Cyp2x7 and http://zfin.org/ZDB-GENE-110114-2	174959	CU468035	GenBank
C65M	Cytochrome P450, family 3, subfamily A, polypeptide 65 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 3, subfamily A, polypeptide 65. Also: cyp3a65.	ECOTOX and http://www.uniprot.org/uniprot/Q32LT1			
CF2M	Cytochrome P450, family 4, subfamily F, Polypeptide 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P450, family 4, subfamily F, Polypeptide 2. Also: CYP4F2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/507016	174959	none given	
C2MR	Cytochrome P4502N2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytochrome P4502N2	ECOTOX			
CKMR	cytokine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytokine.	ECOTOX			
CCAM	Cytoplasmic carbonic anhydrase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytoplasmic carbonic anhydrase. Also: CasCac.	ECOTOX and http://www.uniprot.org/uniprot/A3FFY1	156269	EF375490	GenBank
ST1M	Cytosolic sulfotransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cytosolic sulfotransferase 1. Also: SULT1 ST1, ST1.	ECOTOX and http://www.uniprot.org/uniprot/Q6PH37			
DAMG	Damage	No definition available.				

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
DP3R	Death associated protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Death associated protein 3. Also: im:6905684, dap3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001098737	170323	NM_001098737	GenBank
DF1M	Defensin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Defensin 1. Also: Def1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=406143			
DARM	Dehydroascorbate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dehydroascorbate reductase mRNA. Also:DHAR.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F1			
D7DM	Delta 7-sterol 5-desaturase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to delta 7-sterol 5-desaturase. Also: sterol-C5-desaturase, SC5DL, SC5D.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/235293	177317	none given	
DTPR	Deoxyuridine triphosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Deoxyuridine triphosphatase. Also: dut, dutp pyrophosphatase.	ECOTOX, http://www.ncbi.nlm.nih.gov/ncbi/NM_001006005 and http://www.uniprot.org/uniprot/Q5XJ23	170323	NM_001006005	GenBank
DMPM	Desmoplakin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Desmoplakin. Also: DSP.	ECOTOX and http://www.uniprot.org/uniprot/E1BWI0	175651	none given	
DPAM	Desmoplakin a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Desmoplakin a. Also: DSPA.	ECOTOX and http://www.uniprot.org/uniprot/F8W4Q1	177606	none given	
DT2M	Diacylglycerol transferase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Diacylglycerol transferase 2. Also: dgat2, Diacylglycerol O-acyltransferase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q4V9F0	176978	NM_001030196	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
DDNM	Dihydrodiol dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dihydrodiol dehydrogenase. Also: 2DD	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/27294	174395	JK729396	GenBank
D3BM	Dihydropyrimidine-related protein 3-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dihydropyrimidinase-related protein 3-B.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148231542	166650	NP_001087967	GenBank
DR3M	Dihydropyrimidine-related protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dihydropyrimidinase-related protein 3. Also: DRP3, Dihydropyrimidinase related protein 3, Dpysl3, DRP-3, Unc-33-like phosphoprotein 1, ULIP-1.	ECOTOX and http://www.uniprot.org/uniprot/Q62188	166650	Q62188	GenBank
DMDM	Diphosphomevalonate decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Diphosphomevalonate decarboxylase. Also: mvd, Mevalonate (diphospho)decarboxylase, MDDase, Mevalonate diphosphate decarboxylase, Mevalonate pyrophosphate decarboxylase, mevalonate (diphospho) decarboxylase a, mvda, EC 4.1.1.33.	ECOTOX, http://enzyme.expasy.org/EC/4.1.1.33 , http://www.uniprot.org/uniprot/Q5U403 and http://www.ncbi.nlm.nih.gov/nuccore/NM_001007422.1	169182	NM_001007422.1	GenBank
DPLT	Diplotene	A stage of meiotic prophase which follows the pachytene and during which the paired homologous chromosomes begin to separate and chiasmata become visible.	Webster's			
DMRT	dmrt1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to dmrt1. Also: Doublesex and mab-3 related transcription factor 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/1761			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
D1AM	DMRT1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DMRT1a (Doublesex-and mab-3-related transcription factor 1 a).	ECOTOX			
D1BM	DMRT1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DMRT1b (Doublesex-and mab-3-related transcription factor 1 b).	ECOTOX			
DM1M	DNA (cytosine-5)-methyltransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 1. Also: dnmt1.	ECOTOX and http://zfin.org/ZD_B-GENE-990714-15			
DM8M	DNA (cytosine-5)-methyltransferase 3 alpha a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 3 alpha a. Also: dnmt3aa, dnmt8, DNA (cytosine-5)-methyltransferase 8.	ECOTOX and http://zfin.org/ZD_B-GENE-050314-5			
DM6M	DNA (cytosine-5)-methyltransferase 3 alpha b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 3 alpha b. Also: dnmt3ab, DNA (cytosine-5)-methyltransferase 6, dnmt6.	ECOTOX and http://zfin.org/ZD_B-GENE-050314-3			
DM7M	DNA (cytosine-5)-methyltransferase 3 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific DNA (cytosine-5)-methyltransferase 3 beta. Also: dnmt3b, DNA (cytosine-5)-methyltransferase 7, dnmt7, dnmt3bl, dnmt7, cb91, fb16h07, sb:cb91, wu:fb16h07.	ECOTOX and http://zfin.org/ZD_B-GENE-050314-4			
DM3M	DNA (cytosine-5)-methyltransferase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 3. Also: dnmt3.	ECOTOX and http://zfin.org/ZD_B-GENE-990712-11			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
DN3R	DNA (cytosine-5)-methyltransferase 3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 3A . Also: dnmt3a, and DNA methyltransferase 3A.	ECOTOX, http://www.uniprot.org/uniprot/O88508 and http://www.ncbi.nlm.nih.gov/gene/13435	171290	GmE090818r466	GenBank
DM4M	DNA (cytosine-5)-methyltransferase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 4. Also: dnmt4.	ECOTOX and http://zfin.org/ZDB-GENE-050314-1			
DM5M	DNA (cytosine-5)-methyltransferase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA (cytosine-5)-methyltransferase 5. Also: dnmt5.	ECOTOX and http://zfin.org/ZDB-GENE-050314-2			
DNAD	DNA Adducts	Adducts are damaged cellular machinery when compounds bind irreversibly with DNA, proteins or other cellular components.	www.vetmed.ucdavis.edu			
DNRM	DNA alkylation repair protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA alkylation repair protein.	ECOTOX			
DNAB	DNA binding	DNA binding to chemical.	ECOTOX			
DNAC	DNA Concentration	No definition available.				
DNMT	DNA methylation	A process by which methyl groups are added to certain nucleotides in genomic DNA. This affects gene expression, as methylated DNA is not easily transcribed. The degree of methylation is passed on to daughter strands at mitosis by maintenance DNA methylases. Accordingly, DNA methylation is thought to play an important developmental role in sequentially restricting the transcribable genes available to distinct cell lineages.	http://www.biologyonline.org/dictionary/Dna_methylation			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
R51M	DNA repair protein RAD51 homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA repair protein RAD51 homolog 1. Also: RAD51 homolog A, rad51a, reca.	ECOTOX and http://www.uniprot.org/uniprot/Q08297			
D51M	DNA repair protein RAD51 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to DNA repair protein RAD51. Also: RAD51.	ECOTOX and http://www.uniprot.org/uniprot/Q99133			
DNAS	DNA Synthesis Rate	The linking together of nucleotides (as deoxyribonucleotide triphosphates) to form DNA. In vivo, most synthesis is DNA replication, but incorporation of precursors also occurs in repair. In the special case of retroviruses, DNA synthesis is directed by an RNA template (see reverse transcriptase). H3 thymidine incorporation - Thymidine, an essential DNA building block can be radioactively labeled with H3 (tritium) and used to measure DNA synthesis as a reflection of cell division.				
DNPR	DNA to protein ratio	A ratio of DNA to protein.				
DNRN	DNA to RNA ratio	The ratio between DNA and RNA concentrations in a sample.	ECOTOX			
DLMT	Dominant lethal mutations	Cause embryonic or foetal death. Induction of a dominant lethal event after exposure to a test substance indicates that the substance has affected germinal tissue of the test species.	http://www.oecd-ilibrary.org/environment/test-no-478-genetic-toxicology-rodent-dominant-lethal-test_9789264071360-en			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
DBHM	Dopamine beta-hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine beta-hydroxylase. Also: Dopamine beta-monoxygenase.	ECOTOX and http://www.uniprot.org/uniprot/P15101			
D22M	Dopamine D2 receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine D2 receptor 2. Also: Dopamine receptor 2a, D2R2.	ECOTOX, http://www.uniprot.org/uniprot/Q90WQ6 and http://www.ncbi.nlm.nih.gov/nucleotide/NM_001124372.1	169754	NM_001124372.1	GenBank
DR1M	Dopamine receptor D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine receptor D1. Also: drd1.	ECOTOX and https://www.uniprot.org/uniprot/A0A1D5PNU9	178170	none given	
DD3M	Dopamine receptor D3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine receptor D3. Also: drd3.	ECOTOX and https://www.uniprot.org/uniprot/C5HV40	178170	none given	
D4BM	Dopamine receptor D4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine receptor D4b. Also: drd4b.	ECOTOX and https://www.uniprot.org/uniprot/B0S7D2	178170	none given	
DPTR	Dopamine Transporter Expression	The dopamine transporter or DAT is a monoamine transporter that is specific for clearing the neurotransmitter dopamine out of the synaptic cleft and into a glial cell or the presynaptic neuron.	http://en.wikipedia.org/wiki/Dopamine_transporter			
DTMR	Dopamine transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dopamine transporter	ECOTOX			
DOSM	Dual oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to dual oxidase. Also: duox, duox1.	ECOTOX and http://zfin.org/ZDB-GENE-091117-14	177606	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
D6AM	Dynein heavy chain 6, axonemal-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dynein heavy chain 6, axonemal-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=411602			
DCIM	Dynein, cytoplasmic 1, intermediate chain 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Dynein, cytoplasmic 1, intermediate chain 1. Also: dync1i1, sb:eu1013, zgc:158394.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/561525	170947	NM001079990	GenBank
E3UM	E3 ubiquitin-protein ligase	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to E3 ubiquitin-protein ligase. Also: Mdm2, Double minute 2 protein, p53-binding protein Mdm2.	ECOTOX and http://www.uniprot.org/uniprot/O42354	163146		
E75M	E75 nuclear receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to E75 nuclear receptor. Also: E75.	ECOTOX and http://www.uniprot.org/uniprot/Q3I5Q8			
EG2M	Early growth response 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to early growth response 2b. Also: egr2b, cb427, krx20, KRX-20, krox20.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/30190	178905	none given	
EPPM	Ecdysone phosphate phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ecdysone phosphate phosphatase mRNA. Also: EPP, DapmaEPPase.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/AB742158.1	175700	AB742158.1	GenBank
EA1M	Ecdysone receptor A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone receptor A1.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/AB274820.1	174676	AB274820.1	GenBank
ERBM	Ecdysone receptor B isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone receptor B isoform. Also: EcR-B.	ECOTOX and http://www.uniprot.org/uniprot/D1L3C3			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ECRM	Ecdysone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone receptor (EcR).	ECOTOX			
E74R	Ecdysone-induced protein 74EF mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ecdysone-induced protein 74EF. Also: Eip74EF, E74, GJ13098, vE74.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/6623774 and http://www.uniprot.org/uniprot/Q7M3M6			
EGFR	egfr mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to epidermal growth factor receptor. Also known as Errp; ERBB1; ErbB-1	http://www.ncbi.nlm.nih.gov			
EG3R	Egl-9 family hypoxia-inducible factor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Egl-9 family hypoxia-inducible factor 3 mRNA. Also: egln3, Egl nine homolog 3, zgc:77019, wu:fj78a08.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_213310 and http://www.uniprot.org/uniprot/Q6NY85	170362	NM_213310	GenBank
ELVM	ELAV like neuron-specific RNA binding protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Embryonic lethal abnormal vision-like neuron-specific RNA binding protein 3. Also: HuC, elrc, zHuC, id:ibd1248, wu:fb77b03, elav-related C, elavC, embryonic lethal, abnormal vision-related C.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131449	170392	NM_131449	
EFBM	Elongation factor 1 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to elongation factor 1 beta.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/CAB40840	175222	CAB40840	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
E11M	Elongation factor 1-alpha 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor 1-alpha 1. Also: Eukaryotic translation elongation factor 1 alpha 1, EF-1-alpha-1, Elongation factor Tu, EF-Tu, Eukaryotic elongation factor 1 A-1, eEF1A-1, Eef1a1, Eef1a, and EF1A.	ECOTOX and http://www.uniprot.org/uniprot/P10126	166557	AJ624922	GenBank
EFTM	Elongation factor Tu GTP binding domain containing 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor Tu GTP binding domain containing 1. Also: Elongation factor-like 1, Protein FAM42A, EFTUD1, EFL1, FAM42A.	ECOTOX and http://www.uniprot.org/uniprot/Q7Z2Z2			
EFAM	Elongation factor-1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Elongation factor-1 alpha. Also: EF-1-alpha, 42Sp50, and Thesaurin A.	ECOTOX			
EL5R	ELOVL fatty acid elongase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ELOVL fatty acid elongase 5. Also: elovl5.	ECOTOX and http://zfin.org/ZDB-GENE-040407-2	171290	GmE100215i19804	GenBank
EPLM	Endoplasmin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Endoplasmin-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412150			
EDNR	Endothelin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Endothelin-1. Also: Edn1, ET-1, Preproendothelin-1, PPET1.	ECOTOX and http://www.uniprot.org/uniprot/P22388	174884		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
EF1M	Enhancer of filamentation 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enhancer of filamentation 1. Also: mEF1, CRK-associated substrate-related protein, CAS-L, Neural precursor cell expressed developmentally down-regulated protein 9, NEDD-9, p105, Nedd9, Casl.	ECOTOX and http://www.uniprot.org/uniprot/O35177			
EHMM	Enoyl-CoA hydratase, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enoyl-CoA hydratase, mitochondrial Also: Enoyl-CoA hydratase 1, Short-chain enoyl-CoA hydratase, SCEH, Echs1, Enoyl hydrase, Unsaturated acyl-CoA hydratase, EC 4.2.1.17.	ECOTOX, http://enzyme.expasy.org/EC/4.2.1.17 and http://www.uniprot.org/uniprot/P14604			
ETPM	Enteropeptidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Enteropeptidase. Also: Enterokinase.	ECOTOX and http://www.uniprot.org/uniprot/P98072			
ETMR	Eotaxin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eotaxin. Also: C-C motif chemokine 11, Eosinophil chemotactic protein, Small-inducible cytokine A11, Ccl11, Scya11.	ECOTOX and http://www.uniprot.org/uniprot/P48298			
EPDR	Ependymin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ependymin. Also: epd.	ECOTOX and http://www.uniprot.org/uniprot/A7UH93	173763	ABU49423.1	GenBank
EA4M	EPH receptor A4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to eph receptor A4a. Also: epha4a, epha4, zek2, apha3, ephrin type-A receptor 4a, eph-like receptor tyrosine kinase 1, eph receptor A3.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/64271	179291	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ECCM	Epithelial calcium channel mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to epithelial calcium channel (ECaC).	ECOTOX			
EPHM	Epoxide hydrolase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Epoxide hydrolase 1. Also: EPHX1, Epoxide hydratase, Microsomal epoxide hydrolase.	ECOTOX and http://www.uniprot.org/uniprot/P07687	104399	none given	
EPOM	Erythropoietin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Erythropoietin.	ECOTOX and http://www.uniprot.org/uniprot/Q1ZZT0	156047	DQ415657	GenBank
EMRN	Estrogen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Estrogen - Any of various natural or synthetic substances possessing the biological activity of estrus-producing hormones.				
EMRR	Estrogen receptor : Estrogen mRNA ratio	The ratio of estrogen receptor to estrogen receptor messenger RNA.	ECOTOX			
EA2M	Estrogen receptor alpha 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor alpha 2. Also: ERalpha2, ERa2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=dq177438	170556	DQ177438	GenBank
ERAM	Estrogen receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to estrogen receptor alpha. Also: Estrogen receptor 1, Nuclear receptor subfamily 3 group A member 1, esr1, nr3a1.	ECOTOX and http://www.uniprot.org/uniprot/P16058			
ERBR	Estrogen receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to estrogen receptor beta	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
EB1M	Estrogen receptor beta1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor beta1 protein. Also: estrogen receptor beta1, esr2b.	ECOTOX and http://www.uniprot.org/uniprot/Q90WS9			
EB2M	Estrogen receptor beta2 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor beta2 protein. Also: estrogen receptor beta2, esr2a	ECOTOX and http://www.uniprot.org/uniprot/Q90WS8			
ERGM	Estrogen receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor gamma. Also: esr3, ER-gamma, Nuclear receptor subfamily 3 group A member 3.	ECOTOX and http://www.uniprot.org/uniprot/P57783	170535	JF907360	GenBank
ESRG	Estrogen receptor gene	The estrogen-activated receptor binds to its responsive element in the 5' flanking region of estrogen-responsive genes and modulates the transcription of these genes through its interactions with other transcription factors and the components of the transcription initiation complex.	ECOREF 60619			
ESRM	Estrogen receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen receptor.	ECOTOX			
ESRR	Estrogen related receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Estrogen related receptor. Also: ERR.	ECOTOX and http://www.uniprot.org/uniprot/D1LUZ3	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ETRM	Estrogen-related receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to estrogen-related receptor alpha. Also: Steroid hormone receptor ERR1. Estrogen receptor-like 1, ERR-alpha, nuclear receptor subfamily 3 group B member 1, ESRRA, ERR1, ESTRRA, NR3B1.	ECOTOX and https://www.uniprot.org/uniprot/O08580	175777	none given	
EIMR	Eukaryotic initiation factor 2B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic initiation factor 2B	ECOTOX			
EFMR	Eukaryotic initiation factor 4A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic initiation factor 4A1 (EIF4A1).	ECOTOX			
EP1M	Eukaryotic peptide chain release factor subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic peptide chain release factor subunit 1.	ECOTOX			
ET3M	Eukaryotic translation initiation factor 3 subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic translation initiation factor 3 subunit.	ECOTOX			
E42M	Eukaryotic translation initiation factor 4E-binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Eukaryotic translation initiation factor 4E-binding protein 2. Also: 4E-BP.	ECOTOX and http://www.uniprot.org/uniprot/F8RP76	168602	HQ010440	GenBank
ECSM	Extracellular superoxide dismutase [Cu-Zn] mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Extracellular superoxide dismutase [Cu-Zn]. Also: SOD4, SOD-4, EC-SOD.	ECOTOX and https://www.uniprot.org/uniprot/P34461	178520	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FTTM	Facilitated trehalose transporter Tret1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Facilitated trehalose transporter Tret1-like.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=413575 and http://www.ncbi.nlm.nih.gov/gene/?term=412007			
FCBM	F-actin-capping protein subunit beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to F-actin-capping protein subunit beta. Also: Capzb, capping protein (actin filament) muscle Z-line beta, CapZ beta, Cappb1.	ECOTOX, http://www.ncbi.nlm.nih.gov/protein/148238173 and http://www.uniprot.org/uniprot/P47757	166650	P47757	GenBank
FGAM	Factor in the germline alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Factor in the germline alpha. Also: Figla, FIGalpha, Transcription factor FIGa.	ECOTOX and http://www.uniprot.org/uniprot/O55208			
FDOM	FAD-dependent oxidoreductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FAD-dependent oxidoreductase.	ECOTOX			
F12M	Family with sequence similarity 120C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Family with sequence similarity 120C. Also: fam120c, si:dkey-206f21.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=557842	170801		
FU1M	Far upstream element-binding protein 1	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Far upstream element-binding protein 1. Also: FUSE binding protein 1, Fubp1, FBP.	ECOTOX and http://www.uniprot.org/uniprot/Q32PX7	166650	Q32PX7	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FPSM	Farnesyl pyrophosphate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Farnesyl pyrophosphate synthase. Also: Farnesyl diphosphate synthase, FPP synthase, (2E,6E)-farnesyl diphosphate synthase, Geranyltranstransferase, Farnesyl-diphosphate synthase, EC 2.5.1.10.	ECOTOX and http://www.uniprot.org/uniprot/P14324			
FAOM	Farnesoic acid O-methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to farnesoic acid O-methyltransferase mRNA. Also: FAOM, JHAMT mRNA, juvenile hormone acid o-methyltransferase.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/AB222845.1/	175700	AB222845.1	GenBank
FITM	Fat-inducing transcript 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fat-inducing transcript 2. Also: Fat storage-inducing transmembrane protein 2, fitm2.	ECOTOX and http://www.uniprot.org/uniprot/Q52KL1	176978	NM_001020498.1	GenBank
F11M	Fatty acid binding protein 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 11.	ECOTOX			
F11R	Fatty acid binding protein 11a hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Fatty acid binding protein 11a. Also: FABP11a, Fatty acid-binding protein H6-isoform.	ECOTOX and http://www.uniprot.org/uniprot/Q66I80	176568	none given	
11AM	Fatty acid binding protein 11a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 11a. Also: FABP11a, Fatty acid-binding protein H6-isoform.	ECOTOX and http://www.uniprot.org/uniprot/Q66I80			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BPAM	Fatty acid binding protein 1-A, liver hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Fatty acid binding protein 1-A, liver. Also: FABP1a.	ECOTOX and http://www.uniprot.org/uniprot/Q1AMT3	176568	none given	
F1AM	Fatty acid binding protein 1-A, liver mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 1-A, liver. Also: FABP1a.	ECOTOX and http://www.uniprot.org/uniprot/Q1AMT3			
F2DM	Fatty acid binding protein 1b, tandem duplicate 2 hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to fatty acid binding protein 1b, tandem duplicate 2. Also: fabp1b.2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=fabp1b.2	176568	none given	
F1BR	Fatty acid binding protein 1b, tandem duplicate 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fatty acid binding protein 1b, tandem duplicate 2. Also: fabp1b.2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=fabp1b.2	176568	none given	
BPAR	Fatty acid binding protein 1-B.1 hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Fatty acid binding protein 1-B.1. Also: FABP1b, Fatty acid binding protein 1b, fabp1b.1.	ECOTOX and http://www.uniprot.org/uniprot/Q4VBT1	176568	none given	
F1BM	Fatty acid binding protein 1-B.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 1-B.1. Also: FABP1b, Fatty acid binding protein 1b, fabp1b.1.	ECOTOX and http://www.uniprot.org/uniprot/Q4VBT1			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FA3M	Fatty acid binding protein 3, muscle and heart mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 3, muscle and heart . Also: FABP3, Heart-type fatty-acid binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q8UVG7			
FARN	Fatty acid binding protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 5	ECOTOX			
FA6M	Fatty acid binding protein 6, ileal (Gastrotropin) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein 6, ileal (Gastrotropin). Also: FABP6.	ECOTOX and http://www.uniprot.org/uniprot/Q6IMW5			
FABM	Fatty acid binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid binding protein. Also: fabp.	ECOTOX and http://www.uniprot.org/uniprot/M1GM72			
FD1M	Fatty acid desaturase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid desaturase 1. Also: FADS1, Fatty Acid Delta-5-desaturase, Delta(5) fatty acid desaturase, Acyl-CoA desaturase 1, Stearoyl-CoA desaturase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q920L1 and http://www.uniprot.org/uniprot/P13516			
FD2M	Fatty acid desaturase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid desaturase 2. Also: Delta(6) fatty acid desaturase, Fatty Acid Delta-6-desaturase.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z0R9			
FAEM	Fatty acid elongase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid elongase.	ECOTOX			
FASM	Fatty acid synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid synthase. Also: Fatty-acid synthase.	ECOTOX and http://www.uniprot.org/uniprot/P12276			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FTAM	Fatty acid-binding protein 10-A, liver basic hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Fatty acid-binding protein 10-A, liver basic. Also: FABP10a, Fatty acid-binding protein liver, Liver bile acid-binding protein, Liver-type fatty acid-binding protein, L-FABP.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8L5	176568	none given	
10FM	Fatty acid-binding protein 10-A, liver basic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein 10-A, liver basic. Also: FABP10a, Fatty acid-binding protein liver, Liver bile acid-binding protein, Liver-type fatty acid-binding protein, L-FABP.	ECOTOX and http://www.uniprot.org/uniprot/Q9I8L5			
F10M	Fatty acid-binding protein 10b hnRNA	hnRNA (heterogeneous nuclear RNA) is a collective term referring to pre-mRNA and other nuclear RNAs of various sizes, in this case specific to Fatty acid-binding protein 10b hnRNA. Also: FABP10b.	ECOTOX and http://zfin.org/ZDB-GENE-100217-2	176568	none given	
10BM	Fatty acid-binding protein 10b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein 10b. Also: FABP10b.	ECOTOX			
FAMM	Fatty acid-binding protein, muscle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fatty acid-binding protein, muscle. Also: M-FABP.	ECOTOX and http://www.uniprot.org/uniprot/P41496			
FDXM	Ferredoxin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferredoxin. Also: petF.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=4524600	174382		
FNAM	Ferredoxin-nitrate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferredoxin-nitrate reductase. Also: narB.	ECOTOX and http://www.uniprot.org/uniprot/B0JGF2			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FNIM	Ferredoxin-nitrite reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferredoxin-nitrite reductase. Also: nirA.	ECOTOX and http://www.uniprot.org/uniprot/B0JM77			
FROM	Ferric reductase oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ferric reductase oxidase. Also: ferric reduction oxidase 2-like.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=AY590765	176525	AY590764	GenBank
FRTM	Ferritin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ferritin.	ECOTOX and http://www.uniprot.org/uniprot/Q2PDG9			
FGYM	FGGY carbohydrate kinase domain containing mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FGGY carbohydrate kinase domain containing.	ECOTOX and http://www.uniprot.org/uniprot/E1C771	175651	none given	
FBPM	Fibrinogen, gamma peptide mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibrinogen, gamma peptide. Also: fgg.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZVG7	173763	AAH45868.1	GenBank
FLDM	Fibrinogen-like domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibrinogen-like domain.	ECOTOX			
F18M	Fibroblast growth factor 18-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor 18-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=100577390			
FG2M	Fibroblast growth factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 2. Also: fgf2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/KP728095	173779	KP728095	GenBank
FG8M	Fibroblast growth factor 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor 8. Also: fgf8, Androgen-induced growth factor, Heparin-binding growth factor 8, AIGF.	ECOTOX and http://www.uniprot.org/uniprot/P55075			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
11FM	Fibroblast growth factor 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 11. Also: fgf11.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728096	173779	KP728096	GenBank
16FM	Fibroblast growth factor 16 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 16. Also: fgf16.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728098	173779	KP728098	GenBank
17FM	Fibroblast growth factor 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 17. Also: fgf17.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728097	173779	KP728097	GenBank
20FM	Fibroblast growth factor 20 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 20. Also: fgf20.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728099	173779	KP728099	GenBank
22FM	Fibroblast growth factor 22 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor 22. Also: fgf22.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728100	173779	KP728100	GenBank
FR1M	Fibroblast growth factor receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibroblast growth factor receptor 1. Also: FGFR-1, Fgfr1, Flg, Basic fibroblast growth factor receptor 1, MFR, Proto-oncogene c-Fgr, CD_antigen: CD331.	ECOTOX and http://www.uniprot.org/uniprot/P16092	168257	JQ973864	GenBank
FR2M	Fibroblast growth factor receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor receptor 2. Also: fgfr2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728102	173779	KP728102	GenBank
FR3M	Fibroblast growth factor receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor receptor 3. Also: fgfr3.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728103	173779	KP728103	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FR4M	Fibroblast growth factor receptor 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibroblast growth factor receptor 4. Also: fgfr4.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728104	173779	KP728104	GenBank
FRAM	Fibrinogen alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to fibrinogen alpha. Also: FGA, Fibrogen alpha chain.	ECOTOX and https://www.uniprot.org/uniprot/P14448	177172	XM_001232366	GenBank
FN1M	Fibronectin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fibronectin 1. Also: FN1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/396133	175651	none given	
FZ1M	Fizzy-related protein homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fizzy-related protein homolog. Also: FZR1, Fizzy-related protein 1, Cdh1/Hct1 homolog, Fyr, Fzr.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucest/aw173921 and http://www.uniprot.org/uniprot/Q5Q9A8	169185	AW173921	GenBank
FKPM	FK506-binding protein 15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FK506-binding protein 15. Also: 133 kDa FK506-binding protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6P9Q6			
FMOM	Flavin-containing monooxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to flavin-containing monooxygenase. Also: Dimethylaniline monooxygenase [N-oxide-forming], FMO.	ECOTOX, http://www.uniprot.org/uniprot/A0SZ82 and https://www.ncbi.nlm.nih.gov/genbank/?term=NM_001124664.1	173661	NM_001124664.1	GenBank
F1CM	Flotillin 1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Flotillin 1c. Also: Flot1c, Flot1c protein, Flot1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AWZ4	166650	Q8AWZ4	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FSMR	Follicle stimulating hormone beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to follicle stimulating hormone. Also: Follitropin subunit beta, Follicle stimulating hormone beta subunit, FSHB, FSH-B, FHS-beta, Follitropin beta chain.	ECOTOX and http://www.uniprot.org/uniprot/P01228			
FSRM	Follicle-stimulating hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Follicle-stimulating hormone receptor.	ECOTOX			
FLSM	Follistatin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Follistatin.	ECOTOX			
FXDM	Forkhead box D transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to forkhead box D transcription factor. Also: foxd.	ECOTOX and https://www.uniprot.org/uniprot/D2XNN8	176960	none given	
FXGM	Forkhead transcription factor G mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to forkhead transcription factor G. Also: foxg.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/583688	176960	none given	
FD3M	FoxD3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FoxD3.	ECOTOX			
FX2M	FoxI2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FoxI2 (Forkhead transcription factor gene 2).	ECOTOX			
FRS1	Fraser extracellular matrix complex subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fraser extracellular matrix complex subunit 1. Also: fras1, pif, id:ibd5080, wu:fc10b09.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/563428	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FZZM	Frizzled cysteine rich domain region mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Frizzled cysteine rich domain region.	ECOTOX			
FB1M	Fructose-1,6-bisphosphatase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-1,6-bisphosphatase 1a. Also: fbp1a, fbp1, fbp11, fk92h02, wu:fk92h02, zgc:64096.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_19994 2.1 and http://www.uniprot.org/uniprot/Q6PFT1	169101		
FBMR	Fructose-bisphosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphatase.	ECOTOX			
FBCM	Fructose-bisphosphate aldolase C-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphate aldolase C-B. Also: Brain-type aldolase-B, aldoch.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=nm_001044865	170520	NM_194384	GenBank
FBAM	Fructose-bisphosphate aldolase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fructose-bisphosphate aldolase. Also: Aldolase C.	ECOTOX and http://www.uniprot.org/uniprot/Q92007	166650	Q92007	GenBank
FAAM	Fumarylacetoacetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Fumarylacetoacetase. Also: FAA, Fah, Beta-diketonase, Fumarylacetoacetate hydrolase, EC 3.7.1.2.	ECOTOX and http://www.uniprot.org/uniprot/P35505			
FP1M	Furin-like protease 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Furin-like protease 1. Also: Fur1.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=725466			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FRBR	FUS RNA binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to FUS RNA binding protein. Also: fus, zgc:56390.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/nm_201083	170323	NM_201083	GenBank
GPAR	G protein alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G protein alpha subunit mRNA.	http://www.uniprot.org/uniprot/M9P1E6 and http://www.ncbi.nlm.nih.gov/nucleotide/JQ914104	170397	JQ914104	GenBank
G27M	G protein-coupled receptor 27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G protein-coupled receptor 27. Also: Gpr27 protein, Gpr27.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/NM_001114434.1 and http://www.uniprot.org/uniprot/A9JRY2			
G1PN	G1 Phase Nuclei	No definition available.				
G6MR	G6A11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to G6A11	ECOTOX			
GBRM	GABAa Receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GABAa receptor-associated protein 2.	ECOTOX and http://www.uniprot.org/uniprot/B6GVL8			
GD67	GAD67 (glutamate decarboxylase) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GAD67 (glutamate decarboxylase).	ECOTOX			
GGSM	Gamma glutamylcysteine synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gamma glutamylcysteine synthetase.	ECOTOX			
GVMR	gamma vitelline envelope protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gamma vitelline envelope protein	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GABM	gamma-Aminobutyric acid A receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gamma-Aminobutyric acid A receptor. Also: GABA A, GABA-A.	ECOTOX	174689		
GAAM	gamma-Aminobutyric acid A receptor, subunit alpha 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gamma-Aminobutyric acid A receptor, subunit alpha 1. Also: GABAaRa1, Gabra1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/14394	173826		
AR1M	gamma-Aminobutyric acid receptor subunit rho-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gamma-aminobutyric acid receptor subunit rho-1. Also: gamma-Aminobutyric acid (GABA) receptor rho 1, Gabrr1, GABA(A) receptor subunit rho-1, GABA(C) receptor.	ECOTOX and http://www.uniprot.org/uniprot/P56475			
GGBM	Gamma-glutamyltransferase 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gamma-glutamyltransferase 1b. Also: ggt1b.	ECOTOX and http://zfin.org/ZDB-GENE-110408-13	178022	none given	
G2AM	Ganglioside GM2 activator mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ganglioside GM2 activator. Also: GM2-Activator protein, Cerebroside sulfate activator protein, GM2-AP, Shingolipid activator protein 3.	ECOTOX and http://www.uniprot.org/uniprot/Q60648			
GJ1M	Gap junction alpha-1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gap junction alpha-1 protein. Also: gja1, Connexin-43, Cx43, Short fin protein, shf, sof.	ECOTOX and http://www.uniprot.org/uniprot/O57474			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GB1M	GATA binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GATA binding protein 1. Also: gata1, gata1a, GATA binding protein 1a, gta1, zg1.	ECOTOX, https://www.uniprot.org/uniprot/Q05AJ3 and http://zfin.org/ZDB-GENE-980526-268	177252	none given	
GP2M	GATA binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GATA binding protein 2. Also: gata2, gata2a, GATA binding protein 2a, zg2.	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/30480 and http://zfin.org/ZDB-GENE-980526-260	177252	none given	
GP1M	GDP-L-galactose phosphorylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GDP-L-galactose phosphorylase 1. Also: Protein Vitamin C Defective 2, VTC2, EC 2.7.7.69.	ECOTOX and http://www.uniprot.org/uniprot/Q8RWE8			
G18M	Gene 18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gene 18. Also: thdl18, thyroid hormone down-regulated protein, XL18.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/U41839.1/	68278	U41839	GenBank
GEXP	Gene Expression	Gene Expression: The conversion of the information from the gene into mRNA via transcription and then to protein via translation resulting in the phenotypic manifestation of the gene.	http://www.biology-online.org/dictionary/Gene_Expression			
GGEN	Genetics, General	Changes in the genetic processes of cell (e.g. RNA, DNA).				
GTPF	Genotype Frequencies	No definition available.				
GG1M	Geranylgeranyl pyrophosphate synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to geranylgeranyl pyrophosphate synthase 1. Also: GGPS1.	ECOTOX and http://www.uniprot.org/uniprot/Q1A7T0	176551	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GG2M	Geranylgeranyl pyrophosphate synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to geranylgeranyl pyrophosphate synthase 2. Also: GGPS2.	ECOTOX and http://www.uniprot.org/uniprot/Q1A7S9	176551	none given	
GG4M	GGPP synthase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GGPP synthase 4. Also: Geranylgeranyl pyrophosphate synthase 4, GGPP4.	ECOTOX and http://www.uniprot.org/uniprot/Q9SLG2	176551	none given	
GPSM	GGPP synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GGPP synthase. Also: Geranylgeranyl pyrophosphate synthase, GGPS.	ECOTOX and http://www.uniprot.org/uniprot/O95749	176551	none given	
GHLM	Ghrelin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ghrelin. Also: ghrl and obestatin prepropeptide.	ECOTOX and http://zfin.org/ZDB-GENE-070622-2	175217	none given	
G20M	Gibberellin 20 oxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gibberellin 20 oxidase 1. Also: GA20OX1, GA 20-oxidase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q39110	176578		
G21M	Gibberellin 2-beta-dioxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gibberellin 2-beta-dioxygenase 1. Also: GA2OX1, GA 2-oxidase 1, Gibberellin 2-beta-hydroxylase 1, Gibberellin 2-oxidase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q9SQ80	176578		
G22M	Gibberellin 2-beta-dioxygenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gibberellin 2-beta-dioxygenase 2. Also: GA2OX2, GA 2-oxidase 2, Gibberellin 2-beta-hydroxylase 2, Gibberellin 2-oxidase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9XHM5	176578		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
G31M	Gibberellin 3-beta-dioxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gibberellin 3-beta-dioxygenase 1. Also: GA3OX1, GA 3-oxidase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q39103	176578		
G32R	Gibberellin 3-beta-dioxygenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gibberellin 3-beta-dioxygenase 2. Also: GA3OX2, GA 3-oxidase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZT84	176578		
GL2R	GLI family zinc finger 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GLI family zinc finger 2a. Also: gli2, etlD12892.9, gli2a.	ECOTOX and http://zfin.org/ZDB-GENE-990706-8	171280		
GFAM	Glial fibrillary acidic protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glial fibrillary acidic protein mRNA. Also: cb345, gfapl, wu:fb34h11, wu:fk42c12, zgc:110485, etlD36982.3, xx:af506734, zrf-1 antigen.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=nm_131373	170392	NM_131373	
GNRM	Global nitrogen regulator Ycf28 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Global nitrogen regulator Ycf28. Also: ntcA.	ECOTOX and http://www.uniprot.org/uniprot/B0JRG0			
GAGM	Glucagon A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glucagon A.	ECOTOX and https://www.uniprot.org/uniprot/A0A0R4IS85	176948	NM_001271770.1	GenBank
GBGM	Glucagon B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glucagon B.	ECOTOX and https://www.uniprot.org/uniprot/B0R1C3	176948	NM_001242770.1	GenBank
GRAM	Glucagon receptor A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glucagon receptor A. Also: gcgra.	ECOTOX and https://www.uniprot.org/uniprot/E7FB43	176948	XM_686342.6	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
BRBM	Glucagon receptor B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glucagon receptor B. Also: gcgrb.	ECOTOX and https://www.uniprot.org/uniprot/F1RCQ6	176948	XM_009295263.2	GenBank
GCRR	Glucocorticoid receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucocorticoid receptor. Also: fb13f09, gr, utouto, utut, zgc:113038, nuclear receptor subfamily 3, group c, member 1, nr3c1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene?cmd=retrieve&list_uids=553740	170323	Ef567112	GenBank
GCKM	Glucokinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucokinase. Also: Hexokinase type IV, Hexokinase-4, Hexokinase-D, EC 2.7.1.2.	ECOTOX and http://www.uniprot.org/uniprot/P35557			
GY2M	Glucose dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucose dehydrogenase 2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551044			
GLT1	Glucose transporter 1 mRNA	Glucose transporter 1 mediates glucose transport into red cells, and throughout the blood brain barrier. It is ubiquitously expressed and transport glucose in most cells. Messenger RNA.	http://www.4adi.com/flr/glutsflr.html			
G6PR	Glucose-6-phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glucose-6-phosphatase. Also: g6pca.1.	ECOTOX and https://www.uniprot.org/uniprot/F1Q559	176948	NM_001003512.2	GenBank
G6PM	Glucose-6-phosphate 1-dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucose-6-phosphate 1-dehydrogenase. Also: G6PD, g6pd, Glucose-6-phosphate dehydrogenase (NADP(+)), G6PDH, Glucose-6-phosphate dehydrogenase, EC 1.1.1.49.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.49 and http://www.uniprot.org/uniprot/P54996			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GSPM	Glucosinolate sulphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glucosinolate sulphatase.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551758			
GLCM	Glutamate-cysteine ligase, catalytic subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate-cysteine ligase, catalytic subunit. Also: gclc.	ECOTOX and http://zfin.org/ZDB-GENE-030131-5056	178022	none given	
GC1M	Glutamate carboxypeptidase-like protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate carboxypeptidase-like protein 1 mRNA. Also: cyl18.	ECOTOX and https://www.uniprot.org/uniprot/Q801E4	170608	AY188285	GenBank
GCLM	Glutamate cysteine-ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate cysteine-ligase.	ECOTOX			
G65M	Glutamate decarboxylase 65 kDa isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate decarboxylase 65 kDa isoform mRNA	ECOTOX			
G67M	Glutamate decarboxylase 67 kDa isoform mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate decarboxylase 67 kDa isoform	ECOTOX			
GLTM	Glutamate dehydrogenase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate dehydrogenase 1a. Also: glud1a, glud1.	ECOTOX and http://zfin.org/ZDB-GENE-030114-2	179291	none given	
GIAM	Glutamate receptor, ionotropic, AMPA 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate receptor, ionotropic, AMPA 2b. Also: gria2b, glur2b, gria2.2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=gria2b	179291	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GK2M	Glutamate receptor, ionotropic, kainate 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate receptor, ionotropic, kainate 2. Also: GRIK2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408645			
GRBM	Glutamate receptor, ionotropic, N-methyl D-aspartate 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate receptor, ionotropic, N-methyl D-aspartate 1b. Also: grin1b.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=grin1b	179291	none given	
GN2R	Glutamate receptor, ionotropic, N-methyl D-aspartate 2C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate receptor, ionotropic, N-methyl D-aspartate 2C. Also: Grin2c, NR2c, GluN2C.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/24411 and http://www.uniprot.org/uniprot/Q00961	170324	NM_012575	GenBank
GALM	Glutamate-ammonia ligase A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutamate-ammonia ligase A. Also: glutamine synthase a, glula, gso1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/100000775	179291	none given	
GCCM	Glutamate--cysteine ligase catalytic subunit-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamate--cysteine ligase catalytic subunit-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=XM_002126507.3	160508	XM_002126507	GenBank
GAMM	Glutaminase a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutaminase a. Also: GLSA.	ECOTOX and https://www.uniprot.org/uniprot/Q1LWI2	118453	NM_001045044.1	GenBank
GS2M	Glutamine synthetase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamine synthetase 2. Also:glulb.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/np_878286.1			
GLNR	Glutamine synthetase, chloroplastic/mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutamine synthetase, chloroplastic/mitochondrial, GLN2.	http://www.uniprot.org/uniprot/Q43127	176368	S18600	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GC4R	Glutaredoxin-C4, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutaredoxin-C4, chloroplastic. Also: grxc4, glutaredoxin-c2 homolog 2.	ECOTOX and http://www.uniprot.org/uniprot/Q6K953	170368		
GDGM	Glutathione dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione dehydrogenase. Also: Alcohol dehydrogenase class-3, Alcohol dehydrogenase 2, Alcohol dehydrogenase 5, Alcohol dehydrogenase b2, Alcohol dehydrogenase class-III, Glutathione-dependent formaldehyde dehydrogenase, S-(hydroxymethyl)glutathione dehydrogenase, FALDH, FDH, GSH-FDH, ADH5, ADH-2, ADH2.	ECOTOX and https://www.uniprot.org/uniprot/P28474	177317	none given	
GX1M	Glutathione peroxidase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1. Also: Glutathione peroxidase 1. Also: GPX1, GPx-1, GSHPx-1, Cellular glutathione peroxidase, Selenium-dependent glutathione peroxidase 1, PHGPX1.	ECOTOX and http://www.uniprot.org/uniprot/P11352	168529	DW566563	GenBank
X10M	Glutathione peroxidase 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 7. Also: GPX10, GPx-10.	ECOTOX and http://ciliate.org/index.php/feature/details/GPX10	172755		
G1AR	Glutathione peroxidase 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1a. Also: Gpx1a protein, gpx1a.	ECOTOX and http://www.uniprot.org/uniprot/Q5XJ48	168602	JF411605	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
G1BR	Glutathione peroxidase 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 1b. Also: gpx1b, Gpx1b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q66IE1	168602	JF411606	GenBank
GX2M	Glutathione peroxidase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 2. Also: GPX2, GPx-2.	ECOTOX and http://ciliate.org/index.php/feature/details/TTHERM_00895660	172755		
GX3M	Glutathione peroxidase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 3. Also: Gpx3, GPx-3, GSHPx-3, Plasma glutathione peroxidase, GPx-P, GSHPx-P.	ECOTOX and http://www.uniprot.org/uniprot/P46412			
GX4M	Glutathione peroxidase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 4. Also: Gpx4, Phospholipid hydroperoxide glutathione peroxidase nuclear, GPx-4, GSHPx-4.	ECOTOX and http://www.uniprot.org/uniprot/Q91XR8			
GP4M	Glutathione peroxidase 4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 4b. Also: gpx4b, cb692, and phgpxb.	ECOTOX and http://zfin.org/ZDB-GENE-030410-3	171290	EX721840	GenBank
GX5M	Glutathione peroxidase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 5. Also: Gpx5, GPXH, Epididymal secretory glutathione peroxidase, Epididymis-specific glutathione peroxidase-like protein, EGLP, GPx-5, GSHPx-5, Major androgen-regulated protein, arMEP24.	ECOTOX and http://www.uniprot.org/uniprot/P21765			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GX7M	Glutathione peroxidase 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase 7. Also: GPX7, GPx-7.	ECOTOX and http://ciliate.org/index.php/feature/details/TTHERM_00046110	172755		
GPMR	Glutathione Peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione Peroxidase.	ECOTOX			
G1LM	Glutathione peroxidase-like 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase-like 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=494523			
G2LM	Glutathione peroxidase-like 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione peroxidase-like 2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726269			
GLRR	Glutathione reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione reductase. Also: GSR.	ECOTOX			
GCHM	Glutathione reductase, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to chloroplastic glutathione reductase. Also: AT3G54660, EMB2360, Protein EMBRYO DEFECTIVE 2360, GR2.	ECOTOX and https://www.uniprot.org/uniprot/P42770	177805	none given	
GCYM	Glutathione reductase, cytosolic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to cytosolic glutathione reductase. Also: At3g24170, GR1, OBP29.	ECOTOX and https://www.uniprot.org/uniprot/P48641	177805	none given	
GA3M	Glutathione S-transferase alpha 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutathione S-transferase alpha 3. Also: GSTA3.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=NM_001001777	175777	NM_001001777	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GS4R	Glutathione S-transferase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase 4. Also: CeGST1, GST class-sigma, gst-4.	ECOTOX and http://www.uniprot.org/uniprot/Q21355			
GTAM	Glutathione S-transferase alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase alpha.	ECOTOX			
GA1M	Glutathione S-transferase alpha-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase alpha-1. Also: GST 1-1, GST 1a-1a, GST A1-1, GST B, Glutathione S-transferase Ya-1, Gsta1.	ECOTOX and http://www.uniprot.org/uniprot/P00502			
GD2M	Glutathione S-transferase D2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D2. Also: Glutathione S-transferase delta 2, GstD2, gstD21.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG98			
GD3M	Glutathione S-transferase D3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D3. Also: Glutathione S-transferase delta 3, GstD3, gstD22.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG97			
GD5M	Glutathione S-transferase D5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase D5. Also: GstD5, DmGST24, gstD24.	ECOTOX and http://www.uniprot.org/uniprot/Q9VG95			
GD1M	Glutathione S-transferase delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase delta. Also: Glutathione S-transferase delta 1, GSTD1.	ECOTOX and http://www.uniprot.org/uniprot/E7BTM5			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GE1M	Glutathione S-transferase E1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase E1. Also: Glutathione S-transferase epsilon 1, GSTe1.	ECOTOX and http://www.uniprot.org/uniprot/Q8WQM1			
GE2M	Glutathione S-transferase epsilon 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase epsilon 2.	ECOTOX			
GTKM	Glutathione S-transferase kappa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase kappa.	ECOTOX and http://www.uniprot.org/uniprot/G4W8Z2			
RNGT	Glutathione S-transferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase.	ECOTOX			
GM5M	Glutathione S-transferase Mu 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase Mu 5. Also: Gstm5, Fibrous sheath component 2, GST class-mu 5, Fsc2, Gstm3.	ECOTOX and http://www.uniprot.org/uniprot/P48774	166007	EU747061	GenBank
GSTM	Glutathione S-transferase mu 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase mu 9. Also: GSTm9.	ECOTOX and http://ciliate.org/index.php/feature/details/GST9	172755		
GTMM	Glutathione S-transferase mu mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase mu. Also: Gstm1.	ECOTOX			
GO2M	Glutathione S-transferase omega 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega 2. Also: gsto2	ECOTOX and https://zfin.org/ZDB-GENE-041114-67	174374		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GOMM	Glutathione S-transferase omega class mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega class.	ECOTOX and http://www.uniprot.org/uniprot/Q7VCF4			
GTOR	Glutathione S-transferase omega mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega.	ECOTOX and http://www.uniprot.org/uniprot/B3VHS2	166007	EU747055	GenBank
GTOM	Glutathione S-transferase omega-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase omega-1. Also: Glutathione transferase omega-1, GSTO1.	ECOTOX and http://www.uniprot.org/uniprot/Q9N1F5			
G10R	Glutathione S-transferase P 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase P 10. Also: GST 5.4, GST class-pi, GSTP2-2, gst-10.	ECOTOX and http://www.uniprot.org/uniprot/Q9N4X8			
GTPM	Glutathione S-transferase pi mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase pi. Also: gsti, Glutathione S-transferase P, GSTP1, Chain 7, GST 7-7, GST class-pi.	ECOTOX and http://www.uniprot.org/uniprot/P04906	168528	BQ036247	GenBank
GTRM	Glutathione S-transferase rho mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase rho. Also gstr, gstr1	ECOTOX, http://www.uniprot.org/uniprot/Q0GZP3 and http://www.uniprot.org/uniprot/Q1L907			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GS1M	Glutathione S-transferase S1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S1. Also: GST class-sigma 1, Glutathione S-transferase sigma 1, Glutathione S-transferase 2 , GstS1, GST2.	ECOTOX and http://www.uniprot.org/uniprot/P41043			
G2SM	Glutathione S-transferase S2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S2. Also: Glutathione S-transferase sigma 2, GSTs2.	ECOTOX and http://www.uniprot.org/uniprot/F6KX43			
GS3M	Glutathione S-transferase S3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S3. Also: Glutathione S-transferase sigma 3, GSTs3.	ECOTOX and http://www.uniprot.org/uniprot/F6KX44			
GS4M	Glutathione S-transferase S4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase S4. Also: Glutathione S-transferase sigma 4. GSTs4.	ECOTOX and http://www.uniprot.org/uniprot/H6CSZ2			
GSSM	Glutathione S-transferase sigma class mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase sigma class.	ECOTOX and http://www.uniprot.org/uniprot/B2BR08			
GT5M	Glutathione S-transferase sigma 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutathione S-transferase sigma 5. Also: GST-S5, GSTS5, glutathione S-transferase s5.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KF855310.1/	177378	KF855310.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GT6M	Glutathione S-transferase sigma 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutathione S-transferase sigma 6. Also: GST-S6, GSTS6, glutathione S-transferase s6.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KF855311.1/	177378	KF855311.1	GenBank
GT7M	Glutathione S-transferase sigma 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutathione S-transferase sigma 7. Also: GST-S7, GSTS7, glutathione S-transferase s7.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KF855312.1/	177378	KF855312.1	GenBank
GT8M	Glutathione S-transferase sigma 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glutathione S-transferase sigma 8. Also: GST-S8, GSTS8, glutathione S-transferase s8.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KF855313.1/	177378	KF855313.1	GenBank
GSAR	Glutathione S-transferase theta 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta 1a. Also: gstd1a	ECOTOX and http://www.uniprot.org/uniprot/E7EZ94	174374		
GTBM	Glutathione S-transferase theta 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta 1b. Also: gstd1b.	ECOTOX and http://www.uniprot.org/uniprot/Q6PH41			
GS2R	Glutathione S-transferase theta 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta 2. Also: gstd2	ECOTOX and http://www.uniprot.org/uniprot/P30713	174374		
GTTM	Glutathione S-transferase theta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GT1M	Glutathione S-transferase theta-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase theta-1. Also: GST 5-5, GST class-theta-1, Glutathione S-transferase 5, GSTt1.	ECOTOX and http://www.uniprot.org/uniprot/Q01579			
GZ1M	Glutathione S-transferase Z1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase Z1. Also: GST class-zeta member 1, Glutathione S-transferase 18, Maleylacetone isomerase, GSTZ1, GST18.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZVQ3			
GZTM	Glutathione S-transferase zeta 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase zeta 2. Also: GSTZ2, GST class-zeta member 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9ZVQ4	172755		
GSZM	Glutathione S-transferase zeta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione S-transferase zeta. Also: GST zeta.	ECOTOX and http://www.uniprot.org/uniprot/E6Y352			
GSLM	Glutathione synthetase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glutathione synthetase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=XM_002125287.1	160508	XM_002125287	GenBank
G32M	Glyceraldehyde 3-phosphate dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glyceraldehyde 3-phosphate dehydrogenase 2 mRNA. Also: cb350, g3pdh, gapdhs, gapds, fb71f08, fk58c09, gapdh-2, zgc:76908, wu:fb71f08, wu:fk58c09.	ECOTOX, http://www.uniprot.org/uniprot/Q5MJ86 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_213094	170362	NM_213094	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GPHM	Glyceraldehyde 3-phosphate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glyceraldehyde 3-phosphate dehydrogenase. Also: GAPDH mRNA.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001115114	175189	NM_001115114	GenBank
G3AR	Glycerol-3-phosphate acyltransferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycerol-3-phosphate acyltransferase 1. Also: gpat1, gpam.	ECOTOX and http://www.uniprot.org/uniprot/Q615862	173197		
GNMM	Glycine N-methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycine N-methyltransferase. Also: Folate-binding protein, Gnmt, EC 2.1.1.20.	ECOTOX and http://www.uniprot.org/uniprot/P13255	166328	NM_212816.1	GenBank
GRPM	Glycine-rich protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycine-rich protein. Also: glycine-rich protein-like, cell wall glycine-rich protein, GRP1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/?term=CsGRP1	176650	none given	
GPPM	Glycogen phosphorylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycogen phosphorylase.	ECOTOX			
GPAM	Glycogen phosphorylase, muscle A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glycogen phosphorylase, muscle A. Also: pygma.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001020628.1	176948	NM_001020628.1	GenBank
GPBM	Glycogen phosphorylase, muscle B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glycogen phosphorylase, muscle B. Also: pygmb.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_200472.1?report=genbank	176948	NM_200472.1	GenBank
GL1M	Glycogenin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycogenin-1. Also: GYG1.	ECOTOX and http://www.uniprot.org/uniprot/P46976			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GS1R	Glycogen synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glycogen synthase 1. Also: gys1.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_20118.0.2	176948	NM_20118.0.2	GenBank
GY2R	Glycogen synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to glycogen synthase 2. Also: gys2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001018679.1/	176948	NM_001018679.1	GenBank
GHAM	Glycoprotein hormone alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycoprotein hormone alpha subunit.	ECOTOX			
GCAM	Glycosyl-phosphatidylinositol-linked carbonic anhydrase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Glycosyl-phosphatidylinositol-linked carbonic anhydrase. Also: CasCag.	ECOTOX and http://www.uniprot.org/uniprot/A3FFY2	156269	EF375491	GenBank
GO3M	GMC oxidoreductase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GMC oxidoreductase 3. Also: GMCOX3.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=410747			
GL2M	Gonadoliberin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Also: GnRH2, Gonadoliberin II, Gonadotropin-releasing hormone II, Gonadotropin-releasing hormone 2, GnRH-II, Luliberin II, Luteinizing hormone-releasing hormone II, Luteinizing hormone-releasing hormone 2, LH-RH II.	ECOTOX and http://www.uniprot.org/uniprot/P68075			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GL3M	Gonadoliberin-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadoliberin-3. Also: GnRH3, Gonadoliberin III, Gonadotropin-releasing hormone III, Gonadotropin-releasing hormone 3, GnRH-II, Luliberin III, Luteinizing hormone-releasing hormone III, Luteinizing hormone-releasing hormone 3, LH-RH III.	ECOTOX and http://www.uniprot.org/uniprot/P69105			
GRHR	gonadotrophin releasing hormone (GnRH) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gonadotrophin releasing hormone (GnRH).	ECOTOX			
GNRR	gonadotrophin releasing hormone (GnRH) receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to gonadotrophin releasing hormone (GnRH) receptor.	ECOTOX			
GR3M	Gonadotrophin-releasing hormone receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-3. Also: gnrhr3.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N5			
GASR	Gonadotropin alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin alpha subunit.	ECOTOX			
GBPR	Gonadotropin beta-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin beta-like protein.	ECOTOX			
GR2M	Gonadotropin-releasing hormone II receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone II receptor. Also: GnRHR2, Gonadotropin-releasing hormone 2 receptor, Type II GnRH receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q95MG6			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
G1AM	Gonadotropin-releasing hormone receptor 1 type A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor 1 type A. Also: GnRHR1A.	ECOTOX and http://www.uniprot.org/uniprot/I2B312	164893	AFJ44818	GenBank
G1BM	Gonadotropin-releasing hormone receptor 1 type B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor 1 type B. Also: GnRHR1B.	ECOTOX and http://www.uniprot.org/uniprot/I2B311	164893	AFJ44817	GenBank
GR1M	Gonadotropin-releasing hormone receptor-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-1. Also: GnRHR1.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N3			
GR4M	Gonadotropin-releasing hormone receptor-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Gonadotropin-releasing hormone receptor-4. Also: GnRHR4.	ECOTOX and http://www.uniprot.org/uniprot/B9P4N6			
GOMR	goosecoid mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to goosecoid.	ECOTOX			
GB2M	GRB2-related adaptor protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to GRB2-related adaptor 2. Also: Grap2, Gads, Grb2l, Grid, Mona.	ECOTOX and http://www.uniprot.org/uniprot/O89100	110754		
GFPM	Green fluorescent protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Green fluorescent protein. Also: GFP.	ECOTOX and http://www.uniprot.org/uniprot/P42212			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GO1M	Green-sensitive opsin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Green-sensitive opsin-1. Also: Opsin 1 (cone pigments) medium-wave-sensitive 1, opn1mw1, RH2-1, rh21, zfgr1, grops1, Green cone photoreceptor pigment 1, Opsin RH2-1, Opsin-1 medium-wave-sensitive 1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_131253 and http://www.uniprot.org/uniprot/Q9W6A5	166633	NM_131253	GenBank
GDAM	Growth arrest and DNA damage-inducible protein alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth arrest and DNA damage-inducible protein alpha. Also: GADD45, DNA damage-inducible transcript 1 protein, DDIT-1, Gadd45a.	ECOTOX and http://www.uniprot.org/uniprot/P48316			
GAPM	Growth associated protein 43 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth associated protein 43 mRNA. Also: gap, cb310, neuromodulin mRNA.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131341	170392	NM_131341	
GF1M	Growth factor receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to growth factor receptor 1. Also: fgfr1.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728101	173779	KP728101	GenBank
GH1R	Growth hormone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone 1. Also: gh1.	ECOTOX, http://www.uniprot.org/uniprot/Q1JQ34	169181	NM_001020492.2	GenBank
GHMR	Growth hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Growth hormone is a polypeptide hormone secreted by the anterior pituitary which promotes an increase in body size. Any hormone that regulates growth in plants and animals.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GHPM	Growth hormone receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor 2. Also: GHR2.	ECOTOX and http://www.uniprot.org/uniprot/B5KME6	176060		
GHMM	Growth hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q90ZB0			
HRAM	Growth hormone receptor a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to growth hormone receptor a mRNA. Also: ghra.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001083578.1	178026	NM_001083578.1	RefSeq
HRBM	Growth hormone receptor b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to growth hormone receptor b mRNA. Also: ghrb.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001111081.1	178026	NM_001111081.1	RefSeq
G2AR	Growth hormone receptor type 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor type 2a. Also: GHR2a.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/AY861675	170516	AY861675	GenBank
G2BR	Growth hormone receptor type 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth hormone receptor type 2b. Also: GHR2b.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/56718397/	170516	AY751531	GenBank
HRHM	Growth hormone releasing hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to growth hormone releasing hormone mRNA. Also: ghrh.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001080092.1/	178026	NM_001080092.1	RefSeq
GD8M	Growth/differentiation factor 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Growth/differentiation factor 8. Also: Myostatin, Mstn, Gdf8.	ECOTOX and http://www.uniprot.org/uniprot/O35312			
GTLM	G-Type Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to g-type lysozyme. Also: glyz, lysg.	ECOTOX and http://www.uniprot.org/uniprot/B1B725	172685		

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
GMMR	Guanidinoacetate N-Methyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Guanidinoacetate N-Methyltransferase.	ECOTOX			
GNAM	Guanine nucleotide-binding protein G(o) subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Guanine nucleotide-binding protein G(o) subunit alpha.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/147905738	166650	NP_001081529	GenBank
HETM	Hatching enzyme 1, tandem duplicate 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hatching enzyme 1, tandem duplicate 1. Also: he1.1, he1, he1a, cb284, hatching enzyme 1a.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=he1a+AND+danio%5Borganism%5D	177606	none given	
H71M	Heat shock 70kDa protein 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 1-like. Also: hspa1l.	ECOTOX and http://www.uniprot.org/uniprot/Q0V9A5	166650	Q0V9A5	GenBank
H75M	Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 5 (glucose-regulated protein, 78kDa) precursor.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/147906703	166650	GI:147906703	GenBank
HP5R	Heat shock 70kDa protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock 70kDa protein 5. Also: BiP, Immunoglobulin binding protein.	http://www.ncbi.nlm.nih.gov/gene/?term=NM_001278801.1 and http://www.uniprot.org/uniprot/G5ELX5	170196	NM_001278801.1	Genbank
HC7M	Heat shock cognate protein 70 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock cognate protein 70 (hsc70). Also: HSPA8, Heat shock 70 kDa protein 8, heat shock cognate 71 kDa protein.	ECOTOX			

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H70M	Heat shock cognate 70-kd protein, tandem duplicate 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to heat shock cognate 70-kd protein, tandem duplicate 1. Also: hsp70.1.	ECOTOX and https://www.uniprot.org/uniprot/B0UXS6	177606	none given	
H10M	Heat shock protein 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 10. Also: Hsp10.	ECOTOX and http://www.uniprot.org/uniprot/B8P XK8	166007	EU306559	GenBank
H17M	Heat shock protein 17.6A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to heat shock protein 17.6A. Also: HSP17.6A.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/831076	178664	none given	
HT7M	Heat shock protein 20.7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 20.7. Also: Hsp20.7.	ECOTOX and http://www.uniprot.org/uniprot/B8P XK9	166007	EU306560	GenBank
HACM	Heat shock protein 20/alpha-crystallin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 20/alpha-crystallin. Also: Hsp20/alpha-crystallin.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/AY522572	166007	AY522572	GenBank
H22M	Heat Shock Protein 22 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 22. Also: Hsp22.	ECOTOX and http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4360758/	171183		
H26M	Heat shock protein 22.6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 22.6. Also: Hsp22.6	ECOTOX and http://www.uniprot.org/uniprot/B9VTS8	172774		
H27M	Heat Shock Protein 27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 27. Also: Hsp27.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/KC495957	170530	KC495957	GenBank
H30M	Heat shock protein 30 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 30. Also: HSP 30.	ECOTOX and http://www.uniprot.org/uniprot/P42931			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H40M	Heat shock protein 40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 40 (hsp40).	ECOTOX			
H60M	Heat shock protein 60 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 60. Also: HSP 60, 60 kDa chaperonin, Protein Cpn60.	ECOTOX and http://www.uniprot.org/uniprot/Q5B041			
HSPM	Heat shock protein 70 precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 70 precursor. Also: Hsp70p.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/EU306563	166007	EU306563	GenBank
H9AM	Heat shock protein 90 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90 alpha (hsp90a). Also: hsp90aa1, fb17b01, hsp90a.1, hsp90alpha, wu:fb17b01.	ECOTOX, http://www.uniprot.org/uniprot/G4W8Y9 and http://www.ncbi.nlm.nih.gov/genbank/?term=nm_131328			
H9BM	Heat shock protein 90 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90 beta (hsp90b).	ECOTOX and http://www.uniprot.org/uniprot/G4W8Z0			
H90R	Heat shock protein 90 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HSP90 (Heat shock protein 90). Also: HSP90, Abnormal dauer formation protein 21, daf-21.	ECOTOX and http://www.uniprot.org/uniprot/Q18688			
90BM	Heat shock protein 90kDa alpha (cytosolic), class B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 90kDa alpha (cytosolic), class B member 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148232054	166650	NP_001086624	GenBank
H94M	Heat shock protein 94 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein 94. Also: Hsp94.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/EU306565	166007	EU306565	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H16M	Heat shock protein Hsp-16.1/Hsp-16.11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protein Hsp-16.1/Hsp-16.11. Also: hsp-16.1, hsp16-1b, hsp-16.11, hsp16-1a.	ECOTOX and http://www.uniprot.org/uniprot/P34696#gene_name_table			
H47M	Heat shock protien 47 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heat shock protien 47. Also: HSP47, serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1) S homeolog (serpinh1.S).	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/NM_001086790.1/	175663	NM_001086790	GenBank
HEMH	Hematopoietically-expressed homeobox protein hhx mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hematopoietically-expressed homeobox protein hhx. Also: hhx.	ECOTOX and http://www.uniprot.org/uniprot/Q9IAV3			
HM1R	Heme oxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heme oxygenase 1. Also: hmox1, HO1, hmox, hemox, and hsp32.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/15368	171290	EX738947	GenBank
HOMR	Heme oxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heme oxygenase (HO-1).	ECOTOX			
HS2M	Hemocyanin subunit 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemocyanin subunit 2.	ECOTOX and http://www.uniprot.org/uniprot/P84293	174395	JK729385	GenBank
HC6M	Hemocyanin subunit 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemocyanin subunit 6.	ECOTOX and http://www.uniprot.org/uniprot/K4EJG5	169482	JF802122	GenBank
HM4M	Hemoglobin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin 4.	ECOTOX and http://www.uniprot.org/uniprot/Q5XU11			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HE1M	Hemoglobin alpha embryonic 1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hemoglobin alpha embryonic 1.1. Also: hbae1.1, hba2, hba2r, hbaa1, and hbae1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/30597	177252	none given	
HA3R	Hemoglobin alpha embryonic-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin alpha embryonic-3. Also: hbae3, fb57a06, si:by119c3.4, wu:fb57a06, zgc:86867, globin.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=hbae3 and http://zfin.org/ZDB-GENE-990706-3	163503		
HE2M	Hemoglobin beta embryonic 1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hemoglobin beta embryonic 1.1. Also: be1, hbbe1, and hbbe1.1, beta e1 globin.	ECOTOX and http://zfin.org/ZDB-GENE-030616-7	177252	none given	
HMGM	Hemoglobin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin. Also: Dhb1.	ECOTOX and http://www.uniprot.org/uniprot/Q9NG92			
HSAM	Hemoglobin subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin subunit alpha. Also: Hemoglobin alpha chain, hemoglobin alpha 1 globin chain.	ECOTOX and http://www.uniprot.org/uniprot/E7F4I1			
HGBR	Hemoglobin subunit beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin subunit beta. Also: beta-globin.	ECOTOX, http://www.uniprot.org/uniprot/P56251 , and https://www.ncbi.nlm.nih.gov/protein/P56251	173651	gi 736322 (P56251)	GenBank
BA2M	Hemoglobin subunit beta-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemoglobin subunit beta-2. (ba2) Also: Beta-2-globin, Hemoglobin beta-2 chain.	ECOTOX and http://www.uniprot.org/uniprot/p02140			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HMPM	Hemopexin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hemopexin.	ECOTOX and http://www.uniprot.org/uniprot/Q6PHG2			
HSSM	Heparan sulfate N-deacetylase/ N-sulfotransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heparan sulfate N-deacetylase/ N-sulfotransferase.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413242			
HSER	Heparanase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heparanase. Also: hpse, im:7144134.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_001045005	170323	NM_001045005	GenBank
H6OM	Heparan-sulfate 6-O-sulfotransferase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heparan-sulfate 6-O-sulfotransferase 2. Also: HS6ST2.	ECOTOX and http://www.uniprot.org/uniprot/Q76LW2	175651	none given	
HLPM	Hepatic lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hepatic lipase. Also: lipc.	ECOTOX and http://www.uniprot.org/uniprot/M1GNY1			
HN1M	Hepatocyte nuclear factor 1-alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hepatocyte nuclear factor 1-alpha. Also: HNF1A, HNF-1-alpha, TCF1, Transcription factor 1.	ECOTOX and http://zfin.org/ZDB-GENE-040513-8	177175	none given	
H4AR	Hepatocyte nuclear factor 4 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HNF-4alpha	ECOTOX			
H5PM	Hepcidin 5 precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hepcidin 5 precursor.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/AAU00798.1	173763	AAU00798.1	GenBank
HPCR	Hepcidin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hepcidin.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HNKM	Heterogeneous nuclear ribonucleoprotein K mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heterogeneous nuclear ribonucleoprotein K. Also: Hnrpk, hnRNP K, Hnrnpk.	ECOTOX and http://www.uniprot.org/uniprot/P61979	166650	P61979	GenBank
HA1M	Heterogeneous nuclear ribonucleoproteins A1 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Heterogeneous nuclear ribonucleoproteins A1 homolog. Also: hnRNP A1, Helix-destabilizing protein, Single-strand-binding protein, hnRNP core protein A1, hnrrnpa1, hnrrpa1.	ECOTOX and http://www.uniprot.org/uniprot/P17130	166650	P17130	GenBank
HTZY	Heterozygosity	Having different alleles at one or more corresponding chromosomal loci.	American Heritage Dictionary of the English Language, Fifth Edition, 2011			
HX1M	Hexokinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hexokinase 1. Also: hk1.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_21325.2.1	176948	NM_21325.2.1	GenBank
HX2M	Hexokinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hexokinase 2. Also: hk2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_21306.6.1	176948	NM_21306.6.1	GenBank
HXSM	Hexosaminidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hexosaminidase.	ECOTOX			
HANM	High-affinity nitrate transporter 3.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to High-affinity nitrate transporter 3.1. Also: nrt3.1, nar2.1, nar2.2, wr3, WOUND-RESPONSIVE 3.	ECOTOX and http://www.uniprot.org/uniprot/Q9FGS5	176597	none given	
HS1M	Histone deacetylase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to histone deacetylase 1. Also: HDAC1, HD1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/373961	175777	NM_20415.6	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HD3R	Histone deacetylase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone deacetylase 3. Also: hdac3, zgc:55927, hd3.	(ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_200990 and http://www.uniprot.org/uniprot/Q803C3)	170323	NM_200990	GenBank
H2AR	Histone H2AX mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone H2AX. Also: H2afx, H2a.x, H2ax, Hist5-2ax	ECOTOX, http://www.uniprot.org/uniprot/P27661 and https://www.ncbi.nlm.nih.gov/gene/15270	174404		
HH3R	Histone H3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to histone H3 mRNA	ECOTOX			
HH4M	Histone H4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone H4. Also: His4, H4-I, H4-II, H4-III, H4-IV, H4-V, H4-VI, H4-VII, H4.1, H4.2, H4.3, H4.4, H4.5, H4.6, H4.7.	ECOTOX and http://www.uniprot.org/uniprot/P62801#gene_name_table			
ML4R	Histone-lysine N-methyltransferase MLL4-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Histone-lysine N-methyltransferase MLL4-like. Also: mll4.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/718835	170801		
HCRM	HMG CoA-reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HMG CoA-reductase. Also: 3-hydroxy-3-methylglutaryl-coenzyme A reductase, HMGR.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=EU159456	177316	EU159456	GenBank
HX1R	Homeobox A10b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox A10b. Also: hoxa10b, hoxa-10, hoxa10, z-140.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131155	169181	NM_131155	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H11M	Homeobox A11b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox A11b. Also: hoxa11, hoxa11b, Hoxa-11, im:7142641.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131147.1	169181	NM_131147	GenBank
HX7M	Homeobox A7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox A7. Also: hoxa7, M6, Hox-1.1, AV118143	https://www.ncbi.nlm.nih.gov/gene/15404 , http://www.uniprot.org/uniprot/P02830	174166		
HX4R	Homeobox B4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox B4a. Also: Z-17, zf13, ZF-13, hoxb4, HOX-B4.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/30340 and http://www.uniprot.org/uniprot/P2574	169181		
HX5R	Homeobox B5b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox B5b. Also: z-2, ZF54, ZF-54, hoxa5, hoxzf54, hoxb5-like, id:ibd2566, zgc:101134.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/58052	169181		
H14M	Homeobox protein ceh-14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein ceh-14. Also: ceh-14.	ECOTOX and http://www.uniprot.org/uniprot/P20271	166810		
HXBM	Homeobox protein Hox-B1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to homeobox protein Hox-B1a. Also: hoxb1a, hox-b1, hoxb1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/30337	179291	none given	
HBCM	Homeobox protein MSH-C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Muscle segment homeobox C. Also: Muscle segment homeobox C, msxc, msh-c.	ECOTOX and http://www.uniprot.org/uniprot/Q01703	168257	JQ973863	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H4BM	Homeobox protein Nkx2.4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein Nkx2.4b. Also: nkx2.4b, nk2.1a, nkx2.1a, titf1a, nkx2.1, nkx2.4a.	ECOTOX, http://www.uniprot.org/uniprot/Q918L7 and http://www.ncbi.nlm.nih.gov/gene/58112	168455	NM_131589	GenBank
MBX2	Homeobox protein Nkx-2.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to homeobox protein Nkx-2.1. Also: Nkx2-1, ttf-1, Thyroid nuclear factor 1, Thyroid transcription factor 1, Thyroid-specific enhancer-binding protein.	ECOTOX and https://www.uniprot.org/uniprot/P50220	177131	none given	
H25M	Homeobox protein Nkx-2.5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeobox protein Nkx-2.5. Also: Cardiac-specific homeobox, Homeobox protein CSX, Homeobox protein NK-2 homolog E, Nkx2-5, Csx, Nkx-2.5, Nkx2e.	ECOTOX and http://www.uniprot.org/uniprot/P42582			
OT2M	Homeobox protein OTX2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to homeobox protein OTX2. Also: otx2, Orthodonticle homolog 2.	ECOTOX and https://www.uniprot.org/uniprot/Q91981	179291	none given	
HPKM	Homeodomain interacting protein kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain interacting protein kinase. Also: hipk, Homeodomain interacting protein kinase isoform A, Homeodomain interacting protein kinase isoform B.	ECOTOX, http://www.uniprot.org/uniprot/Q9W0Q1 and http://www.ncbi.nlm.nih.gov/gene/?term=408664			
HB1M	Homeodomain protein HB1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein HB1.	ECOTOX and http://www.uniprot.org/uniprot/Q6S3D9			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
HB2M	Homeodomain protein HB2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein HB2.	ECOTOX and http://www.uniprot.org/uniprot/Q6S3E0			
TT1M	Homeodomain protein TTX-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Homeodomain protein TTX-1.	ECOTOX and http://www.uniprot.org/uniprot/Q95W17			
HSEM	Hormone-sensitive enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hormone-sensitive enzyme. Also: Lipase, hormone-sensitive a, lipea.	ECOTOX and http://www.uniprot.org/uniprot/A3KPJ7	176978	NM_001316725.1	GenBank
H23R	HR23B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HR23B	ECOTOX			
H70R	HSP70 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to HSP70 (Heat shock protein 70).	ECOTOX			
HCHM	Hydrocephalus-inducing protein homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydrocephalus-inducing protein homolog.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=726796			
HCLM	Hydrocephalus-inducing protein-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydrocephalus-inducing protein-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=100578512			
HCDM	Hydroxyacyl-Coenzyme A dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxyacyl-Coenzyme A dehydrogenase. Also: Hydroxyacyl Coenzyme A dehydrogenase, Hydroxyacyl-CoA dehydrogenase, Hydroxyacyl CoA dehydrogenase, hadh, hadhsc.	ECOTOX and http://www.uniprot.org/uniprot/Q6DI22			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H32M	Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 2. Also: hsd3b2, hsd3b1, cb723, zgc:122972, hydroxy-delta-5-steroid dehydrogenase, 3 beta- and steroid delta-isomerase 1, 3beta-hydroxysteroid dehydrogenase/delta5-delta4 isomerase, and 3 beta-hydroxysteroid dehydrogenase 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=HSD3B1+A ND+gallus%5BOrganism%5D , and http://zfin.org/ZDB-GENE-030828-2	170801		
HASM	Hydroxymethylglutaryl-CoA synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxymethylglutaryl-CoA synthase.	ECOTOX			
HD1M	Hydroxysteroid 11-beta-dehydrogenase 1-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hydroxysteroid 11-beta-dehydrogenase 1-like protein. Also: hsd11b3, 11-beta-hydroxysteroid dehydrogenase type 3, hsd3.	ECOTOX and http://www.uniprot.org/uniprot/Q6PUF3			
HL2M	Hydroxysteroid dehydrogenase-like protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hydroxysteroid dehydrogenase-like protein 2. Also: HSDL2, Short chain dehydrogenase/reductase family 13C member 1.	ECOTOX and https://www.uniprot.org/uniprot/Q6YN16	177455	none given	
HYPM	Hymenoptaecin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hymenoptaecin.	ECOTOX and http://www.uniprot.org/uniprot/Q10416			
HP5M	Hypothetical protein HMPREF9474_04637 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to hypothetical protein HMPREF9474_04637. Also: Expressed Sequence Tag EG591503, EST EG591503.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/323399095			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
H1AM	Hypoxia-inducible factor 1-alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Hypoxia-inducible factor 1-alpha. Also: HIF1A, HIF-1-alpha, HIF1-alpha, ARNT-interacting protein.	ECOTOX and http://www.uniprot.org/uniprot/Q61221	168528	DY708816	GenBank
IGMR	Immunoglobulin M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to immunoglobulin M. Also: IGM	ECOTOX	172685		
IGHM	Immunoglobulin heavy chain, partial cds mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Immunoglobulin heavy chain, partial cds. Also: IgM.	ECOTOX and http://www.imgt.org/ligmdb/view?format=EMBL&id=AB004105			
IGDM	Immunoglobulin heavy constant delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to immunoglobulin heavy constant delta. Also: ighd.	ECOTOX and https://www.uniprot.org/uniprot/M9MMF9	177073	BX510335	GenBank
IGZM	Immunoglobulin heavy constant zeta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to immunoglobulin heavy constant zeta. Also: ighz.	ECOTOX and http://zfin.org/ZD-B-GENE-040513-8	177073	AY643750	GenBank
IHHM	Indian hedgehog protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Indian hedgehog protein. Also: IHH.	ECOTOX and https://www.uniprot.org/uniprot/Q98938	177932	none given	
ISAM	Inhibin subunit alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to inhibin subunit alpha. Also: inha, inhibin alpha chain.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=EU159465	177316	EU159465	GenBank
IN2M	Innixin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Innixin 2. Also: Innixin inx2, Innixin-2, Gap junction protein prp33, Pas-related protein 33, Inx2, prp33.	ECOTOX, http://www.ncbi.nlm.nih.gov/genie/?term=724832 and http://www.uniprot.org/uniprot/Q9V427			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
IOLM	Inositol oxygenase-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Inositol oxygenase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408650			
I3SM	Inositol-3-phosphate synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Inositol-3-phosphate synthase. Also: Inos, IPS, MIP synthase, MI-1-P synthase, Myo-inositol 1-phosphate synthase, Myo-inositol-1-phosphate synthase, Inositol 1-phosphate synthetase, Glucose 6-phosphate cyclase, Glucocycloaldolase, D-glucose 6-phosphate cycloaldolase, 1L-myo-inositol-1-phosphate lyase (isomerizing), EC 5.5.1.4.	ECOTOX, http://enzyme.expasy.org/EC/5.5.1.4 and http://www.uniprot.org/uniprot/O97477			
INS3	insl3 (insulin-like peptide 3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insl3 (insulin-like peptide 3)	ECOTOX			
II1M	Insulin-induced gene 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-induced gene 1. Also: INSIG1.	ECOTOX and http://www.uniprot.org/uniprot/Q5ZMT9	176554	NM_001030966	GenBank
II2M	Insulin-induced gene 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-induced gene 2. Also: INSIG2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=NM_001031261	176554	NM_001031261	GenBank
IG1M	insulin-like growth factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 1 (IGF-1).	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
IFRM	Insulin-like growth factor 1 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor 1 receptor. Also: Insulin like growth factor 1 receptor, Insulin-like growth factor I receptor, Receptor protein-tyrosine kinase, Receptor protein tyrosine kinase, EC 2.7.10.1.	ECOTOX, http://enzyme.expasy.org/EC/2.7.10.1 and http://www.uniprot.org/uniprot/Q60751			
1RAM	Insulin-like growth factor 1 receptor a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 1 receptor a mRNA. Also: igf1ra.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_152968.1	178026	NM_152968.1	RefSeq
1RBM	Insulin-like growth factor 1 receptor b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 1 receptor b mRNA. Also: igf1rb.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_152969.1	178026	NM_152969.1	RefSeq
IG2M	insulin-like growth factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 2 (IGF-2).	ECOTOX			
I2RM	Insulin-like growth factor 2 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 2 receptor mRNA. Also: igf2r.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001039627.2	178026	NM_001039627.2	RefSeq
2RAM	Insulin-like growth factor 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 2a mRNA. Also: igf2a.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_131433	178026	NM_131433	RefSeq
2RBM	Insulin-like growth factor 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor 2b mRNA. Also: igf2b.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001001815	178026	NM_001001815	RefSeq

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
I1BM	Insulin-like growth factor binding protein 1 paralog B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1 paralog B1. Also: IGFBP-1B1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/NM_001123624.1 and http://www.uniprot.org/uniprot/M4Q8Z6			
IA1R	Insulin-like growth factor binding protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1a. Also: cb656, igfbp1, IGFBP-1, igfbp1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=nm_173283	169181	NM_173283	GenBank
IB1R	Insulin-like growth factor binding protein 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein 1b. Also: igfbp1b.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=NM_001098257	169181	NM_001098257	GenBank
IB1M	Insulin-like growth factor binding protein-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor binding protein-1. Also: IGFBP1.	ECOTOX and http://www.uniprot.org/uniprot/Q5GBG2	168528	AY662657	GenBank
2AAM	Insulin-like growth factor binding protein 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 2a mRNA. Also: igfbp2a.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_131458.2	178026	NM_131458.2	RefSeq
2BBM	Insulin-like growth factor binding protein 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 2b mRNA. Also: igfbp2b.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001126464.1	178026	NM_001126464.1	RefSeq
I3RM	Insulin-like growth factor binding protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 3 mRNA. Also: igfbp5a.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_205751.2	178026	NM_205751.2	RefSeq

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
I5AM	Insulin-like growth factor binding protein 5a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 5a mRNA. Also: igfbp5a.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001098754.1	178026	NM_001098754.1	RefSeq
I5BM	Insulin-like growth factor binding protein 5b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 5b mRNA. Also: igfbp5b.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001126463.1	178026	NM_001126463.1	RefSeq
I6AM	Insulin-like growth factor binding protein 6a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 6a mRNA. Also: igfbp6a.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001161401.1	178026	NM_001161401.1	RefSeq
I6BM	Insulin-like growth factor binding protein 6b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to insulin-like growth factor binding protein 6b mRNA. Also: igfbp6b.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001161402.2	178026	NM_001161402.2	RefSeq
I1AM	Insulin-like growth factor receptor 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor receptor 1a. Also: IGFR1A.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/3135375/	170516	AF062499	GenBank
I2AM	Insulin-like growth factor receptor 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Insulin-like growth factor receptor 1b. Also: IGFR1B.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/3135377/	170516	AF062500	GenBank
IGLR	Integrin alpha-L mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Integrin alpha-L. Also: itgal.	ECOTOX and http://www.uniprot.org/uniprot/P24063	170801		
IA6M	Integrin, alpha 6b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to integrin, alpha 6b. Also: itga6b, fl20e08.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/541320	177606	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
IAMM	Integrin, alpha M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Integrin, alpha M. Also: complement component 3 receptor 3 subunit, itgam.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/XM_68707.2.8/	118453	XM_68707.2.3	GenBank
IA1M	Interferon alpha 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon alpha 1. Also: IFNA1.	ECOTOX and http://www.uniprot.org/uniprot/Q6XQG7			
IF1M	Interferon gamma 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to interferon gamma 1. Also: IFN-y1, IFNY1.	ECOTOX	172397		
IF2M	Interferon gamma 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to interferon gamma 2. Also: IFN-y2, IFNY2.	ECOTOX	172397		
IFGR	Interferon gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon gamma.	ECOTOX			
ITFM	Interferon mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon. Also: IFN.	ECOTOX	163146		
IM1M	Interferon-induced GTP-binding protein Mx1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interferon-induced GTP-binding protein Mx1. Also: Myxoma resistance protein 1, Myxovirus resistance protein 1, MX 1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/1519383 and http://www.uniprot.org/uniprot/P79135			
I1AR	Interleukin 1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 1 alpha.	ECOTOX			
I1BR	Interleukin 1 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 1 beta.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
I1RM	Interleukin 1 receptor type 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to interleukin 1 receptor type 1. Also: IL1R1, interleukin-1 receptor type 1, IL-1 receptor I, interleukin 1 receptor, type I.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=NM_205485	175777	NM_205485	GenBank
I10R	Interleukin 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 10. Also: IL-10, Cytokine synthesis inhibitory factor, CSIF.	ECOTOX and http://www.uniprot.org/uniprot/Q29408			
11AR	Interleukin 11a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 11a. Also: il11a.	ECOTOX and http://www.uniprot.org/uniprot/F1R1E3	176942	XM_693882.8	GenBank
I12A	Interleukin 12a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 12a.	ECOTOX			
I12B	Interleukin 12b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 12b.	ECOTOX			
L16M	Interleukin 16 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 16. Also: IL16, Interleukin 16 (lymphocyte chemoattractant factor).	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=IL16+A ND+gallus%5BOrganism%5D	177255	one given	
I17R	Interleukin 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 17.	ECOTOX			
I21M	Interleukin 21 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 21. Also: II21, II-21, Interleukin-21.	ECOTOX and http://zfin.org/ZDB-GENE-120510-4	177073	NM_001128574	GenBank
I3MR	Interleukin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 3.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
I4MR	Interleukin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 4.	ECOTOX			
I6MR	Interleukin 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 6. Also: IL-6.	ECOTOX and http://www.uniprot.org/uniprot/P20607			
I8MR	Interleukin 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin 8. Also: IL-8, C-X-C motif chemokine 8, Chemokine (C-X-C motif) ligand 8. CXCL8.	ECOTOX and http://www.uniprot.org/uniprot/P41324			
ILRM	Interleukin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin receptor.	ECOTOX			
IR4M	Interleukin-1 receptor-associated kinase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin-1 receptor-associated kinase 4. Also: irak4 and zgc:55553.	ECOTOX and http://zfin.org/ZDB-GENE-040426-738	172465		
IL2R	Interleukin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Interleukin-2.	ECOTOX			
IT2M	Internal transcribed spacer 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Internal transcribed spacer 2. Also: its2.	ECOTOX	177258	none given	
IFAM	Intestinal fatty acid-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Intestinal fatty acid-binding protein. Also: FABP2.	ECOTOX and http://www.uniprot.org/uniprot/Q8AX65			
IRTM	Iron regulated transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to iron regulated transporter. Also: fe(2+) transport protein 1-like.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/?term=AY590764	176525	AY590765	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ISPM	Iron starvation induced protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Iron starvation induced protein. Also: ISIP1.	ECOTOX and http://www.uniprot.org/uniprot/B7GA90			
IDHM	Isocitrate dehydrogenase [NADP], mitochondrial precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Isocitrate dehydrogenase [NADP], mitochondrial precursor (idh2). Also: Isocitrate dehydrogenase [NADP], mitochondrial, isocitrate dehydrogenase 2 (NADP+), mitochondrial.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZUP6			
ISTM	Isotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Isotocin. Also: Isotocin precursor, oxytocin, oxt, itnp, oxtl, it-tp, fj33a01, wu:fj33a01, wu:fq40d10.	ECOTOX, http://www.uniprot.org/uniprot/Q98SU8 , http://getentry.ddbj.nig.ac.jp/getentry/na/AF322651 and http://www.ncbi.nlm.nih.gov/geo/352920			
JHAM	Juvenile hormone esterase isoform A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Juvenile hormone esterase isoform A.	ECOTOX and http://www.uniprot.org/uniprot/E2QC34			
JHEM	Juvenile hormone esterase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to juvenile hormone esterase mRNA. Also: JHE, juvenile-hormone esterase.	ECOTOX and https://www.uniprot.org/uniprot/P12992	175700	BJ932560	GenBank
JZFR	Juxtaposed with another zinc finger protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Juxtaposed with another zinc finger protein 1. Also: jazf1.	ECOTOX and http://www.uniprot.org/uniprot/Q80ZQ5	170801		
KSPR	Kazal-type serine peptidase inhibitor domain 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kazal-type serine peptidase inhibitor domain 2. Also: kazald2.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=NM_001105124	170520	NM_001105124	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
K1AM	Kelch-like ECH-associated protein 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kelch-like ECH-associated protein 1a. Also: keap1 and keap1a.	ECOTOX and http://www.uniprot.org/uniprot/Q1ECZ2	168602 172465	JX470752 NM182864.2	GenBank
K1BM	Kelch-like ECH-associated protein 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kelch-like ECH-associated protein 1b. Also: Keap1b, klhl19.	ECOTOX and http://zfin.org/act ion/marker/view/ZDB-GENE-080508-1	168602	JX470753	source unknown
KT8M	Keratin 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Keratin 8 (krt8).	ECOTOX			
C16M	Keratin, type I cytoskeletal 16 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Keratin, type I cytoskeletal 16. Also: Krt16, cytokeratin-16, keratin-16, CK-16, K16, keratin complex 1, acidic, gene 16.	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/16666 , and http://www.uniprot.org/uniprot/Q9Z2K1	110754		
KS1M	kiss-1 metastasis suppressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to KiSS-1 metastasis suppressor. Also: KISS1, kisspeptin1, kisspeptin 1.	ECOTOX and http://zfin.org/ZDB-GENE-080128-1	177212	none given	
K1RM	kiss1 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to kiss1 receptor. Also: KISS1r, kisspeptin 1 receptor, kiss1ra.	ECOTOX and https://www.uniprot.org/uniprot/B0F101	177212	none given	
K2RM	kiss2 receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to kiss2 receptor. Also: KISS2r, kisspeptin 2 receptor.	ECOTOX and https://www.uniprot.org/uniprot/V5JDG3	177212	none given	
KS2M	Kisspeptin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kisspeptin 2. Also: KISS2, kisspeptin2, kiss-2.	ECOTOX and http://zfin.org/ZDB-GENE-090526-1	177212	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
KNGM	Kringle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kringle.	ECOTOX			
KLFM	Kruppel-like factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Kruppel-like factor 2. Also: KLF2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/420148	174884		
KP9M	Krueppel-like factor 9	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to krueppel-like factor 9. Also: kruppel-like factor 9, Klf9, basic transcription element-binding protein 1, BTE-binding protein 1, GC-box-binding protein 1, Transcription factor BTEB1, BTEB1.	ECOTOX and https://www.uniprot.org/uniprot/Q01713	177269	none given	
K3MR	Kynurenine 3-monoxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to kynurenine 3-monoxygenase. Also: kmo.	ECOTOX, http://www.uniprot.org/uniprot/Q1RLY6 and https://www.ncbi.nlm.nih.gov/gene/368242	173808		
LCMR	Laccase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Laccase.	ECOTOX and http://www.uniprot.org/uniprot/F1BQP3			
LDBR	Lactate Dehydrogenase B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lactate Dehydrogenase B.	ECOTOX			
LFNR	lactoferrin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lactoferrin.	ECOTOX			
LG2M	Laminin G, subdomain 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Laminin G, subdomain 2.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
L14M	Lanosterol 14-alpha demethylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lanosterol 14-alpha demethylase. Also: Cytochrome p450 51A1, CYP51A1, Cytochrome P450-14DM, Cytochrome P450LI, Sterol 14-alpha demethylase, CYPLI, Cytochrome P450 51, Cytochrome P450-LIA1, CYP51, EC 1.14.13.70.	ECOTOX, http://www.uniprot.org/uniprot/P49602 and http://www.uniprot.org/uniprot/Q16850			
LSSM	Lanosterol synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lanosterol synthase. Also: Iss, 2,3-oxidosqualene-lanosterol cyclase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/nm_001083567.1	169182	NM_001083567.1	GenBank
LTIM	Larval type I keratin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to larval type I keratin. Also: RLKI.	ECOTOX and https://www.uniprot.org/uniprot/A7TUG6	179296	none given	
LAPR	L-ascorbate peroxidase 1, cytosolic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-ascorbate peroxidase 1, cytosolic. Also: apx1, apxa, osapx01.	ECOTOX and http://www.uniprot.org/uniprot/Q10N21	170365		
LM2M	Lectin mannose-binding 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lectin mannose-binding 2. Also: Iman2, surfactant protein a, sp-a.	ECOTOX and http://zfin.org/ZDB-GENE-070209-149	177131	none given	
LRMR	Leptin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leptin receptor. Also: Lepr, B219, OB receptor.	ECOTOX and http://www.uniprot.org/uniprot/P48356			
LEPT	Leptotene	Early stage of prophase in meiosis in which the chromosomes contract and become visible as long filaments well separated from each other. Synonym: leptonema	Farlex Partner Medical Dictionary, Farlex 2012			

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LCTR	Leucine Specific tRNA	A transfer RNA which is specific for carrying leucine to sites on the ribosomes in preparation for protein synthesis.	http://www.ncbi.nlm.nih.gov			
LRIM	Leucine-rich repeats and immunoglobulin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leucine-rich repeats and immunoglobulin-like.	ECOTOX			
LSCM	Leucyl-tRNA synthetase, cytoplasmic-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Leucyl-tRNA synthetase, cytoplasmic-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=412282			
GLDM	L-galactono-1,4,-lactone dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-galactono-1,4,-lactone dehydrogenase mRNA. Also: GalLDH.	ECOTOX and http://www.uniprot.org/uniprot/C9E3E9			
LSPM	LIM and SH3 domain protein Lasp-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to LIM and SH3 domain protein Lasp-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725777			
LHPM	LIM/homeobox protein Lhx3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to LIM/homeobox protein Lhx3. Also: Lim3 homeobox, Lhx3, LIM homeobox protein 3, Homeobox protein LIM-3, Homeobox protein P-LIM, Lim-3, Lim3, Plim.	ECOTOX and http://www.uniprot.org/uniprot/P50481			
LX1R	Linoleate 9S-lipoxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Linoleate 9S-lipoxygenase 1. Also: Lipoxygenase 1, AtLOX1, LOX1.	ECOTOX and http://www.uniprot.org/uniprot/Q06327	174967		
L3LM	Lipase 3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lipase 3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=411353			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LHAM	Lipase member H-A-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipase member H-A-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=727037			
LPSM	Lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipase (Lip). Also: Triacylglycerol lipase.	ECOTOX and http://www.uniprot.org/uniprot/O59952			
LPDN	Lipid to DNA ratio	The amount of lipid as compared to the amount of DNA in a sample.	ECOTOX			
L13M	Lipopolysaccharide and beta-1,3-glucan binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipopolysaccharide and beta-1,3-glucan binding protein. Also: LGBP.	ECOTOX and http://www.uniprot.org/uniprot/Q2QF31	166302		
LMPPM	Lipopolysaccharide-binding protein/mammalian bactericidal/permeability increasing protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipopolysaccharide-binding protein/mammalian bactericidal/permeability increasing protein.	ECOTOX			
LLRN	Lipoprotein lipase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipoprotein lipase. Also: Ipl, EC 3.1.1.34.	ECOTOX and http://www.uniprot.org/uniprot/P11152			
LX2R	Lipoxygenase 2, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lipoxygenase 2, chloroplastic. Also: AtLOX2, LOX2.	ECOTOX and http://www.uniprot.org/uniprot/P38418	174967		
FA1M	Liver basic fatty acid binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Liver basic fatty acid binding protein. Also: Fatty acid binding protein 1, liver, LBFABP, liver basic FABP, liver bile acid-binding protein.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=LBFABP+AND+gallus%5BOrganism%5D	177255	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LLDM	L-lactate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to L-lactate dehydrogenase. Also: Lactate dehydrogenase, Idh, L-lactic acid dehydrogenase, L-lactic dehydrogenase, EC 1.1.1.27.	ECOTOX, http://enzyme.expasy.org/EC/1.1.1.27 , http://www.uniprot.org/uniprot/P00343 and http://www.uniprot.org/uniprot/D2DSR9			
LNFM	Low molecular weight neuronal intermediate filament mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Low molecular weight neuronal intermediate filament. Also: XNIF, neuronal intermediate filament protein.	ECOTOX and http://www.uniprot.org/uniprot/P35617	166650	P35617	GenBank
LLRM	Low-density lipoprotein receptor associated protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to low-density lipoprotein receptor associated protein	ECOTOX			
LDRM	Low-density lipoprotein receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Low-density lipoprotein receptor. Also: Low density lipoprotein receptor, LDLR.	ECOTOX and http://www.uniprot.org/uniprot/Q28832	168071	DT361328	GenBank
LDPM	Low density lipoprotein receptor adapter protein 1-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to low density lipoprotein receptor adapter protein 1-A mRNA. Also: XPTB, Idlrp1-a, Autosomal recessive hypercholesterolemia protein homolog alpha, ARH alpha, xARH alpha, Xcat4.	ECOTOX and https://www.uniprot.org/uniprot/Q801G1	170608	AY18356	Genbank
LBKM	Lumbrokinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lumbrokinase.	ECOTOX and http://www.uniprot.org/uniprot/Q5MBA0			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LHAR	Luteinizing hormone alpha-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to luteinizing hormone alpha-subunit	ECOTOX			
LH1R	Luteinizing hormone beta 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone beta 1. Also: lhbeta1, lhb1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_205623	170532	NM_205623	GenBank
LHBR	Luteinizing hormone beta-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to luteinizing hormone beta-subunit	ECOTOX			
LHRM	Luteinizing hormone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone receptor. Also: Lutropin-choriogonadotropin hormone receptor .	ECOTOX, http://www.uniprot.org/uniprot/P16235 and http://www.uniprot.org/uniprot/F1B1E3			
LHGR	Luteinizing hormone/choriogonadotropin receptor (LHCGR) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Luteinizing hormone/choriogonadotropin receptor (LHCGR), mRNA. This gene encodes the receptor for both luteinizing hormone and choriogonadotropin. This receptor belongs to the G-protein coupled receptor 1 family, and its activity is mediated by G proteins which activate adenylate cyclase. Also: hypergonadotropic hypogonadism, lutropin/choriogonadotropin receptor.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/3973	170402		
LHMR	Lutenizing hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lutenizing hormone.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LB1M	Lycopene beta-cyclase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lycopene beta-cyclase 1. Also: beta-Lcy1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/102578042	176551	none given	
LB2M	Lycopene beta-cyclase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lycopene beta-cyclase 2. Also: beta-Lcy2.	ECOTOX and http://www.uniprot.org/uniprot/A0A0S1U229	176551	none given	
LB3M	Lycopene beta-cyclase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lycopene beta-cyclase 3. Also: beta-Lcy3.	ECOTOX	176551	none given	
LECM	Lycopene epsilon-cyclase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to lycopene epsilon-cyclase. Also: e-Lcy.	ECOTOX and http://www.uniprot.org/uniprot/A0A059STX0	176551	none given	
LZ1M	Lysozyme 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lysozyme 1. Also: 1,4-beta-N-acetylmuramidase 1, cv-lysozyme 1, lysoz1, lysoz.	ECOTOX and http://www.uniprot.org/uniprot/P83673			
LZMR	Lysozyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Lysozyme.	ECOTOX and http://www.uniprot.org/uniprot/P05105			
MEPM	Macrophage expressed protein 1-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Macrophage expressed protein 1-like protein.	ECOTOX and http://www.uniprot.org/uniprot/B3F732			
MMRM	Macrophage mannose receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Macrophage mannose receptor.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MBTM	MADS-box transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MADS-box transcription factor. Also: MADS-RIN.	ECOTOX, http://planttfdb.cbi.pku.edu.cn/tf.php?sp=Sly&did=Solyc05g012020.2.1 and http://www.uniprot.org/uniprot/Q8S4L4	176551	none given	
MGRN	Magnesium superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Magnesium superoxide dismutase.	ECOTOX			
MG1M	Magnesium-dependent phosphatase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Magnesium-dependent phosphatase 1. Also: MDP1.	ECOTOX and http://www.uniprot.org/uniprot/Q9D967			
MORM	Main olfactory receptor-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Main olfactory receptor-like protein. Also: SORB.	ECOTOX and http://www.uniprot.org/uniprot/Q1KY06			
HIIM	Major histocompatibility complex class II alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Major histocompatibility complex class II alpha. Also: MHC class II alpha antigen.	ECOTOX and http://www.uniprot.org/uniprot/Q4U1C7			
MVPM	Major vault protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Major vault protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6P3L0			
MD1M	Malate dehydrogenase 1a, NAD (Soluble) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Malate dehydrogenase 1a, NAD (Soluble) (mdh1a).	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MDHM	Malate dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Malate dehydrogenase. Also: Cytosolic malate dehydrogenase, Malic dehydrogenase, Mdh2, Mdh2a, EC 1.1.1.37.	ECOTOX, http://www.uniprot.org/uniprot/Q6B4U5 and http://www.uniprot.org/uniprot/P1708			
MLEM	Malic enzyme 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Malic enzyme 1. Also: NADP-dependent malic enzyme, Me1.	ECOTOX and http://www.uniprot.org/uniprot/P13697	104399	none given	
MNSM	Manganese superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Manganese superoxide dismutase.	ECOTOX			
MLPM	Masquerade-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Masquerade-like protein.	ECOTOX and http://www.uniprot.org/uniprot/P91777			
MFPR	MatE family protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MatE family protein. Also: oj1217b09.6, putative ripening regulated protein.	ECOTOX and http://www.uniprot.org/uniprot/Q8H7P0	170367		
MM9M	Matrix metalloproteinase-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Matrix metalloproteinase-9. Also: MMP-9, MMP 9, 792 kDa gelatinase, 92 kDa type IV collagenase, Gelatinase B, EC 3.4.24.35.	ECOTOX and http://www.uniprot.org/uniprot/P50282			
MCPM	m-Calpain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to m-Calpain.	ECOTOX and http://www.uniprot.org/uniprot/D6NLA6	169409	GU564439	GenBank
MCDM	McyD protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to McyD protein. Also: mcyD.	ECOTOX and http://www.uniprot.org/uniprot/B0JPV8	154141	B0JPV8	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MEIR	Meiosis Rate	No definition available.				
ME1A	Meiotic Abnormalities, 1 st Anaphase	No definition available.				
ME1M	Meiotic Abnormalities, 1 st Metaphase	No definition available.				
ME2M	Meiotic Abnormalities, 2 nd Metaphase	No definition available.				
MEIA	Meiotic Abnormalities, General	No definition available.				
MEIX	Meiotic Index	The number of round spermatids for each pachytene primary spermatocytes	http://www.biolrep.org/cgi/content/short/biolrep/rod.102.010652v1			
MM1M	Membrane metallo-endopeptidase-like 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Membrane metallo-endopeptidase-like 1-like. Also: Membrane metallo-endopeptidase-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=726421			
MPBM	Membrane progestin receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Membrane progestin receptor beta. Also: Progestin and adipoQ receptor family member VIII, Paqr8, Mprb.	ECOTOX and http://www.uniprot.org/uniprot/Q80ZE5			
MNFM	Mesencephalic astrocyte-derived neurotrophic factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mesencephalic astrocyte-derived neurotrophic factor. Also: manf.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/NM_001076629	178028	NM_001076629	GenBank
MRNA	Messenger RNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.				
M18M	metalloproteinase 18 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to metalloproteinase 18 mRNA .	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MMRN	Metallothionein mRNA	No definition available.				
MRMT	Metallothionein mRNA metallothionein ratio	The ratio of metallothionein messenger RNA to metallothionein.	ECOTOX			
M3MR	Metallothionein-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-3. Also: MT-3, Metallothionein-III, Metallothionein 3, Metallothionein III, Growth inhibitory factor, GIF, MT-III.	ECOTOX and http://www.uniprot.org/uniprot/P28184			
M4MR	Metallothionein-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-4. Also: MT-4, Metallothionein-IV, Metallothionein 4, Metallothionein IV, MT-IV.	ECOTOX and http://www.uniprot.org/uniprot/P47945			
MTAM	Metallothionein-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-A.	ECOTOX			
MTBM	Metallothionein-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-B.	ECOTOX			
M1MR	Metallothionein-I mRNA	A metallothionein isoform messenger RNA.	ECOTOX			
M2MR	Metallothionein-II mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metallothionein-II. Also: mt-II, mt-2, Metallothionein 2, Metallothionein-2, Metallothionein II.	ECOTOX and http://www.uniprot.org/uniprot/P04355			
MT1M	Metal-responsive transcription factor 1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metal-responsive transcription factor 1.1.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M1AM	Metal-responsive transcription factor 1.1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Metal-responsive transcription factor 1.1a.	ECOTOX			
MPAP	Metaphase to anaphase ratio	The ratio of metaphase to anaphase stages in nuclear division.	ECOTOX	176478		
MA1R	Methionine adenosyltransferase I, alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine adenosyl transferase I, alpha. Also, mat1a.	ECOTOX and http://zfin.org/ZD-B-GENE-030131-6127	171802	HO056261	GenBank
MB1R	Methionine sulfoxide reductase B1.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B1.1. Also: MSRB1.1	ECOTOX	172734		
MB2R	Methionine sulfoxide reductase B1.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B1.2. Also: MSRB1.2	ECOTOX	172734		
MR1R	Methionine sulfoxide reductase B2.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B2.1. Also: MSRB2.1	ECOTOX	172734		
MR2R	Methionine sulfoxide reductase B2.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase B2.2. Also: MSRB2.2	ECOTOX	172734		
MSRM	Methionine sulfoxide reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine sulfoxide reductase.	ECOTOX			
MS1R	Methionine-S-sulfoxide reductase A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methionine-S-sulfoxide reductase A1. Also: MSRA1	ECOTOX and http://www.uniprot.org/uniprot/Q8H6T1	172734		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MB2M	Methyl-CpG binding domain protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methyl-CpG binding domain protein 2. Also: MDB2.	ECOTOX and http://zfin.org/act ion/marker/sequence/view/ZDB-GENE-030131-9049			
MO1M	Methylsterol monooxygenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Methylsterol monooxygenase 1. Also: msmo1, sc4mol, 4-methylsterol oxidase, C-4 methylsterol oxidase, Methylsterol hydroxylase, sterol-C4-methyl oxidase-like, EC 1.14.13.72.	ECOTOX, http://enzyme.ex pasy.org/EC/1.1 4.13.72 , http://www.ncbi.nlm.nih.gov/nuc core/BC050163 and http://www.uniprot.org/uniprot/Q7ZW77	169182	BC050163	GenBank
M8PM	MGC132184 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC132184 protein. Also: basp1, uncharacterized protein LOC734877.	ECOTOX, http://www.ncbi.nlm.nih.gov/prot ein/148232076 and http://www.uniprot.org/uniprot/Q3KPN5	166650	GI:148232076	NCBI
M9PM	MGC81949 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC81949 protein. Also: cct6a.	ECOTOX and http://www.uniprot.org/uniprot/Q6GMA6	166650	Q6GMA6	GenBank
MG4M	MGC84000 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC84000 protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6GM38	166650	Q6GM38	GenBank
M84M	MGC84072 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MGC84072 protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/prot ein/148222322	166650	NP_001087724	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MNUC	Micronuclei	Micronuclei formation or micronuclei frequency. A micronucleus (MN) is formed during the metaphase/anaphase transition of mitosis (cell division). The micronucleus test is used to identify substances that cause cytogenetic damage which results in the formation of micronuclei containing lagging chromosome fragments or whole chromosomes.	http://www.crios.be/genotoxicitytests/micronucleus_test.htm and http://www.oecd.org/chemicalsafety/assessmentofchemicals/1948442.pdf			
MS1M	Microsomal glutathione S-transferase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microsomal glutathione S-transferase 1. Also: mgst1, mgst3b	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/EU747057 , http://www.uniprot.org/uniprot/D9N176 , and https://zfin.org/ZDB-GENE-061215-48	166007	EU747057	GenBank
MS3M	Microsomal glutathione S-transferase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to microsomal glutathione S-transferase 3. Also: mgst3, mgst3a	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/EU747058 , http://www.uniprot.org/uniprot/Q7ZUH8 , and https://zfin.org/ZDB-GENE-040426-2767	166007	EU747058	GenBank
MTTM	Microsomal triglyceride transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microsomal triglyceride transporter. Also: Microsomal triglyceride transfer protein large subunit, mtsp, mtp.	ECOTOX and http://www.uniprot.org/uniprot/A0A0R4IVV0	176978	NM_212970.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
LC3M	Microtubule-associated protein 1 light chain 3 beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microtubule-associated protein 1 light chain 3 beta. Also: map1lc3b, lc3, wu:fb60g11, zgc:56434, LC3 phospholipid conjugate.	ECOTOX, http://zfin.org/ZDB-GENE-030131-1145 and http://www.uniprot.org/uniprot/Q7ZUD8	170947	NM199604	GenBank
MAPM	Microtubule-associated protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Microtubule-associated protein. Also: Xtp protein, xtp, mapt.	ECOTOX, http://www.uniprot.org/uniprot/Q6AX34 , http://www.ncbi.nlm.nih.gov/protein/50925070 and http://www.uniprot.org/uniprot/C5I786			
MCMR	Mineralocorticoid mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mineralocorticoid.	ECOTOX			
MCRM	Mineralocorticoid receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mineralocorticoid receptor. Also: MR, Nuclear receptor subfamily 3 group C member 2, Nr3c2, Mlr.	ECOTOX and http://www.uniprot.org/uniprot/P22199			
M122	miRNA 122	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 122 (miR-122).	ECOTOX and http://www.mirbase.org/			
M133	miRNA 133b-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 133b-5p (miR-133b-5p). Also: miR-133b*.	ECOTOX and http://www.mirbase.org/			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M135	miRNA 135a	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 135a (miR-135a).	ECOTOX and http://www.mirbase.org/			
M140	miRNA 140	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 140 (miR-140).	ECOTOX and http://www.mirbase.org/cgi-bin/mirna_entry.pl?acc=MI0002003	166630	mimat0003 159	miRBase
M145	miRNA 145	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 145 (miR-145).	ECOTOX and http://www.mirbase.org/			
M15A	miRNA 15a-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 15a-5p(miR-15a-5p). Also: miRNA 15a.	ECOTOX and http://www.mirbase.org/			
18BM	miRNA 181b	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 181b.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/104795745	176915	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M187	miRNA 187	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 187 (miR-187).	ECOTOX and http://www.mirbase.org/cgi-bin/mirna_entry.pl?acc=MI0001370			
M192	miRNA 192	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 192 (miR-192).	ECOTOX and http://www.mirbase.org/			
19BM	miRNA 19b	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 19b.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/100033577	176915	none given	
19CM	miRNA 19c	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 19c.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=100033578	176915	none given	
19DM	miRNA 19d	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 19d.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=100033579	176915	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M202	miRNA 202-5p	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 202-5p (miR-202-5p).	ECOTOX and http://www.mirbase.org/			
M204	miRNA 204	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 204 (miR-204).	ECOTOX and http://www.mirbase.org/			
M216	miRNA 216b	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 216b (miR-216b).	ECOTOX and http://www.mirbase.org/			
M217	miRNA 217	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 217 (miR-217).	ECOTOX and http://www.mirbase.org/			
M23A	miRNA 23a	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 23a (miR-23a).	ECOTOX and http://www.mirbase.org/			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M338	miRNA 338	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 338 (miR-338).	ECOTOX and http://www.mirbase.org/			
M363	miRNA 363	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 363 (miR-363).	ECOTOX and http://www.mirbase.org/			
M365	miRNA 365	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 365 (miR-365).	ECOTOX and http://www.mirbase.org/			
M499	miRNA 499	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 499 (miR-499).	ECOTOX and http://www.mirbase.org/			
M728	miRNA 728	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 728 (miR-728).	ECOTOX and http://www.mirbase.org/			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
M733	miRNA 733	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA 733 (miR-733).	ECOTOX and http://www.mirbase.org/			
735M	miRNA 735	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 735. Also: Ro-associated Y RNA 2, rny2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/100033748	176915	none given	
739M	miRNA 739	microRNAs (miRNAs) are short (20-24 nt) non-coding RNAs that are involved in post-transcriptional regulation of gene expression in multicellular organisms by affecting both the stability and translation of mRNAs, in this case specific to microRNA 739.	ECOTOX and http://www.mirbase.org/cgi-bin/mirna_entry.pl?acc=MI0004785	176915	none given	
MLT7	miRNA let-7h	miRNA (microRNA) is a naturally occurring, small non-coding RNA molecule, about 21–25 nucleotides in length partially complementary to one or more messenger RNA (mRNA) molecules, in this case specific to microRNA let-7h (miR-let-7h).	ECOTOX and http://www.mirbase.org/			
MLKR	Mitogen activated protein kinase phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mitogen activated protein kinase phosphatase. Also: MPK.	ECOTOX and http://www.uniprot.org/uniprot/M1Q6U0	166306	JX137276	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MP1M	Mitogen-activated protein kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 1 (MAPK1). Mitogen-activated protein kinase 1 is also known as PRKM1, PRKM2, ERK, ERK2, MAPK2, p41mapk.	ECOTOX and http://www.gene-names.org/data/hgnc_data.php?hgnc_id=6871			
M11M	Mitogen-activated protein kinase 11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 11 (MAPK11). Mitogen-activated protein kinase 11 is also known as PRKM11, p38-2, p38Beta, SAPK2.	ECOTOX and http://www.gene-names.org/data/hgnc_data.php?hgnc_id=6873			
M14M	Mitogen-activated protein kinase 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mitogen-activated protein kinase 14 (MAPK14). Mitogen-activated protein kinase 14 is also known as CSBP1, CSBP2, CSPB1, Mxi2, p38, p38 MAP kinase, PRKM14, PRKM15, p38-alpha.	ECOTOX, http://www.gene-names.org/data/hgnc_data.php?hgnc_id=6876 and http://en.wikipedia.org/wiki/MAPK_14			
MP6M	Mitogen-activated protein kinase 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 6 (MAPK6). mitogen-activated protein kinase 6 is also known as PRKM6, ERK3, HsT17250, p97MAPK.	ECOTOX and http://www.gene-names.org/data/hgnc_data.php?hgnc_id=6879			
MP9M	Mitogen-activated protein kinase 9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to mitogen-activated protein kinase 9 (MAPK9). Mitogen-activated protein kinase 9 is also known as JNK2, Jun kinase, p54a, SAPK, PRKM9.	ECOTOX and http://www.gene-names.org/data/hgnc_data.php?hgnc_id=6886			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MTOS	Mitosis	A method of indirect cell division in which the two daughter nuclei normally receive identical complements of the number of chromosomes characteristic of the somatic cells of the species	Dorland's Medical Dictionary for Health Consumers, 2007			
MIAT	Mitotic Abnormalities, Anaphase	No definition available.				
MIBC	Mitotic Abnormalities, Binucleate Cell	No definition available.				
MIBG	Mitotic Abnormalities, Bridge	No definition available.				
MICL	Mitotic Abnormalities, Clumping	No definition available.				
MICY	Mitotic Abnormalities, Cytomixis	No definition available.				
MIPO	Mitotic Abnormalities, Disturbed Polarity	No definition available.				
MIES	Mitotic Abnormalities, Early Separation	No definition available.				
MIEX	Mitotic Abnormalities, Exclusion	No definition available.				
MIFR	Mitotic Abnormalities, Fragment	No definition available.				
MITA	Mitotic Abnormalities, General	No definition available.				
MIIN	Mitotic Abnormalities, Interphase Cells	No definition available.				
MILG	Mitotic Abnormalities, Laggard	No definition available.				

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MIMT	Mitotic Abnormalities, Metaphase	No definition available.				
MIMN	Mitotic Abnormalities, Micronuclei	No definition available.				
MINB	Mitotic Abnormalities, Nuclear Budding	No definition available.				
MINF	Mitotic Abnormalities, Nuclear Fusion	No definition available.				
MIPR	Mitotic Abnormalities, Prophase	No definition available.				
MISK	Mitotic Abnormalities, Stickiness	No definition available.				
MITI	Mitotic Index (#Mitoses/Total Cells)	No definition available.				
MITR	Mitotic Rate	The proportion of cells in a tissue that are undergoing mitosis, expressed as a mitotic index or, roughly, as the number of cells in mitosis in each microscopic high-power field in tissue sections.	Stedman's Medical Dictionary Copyright, 2002, 2001, 1995			
MAOM	Mono amine oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mono amine oxidase (MAO) .	ECOTOX			
MHYM	Monoacylglycerol hydrolyzate mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Monoacylglycerol hydrolyzate. Also: Monoglyceride lipase, mgll.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZWC2	176978	NM_200297	GenBank
MDAR	Monodehydroascorbate reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Monodehydroascorbate reductase mRNA. Also: MDHAR.	ECOTOX and http://www.uniprot.org/uniprot/C9E3F2			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MR1M	Multidrug-Resistance like Protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Multidrug-Resistance like Protein 1. Also: CG6214, Dmel\CG6214, dMRP, dMRP/CG6214, dMRP1, MRP1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=cg6214			
MUTA	Mutation	The process by which such a sudden structural change occurs, either through an alteration in the nucleotide sequence of the DNA coding for a gene or through a change in the physical arrangement of a chromosome.	The American Heritage Medical Dictionary, 2007			
MXPM	Mx protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Mx protein.	ECOTOX			
MYCR	MYC binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MYC binding protein 2. Also: mycbp2, myc.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=368439	170801		
MPOM	Myc proto-oncogene protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myc proto-oncogene protein. Also: c-Myc, v-myc avian myelocytomatosis viral oncogene homolog, v-myc myelocytomatosis viral oncogene homolog, v-myc myelocytomatosis viral oncogene-like protein.	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/420332 , and https://www.uniprot.org/uniprot/P01109	177185	none given	
MBPM	Myelin basic protein A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myelin basic protein a mRNA. Also: mbp, cb274, fj33b11, wu:fj33b11, wu:fq15b02, zgc:136630, myelin basic protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=ay860977	170392	AY860977	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MP0M	Myelin protein zero mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myelin protein zero (p0).	ECOTOX and http://www.uniprot.org/uniprot/C5I789			
M1BM	Myeloid cell leukemia sequence 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloid cell leukemia sequence 1b. Also: mcl1b, Mcl1b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q568W5			
M88M	Myeloid differentiation primary response protein MyD88 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloid differentiation primary response protein MyD88. Also: Myeloid differentiation factor 88, MyD88.	ECOTOX and http://www.uniprot.org/uniprot/P22366			
MYPM	Myeloperoxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myeloperoxidase.	ECOTOX			
MEFR	Myocyte enhancer factor 2c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myocyte enhancer factor 2c. Also: mef2c, mef2ca, zgc:64184, zgc:85726, id:ibd5026, wu:fc05b06.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/30575	170801		
MYDM	MyoD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to MyoD.	ECOTOX and http://www.uniprot.org/uniprot/Q98SS8			
MF5M	Myogenic factor 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myogenic factor 5. Also: MYF5.	ECOTOX and http://www.uniprot.org/uniprot/P34061			
MYMM	Myohemerytherin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myohemerytherin.	ECOTOX and http://www.uniprot.org/uniprot/P22761			
MHCR	Myosin heavy chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myosin heavy chain.	ECOTOX and http://www.uniprot.org/uniprot/Q84VD8	176653	AY224548	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
MY6M	Myosin, heavy chain 6, cardiac muscle, alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myosin, heavy chain 6, cardiac muscle, alpha. Also: amhc, myh6	ECOTOX and http://zfin.org/ZDB-GENE-031112-1	174562	NM_198823	GenBank
MYZM	Myozenin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myozenin.	ECOTOX			
MACM	Myristoylated alanine rich protein kinase C substrate mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Myristoylated alanine rich protein kinase C substrate. Also: marcks.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148233446	166650	GI:148233446	NCBI
NOPM	N-myc proto-oncogene protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-myc proto-oncogene protein. Also: N-myc protein, v-myc avian myelocytomatisis viral oncogene neuroblastoma derived homolog, v-myc myelocytomatisis viral related oncogene, neuroblastoma derived, MYCN proto-oncogene, bHLH transcription factor, MYCN.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=421948	175777	none given	
DD1M	N(G),N(G)-dimethylarginine dimethylaminohydrolase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N(G),N(G)-dimethylarginine dimethylaminohydrolase 1. Also: DDAH1, DDAH-1, Dimethylarginine dimethylaminohydrolase 1, DDAH1, Dimethylargininase-1.	ECOTOX and http://www.uniprot.org/uniprot/P56965	166650	P56965	GenBank
NKCM	Na+ K+ 2Cl- Cotransporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+ K+ 2Cl- Cotransporter (Sodium Potassium Chlorine cotransporter).	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NKAM	Na+ K+ ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+ K+ ATPase (Sodium Potassium ATPase).	ECOTOX			
NK1M	Na+/H+ ATPase alpha1a-subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/H+ ATPase alpha1a-subunit.	ECOTOX			
NAAM	Na+/K+ ATPase alpha 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1a. Also: Sodium/potassium-transporting ATPase alpha 1a.	ECOTOX			
NABM	Na+/K+ ATPase alpha 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1b. Also: Sodium/potassium-transporting ATPase alpha 1b.	ECOTOX			
NACM	Na+/K+ ATPase alpha 1c mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 1c. Also: Sodium/potassium-transporting ATPase alpha 1c.	ECOTOX and http://www.uniprot.org/uniprot/I6T811			
NA3M	Na+/K+ ATPase alpha 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Na+/K+ ATPase alpha 3. Also: Sodium/potassium-transporting ATPase subunit alpha-3, Sodium/potassium-transporting ATPase alpha 3, Na(+)/K(+) ATPase alpha(III) subunit, Sodium pump subunit alpha-3, atp1a3.	ECOTOX and http://www.uniprot.org/uniprot/P58312			
NT2M	N-acetyltransferase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-acetyltransferase 2. Also: Nat2.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/116632	174959	EX740965	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NDBM	NADH dehydrogenase (ubiquinone) 1 Beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase 1 Beta.	ECOTOX			
NDFM	NADH dehydrogenase Fe-S protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase Fe-S protein 3. Also: NADH:ubiquinone oxidoreductase core subunit S3, NDUFS3.	ECOTOX and https://www.uniprot.org/uniprot/Q566S4	156137	NM_001017755	GenBank
NA1M	NADH dehydrogenase subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase subunit 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/BAE72147	175222	BAE72147	GenBank
ND5M	NADH dehydrogenase subunit 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH dehydrogenase subunit 5. Also: nad5	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/?term=11542540	174382		
NURM	NADH:ubiquinone reductase (H(+)-translocating) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADH:ubiquinone reductase (H(+)-translocating). Also: NADH-ubiquinone oxidoreductase chain 1, NADH dehydrogenase subunit 1, NDI.	ECOTOX, http://www.uniprot.org/uniprot/E1CI17 , http://enzyme.expasy.org/EC/1.6.5.3 , and http://www.uniprot.org/uniprot/P03886	174395		
NDQM	NADPH dehydrogenase, quinone oxidoreductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADPH dehydrogenase, quinone oxidoreductase 1. Also: Azoreductase, DT-diaphorase, Menadione reductase, NAD(P)H:quinone oxidoreductase 1, Phylloquinone reductase, Quinone reductase 1.	ECOTOX and http://www.uniprot.org/uniprot/P05982	104399	None given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NHRM	NADPH--hemoprotein reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NADPH--hemoprotein reductase. Also: NADPH-cytochrome P450 oxidoreductase.	ECOTOX and http://enzyme.expasy.org/EC/1.6.2.4			
NNSM	Nanos mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nanos.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/GU969244.1	176952	GU969244	GenBank
NXSM	Neoxanthin synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to neoxanthin synthase. Also: NSY.	ECOTOX and http://www.uniprot.org/uniprot/K4C9E2	176551	none given	
NGFM	Nerve growth factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nerve growth factor. Also: NGF.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP178114.1/	173779	KP178114	GenBank
NGRM	Nerve growth factor receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nerve growth factor receptor. Also: ngfr.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728107	173779	KP728107	GenBank
NT1M	Neurotrophic receptor tyrosine kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to neurotrophic receptor tyrosine kinase 1. Also: NTRK1, MTC, TRK, TRK1, TRKA, TRK-A.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/4914	173779	EE397822.1	GenBank
NT3M	Neurotrophin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to neurotrophin 3. Also: NTF3, NT-3.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KP728105	173779	KP728105	GenBank
NT7M	Neurotrophin 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to neurotrophin 7. Also: NTF7.	ECOTOX and https://www.uniprot.org/uniprot/A0A0K1P4N0	173779	KP728106	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NSTM	Nestin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nestin. Also: nes.	ECOTOX, http://www.uniprot.org/uniprot/P86839 and https://www.ncbi.nlm.nih.gov/gene/?term=100150939	174516		
NRXR	Neurexin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurexin 2. Also: nrxn2, kiaa0921.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/18190	170801		
NRTM	Neuritin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuritin. Also: NRN1.	ECOTOX and http://www.uniprot.org/uniprot/C0H972			
NCPM	Neurocan core protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurocan core protein. Also: Chondroitin sulfate proteoglycan 3, ncan, Cspg3.	ECOTOX and http://www.uniprot.org/uniprot/P55066	168274	P55066	Uniprot
NLGM	Neuroligin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuroligin. Also: nlg.	ECOTOX and https://www.uniprot.org/uniprot/A0A2R7WWK1	176960	none given	
NNLM	Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel ligand binding domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel ligand binding domain.	ECOTOX			
NNTM	Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel transmembrane region mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal acetylcholine receptor, Neurotransmitter-gated ion-channel transmembrane region.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ND1R	Neuronal differentiation 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal differentiation 1. Also: neuro-d, neurod, neurod1, ndr, ndf1.	ECOTOX and http://zfin.org/ZDB-GENE-990415-172	171280		
DCXM	Neuronal migration protein doublecortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuronal migration protein doublecortin. Also: Dcx, Doublin, Lissencephalin-X.	ECOTOX and http://www.uniprot.org/uniprot/O88809			
NG1M	Neurongenin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neurongenin 1 mRNA. Also: ngn1, ngr1, cb260, zNgn1, neurod3, chunp6899, NGN-1, Zath4c, neurogenic differentiation 3, neurogenic differentiation factor 3, neurogenin-related protein 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=NM_131041	170392	NM_131041	
NFFR	Neuropeptide FF-amide peptide precursor like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide FF-amide peptide precursor like. Also: npffl, pqrf.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/368264	170801		
NPYM	Neuropeptide Y mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide Y.	ECOTOX			
NY8B	Neuropeptide Y receptor Y8b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neuropeptide Y receptor Y8b. Also: zyb, npyryb, zgc:194624, zgc:194648.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=nm_131436	169181	NM_131436	GenBank
NCMM	Neutral ceramidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Neutral ceramidase. Also: Cdase, N-Cdase, NCDase, Neutral N-acylsphingosine amidohydrolase, Neutral acylsphingosine deacylase, Slug-a-bed protein, slab.	ECOTOX and http://www.uniprot.org/uniprot/Q9VA70			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NA1R	Nicotinic acetylcholine receptor alpha1 subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nicotinic acetylcholine receptor alpha1 subunit. Also: nAChRa1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=NM_001098220	175423	NM_001098220	GenBank
NO2M	Nitric oxide synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nitric oxide synthase 2.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/229270313/	174676	FJ593040.1	GenBank
NO3M	Nitric oxide synthase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nitric oxide synthase 3. Also: NOS3.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/100858754	174884		
NOSR	nitric oxide synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nitric oxide synthase mRNA	ECOTOX			
NMRM	N-methyl-D-aspartate receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-methyl-D-aspartate receptor. Also:NMDAR.	ECOTOX and http://www.uniprot.org/uniprot/A7YJZ0			
NLPM	Noggin like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to noggin like protein. Also: NLG.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/AB076181.1/	178849	AB076181	GenBank
NPSM	Nonribosomal peptide synthetase McyA protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nonribosomal peptide synthetase McyA protein. Also: mcyA.	ECOTOX and http://www.uniprot.org/uniprot/L8NWM7			
NT1R	Notch 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to notch 1a. Also: n1a, des, notch1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/30718	171280		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NGRN	Notch gene homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Notch gene homolog 1	ECOTOX			
NTCM	Notch mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Notch.	ECOTOX			
NIRM	Novel immune-type receptor 6 isoform 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Novel immune-type receptor 6 isoform 1. Also: NITR6.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/EU419362.1	173763	Eu419362.1	GenBank
UC3M	Novel protein similar to vertebrate urocortin 3 (Stresscopin) (UCN3) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Novel protein similar to vertebrate urocortin 3 (Stresscopin) (UCN3). Also: ucn3L.	ECOTOX and http://www.uniprot.org/uniprot/Q1LYP1			
NQO1	Nqo1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nqo1 mRNA	ECOTOX			
NRSR	N-ras mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene N-ras.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucore/162424326	170525		
NS1M	Nsep1 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nsep1 protein.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/27503841	166650	AAH42217	GenBank
NTAM	N-Terminal acetyltransferase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to N-Terminal acetyltransferase.	ECOTOX			
NG3M	NT-3 growth factor receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to NT-3 growth factor receptor. Also: NTRK3.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/913470885/	173779	KP728109	GenBank
NABN	Nuclear Abnormalities	No definition available.				

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NF2M	Nuclear Factor erythroid 2-related factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear Factor erythroid 2-related factor (Nrf2).	ECOTOX			
NFCR	Nuclear factor I/C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear factor I/C. Also: nfic.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100005568	170801		
NKBM	Nuclear factor kappa B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear factor kappa B. Also: NKAP, NFKB activating protein.	ECOTOX, https://www.ncbi.nlm.nih.gov/gene/?term=NM_001003414 , and http://zfin.org/ZDB-GENE-030131-8064	176942	NM_001003414	GenBank
N1AM	Nuclear factor, erythroid 2-like 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear factor, erythroid 2-like 1a. Also: nrf1a, nfe2l1, nfe2l1a.	ECOTOX and http://zfin.org/ZDB-GENE-040630-5	178022	none given	
N1BM	Nuclear factor, erythroid 2-like 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear factor, erythroid 2-like 1b. Also: nfe2l1b, nrf1b.	ECOTOX and http://zfin.org/ZDB-GENE-120319-2	178022	none given	
N2AM	Nuclear factor, erythroid 2-like 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear factor, erythroid 2-like 2a. Also: nfe2l2a, nfe2l2, nrf2a.	ECOTOX and http://zfin.org/ZDB-GENE-030723-2	178022	none given	
NL2M	Nuclear factor, erythroid 2-like 2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear factor, erythroid 2-like 2b. Also: nfe2l2b, nrf2b.	ECOTOX and http://zfin.org/ZDB-GENE-120320-3	171290	GmE090818c13982	GenBank
N23M	Nuclear factor, erythroid 2-like 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear factor, erythroid 2-like 3. Also: nfe2l3, nrf3.	ECOTOX and http://zfin.org/ZDB-GENE-040426-2334	178022	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
N14M	Nuclear hormone receptor family member 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear hormone receptor family member 14. Also: nhr14, nhr-14.	ECOTOX and https://www.uniprot.org/uniprot/O02151	178025	none given	
H96M	Nuclear hormone receptor HR96 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear hormone receptor HR96. Also: HR96.	ECOTOX and http://www.uniprot.org/uniprot/Q24143	166150	none given	
NCPF	Nuclear phase frequency	Number of phases that a cell goes through during cell division.				
NR3M	Nuclear receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor 3. Also: HR3.	ECOTOX and http://www.uniprot.org/uniprot/Q9NH86			
NR1R	Nuclear receptor coactivator 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 1. Also: ncoa1, dkey-34f16.7, si:dkey-34f16.6, si:dkey-5g7.6, src1.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/XM_686652 and http://zfin.org/ZDB-GENE-041001-175	170323	XM_686652	GenBank
NC2R	Nuclear receptor coactivator 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 2. Also: ncoa2, ncoa-2, glucocorticoid receptor-interacting protein 1, tteroid receptor coactivator 2, transcriptional intermediary factor 2, grip1, src2, tif2, wu:fc41a10, wu:fe26a11.	ECOTOX, http://www.uniprot.org/uniprot/Q98TW1 and http://zfin.org/ZDB-GENE-010406-3	170323	NM_131777	GenBank
NR3R	Nuclear receptor coactivator 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor coactivator 3. Also: ncoa3, sb:eu248, sb:eu484, SRC3.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/xm_687846 and http://zfin.org/ZDB-GENE-051107-8	170323	XM_687846	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NR2R	Nuclear receptor corepressor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor corepressor 2. Also: ncor2, SMRT; gb:be017685; si:bz71m17.2.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/NM_001007032	170323	NM_001007032	GenBank
NRCR	Nuclear receptor corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor co-repressor. Also: ncor1, ncor.	ECOTOX, http://www.ncbi.nlm.nih.gov/uniprot/ef016488 and http://www.uniprot.org/uniprot/A8B6H7	170323	EF016488	GenBank
ROAM	Nuclear receptor ROR-alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor ROR-alpha. Also: Nuclear receptor RZR-alpha, Nuclear receptor subfamily 1 group F member 1, Retinoid-related orphan receptor-alpha, Rora, Nr1f1, Rzra.	ECOTOX and http://www.uniprot.org/uniprot/P51448			
ROBM	Nuclear receptor ROR-beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor ROR-beta. Also: Nuclear receptor RZR-beta, Nuclear receptor subfamily 1 group F member 2, Retinoid-related orphan receptor-beta, Rorb, Nr1f2.	ECOTOX and http://www.uniprot.org/uniprot/Q8R1B8			
N0BM	Nuclear receptor subfamily 0 group B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 0 group B member 1. Also: DSS-AHC critical region on the X chromosome protein 1, Nuclear receptor DAX-1, NR0B1, AHC, DAX1.	ECOTOX and http://www.uniprot.org/uniprot/P51843			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ND1M	Nuclear receptor subfamily 1 group D member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 1 group D member 1. Also: Rev-erbA-alpha, V-erbA-related protein 1, Nr1d1, Ear1.	ECOTOX and http://www.uniprot.org/uniprot/Q3UV55			
ND2M	Nuclear receptor subfamily 1 group D member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 1 group D member 2. Also: Orphan nuclear receptor RVR, Rev-erb-beta, Nr1d2.	ECOTOX and http://www.uniprot.org/uniprot/Q60674			
LXRM	Nuclear receptor subfamily 1, group H, member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to nuclear receptor subfamily 1, group H, member 3. Also: nr1h3, liver x receptor, oxysterols receptor LXR-alpha.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/548341	175649	none given	
NRRM	Nuclear receptor subfamily 4 group A member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 4 group A member 2 . Also: Immediate-early response protein NOT, Orphan nuclear receptor, NURR1, Transcriptionally-inducible nuclear receptor, NR4A2, NOT, TINUR.	ECOTOX and http://www.uniprot.org/uniprot/P43354	170852		
5AAM	Nuclear receptor subfamily 5 group A member 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 1a. Also: Nr5a1a.	ECOTOX and http://www.uniprot.org/uniprot/M9UU09	170160		
N52R	Nuclear receptor subfamily 5 group A member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 2 mRNA. Also: Nr5a2, Alpha-1-fetoprotein transcription factor, B1-binding factor, CYP7A promoter-binding factor, Hepatocytic transcription factor, Liver receptor homolog 1.	ECOTOX, http://www.uniprot.org/uniprot/M9V032 and http://www.uniprot.org/uniprot/O00482	170402	KC476440	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
N55R	Nuclear receptor subfamily 5 group A member 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5 group A member 5 mRNA. Also: Nr5a5, ff1c, fd46g06, wu:fd46g06, zgc:111842, zgc:153866.	ECOTOX, http://www.ncbi.nlm.nih.gov/geo/407626 and http://www.uniprot.org/uniprot/M9UWG5	170402	KC476441	GenBank
5ABM	Nuclear receptor subfamily 5, group A, member 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor subfamily 5, group A, member 1b. Also: nr5a1b, Novel protein similar to Carassius auratus nuclear hormone receptor FTZ-F1, nr5a2l, Ff1d.	ECOTOX and http://www.uniprot.org/uniprot/Q800U8	170160	Q800U8	GenBank
UP1M	Nuclear receptor USP isoform 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor USP isoform 1. Also: Ultraspiracle isoform 1.	ECOTOX and http://www.uniprot.org/uniprot/K7WYJ0	166150	JX680324	GenBank
US2M	Nuclear receptor USP isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor USP isoform 2. Also: Ultraspiracle isoform 2.	ECOTOX and http://www.uniprot.org/uniprot/K7WLB9	166150	JX680325	GenBank
NR2M	Nuclear receptor-binding factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nuclear receptor-binding factor 2. Also: nrbf2, NRBF-2.	ECOTOX and http://www.uniprot.org/uniprot/Q8VCQ3			
NLMR	Nucleolin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nucleolin. Nucleolin = A major nucleolar protein (100 kD) that functions as a shuttle protein between nucleus and cytoplasm and is also found on the cell surface. Nucleolin binds midkine and heparin binding growth associated molecule (HB GAM).	http://cancerweb.ncl.ac.uk/omd//omd/			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NDKM	Nucleoside diphosphate kinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Nucleoside diphosphate kinase 1. Also: NDKP1, Nucleoside diphosphate kinase I, NDK I, NDP kinase I, NDPK I, Nucleoside 5'-diphosphate phosphotransferase, Nucleoside diphosphokinase, Nucleoside-diphosphate kinase, EC 2.7.4.6.	ECOTOX, http://enzyme.expasy.org/EC/2.7.4.6 and http://www.uniprot.org/uniprot/O81372	155054		
OMGR	O6-MGMT mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to O6-MGMT mRNA. Also: O6-methylguanine-DNA methyltransferase.	ECOTOX, http://www.uniprot.org/uniprot/D2Y3F1 and http://www.ncbi.nlm.nih.gov/nucleotide/283825502	170525	GU296409	
OCRM	Octopamine receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Octopamine receptor.	ECOTOX and http://www.uniprot.org/uniprot/Q17232			
OLTM	Olive tail moment	The product of the tail length and the fraction of total DNA in the tail. Tail moment incorporates a measure of both the smallest detectable size of migrating DNA (reflected in the comet tail length) and the number of relaxed/broken pieces (represented by the intensity of DNA in the tail).	http://www.cometassayindia.org/definitions.htm	166647		
OCHM	omChgH mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to omChgH	ECOTOX			
OCLM	omChgL mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to omChgL	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
OS1M	Opsin-1, short-wave-sensitive 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Opsin-1, short-wave-sensitive 1. Also: opn1sw1, SWS1, zfuv, uvops, opn1sw2, Opsin 1 (cone pigments) short-wave-sensitive 1, Opsin SWS-1, Ultraviolet cone photoreceptor pigment, Ultraviolet-sensitive opsin.	ECOTOX, http://www.uniprot.org/uniprot/Q9W6A9 and http://www.ncbi.nlm.nih.gov/genbank/?term=nm_131319	166633	NM_131319	GenBank
OS2M	Opsin-1, short-wave-sensitive 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Opsin-1, short-wave-sensitive 2. Also: Opsin 1 (cone pigments) short-wave-sensitive 2, opn1sw2, SWS2, bluops, zfblue, Blue cone photoreceptor pigment, Blue-sensitive opsin, Opsin SWS-2.	ECOTOX, http://www.ncbi.nlm.nih.gov/genbank/?term=NM_131192 and http://www.uniprot.org/uniprot/Q9W6A8	166633	NM_131192	GenBank
OXNR	Orexin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to orexin	ECOTOX			
OATM	Organic anion transporting polypeptide 58Dc mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Organic anion transporting polypeptide 58Dc. Also: CG3380, Dmel\CG3380, OATP, oatp 58Dc.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/37545			
ODCM	Ornithine decarboxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ornithine decarboxylase. Also: ODC1, ODC, EC 4.1.1.17.	ECOTOX and http://www.uniprot.org/uniprot/P00860			
ODAM	Orthodenticle A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to orthodenticle A. Also: otxa.	ECOTOX and https://www.uniprot.org/uniprot/A0MV37	176960	none given	
ODBM	Orthodenticle B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to orthodenticle B. Also: otxb.	ECOTOX and https://www.uniprot.org/uniprot/A0MV38	176960	none given	

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
OAP8	OsAPx8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to OsAPx8	ECOTOX			
EG1M	Oviductal glycoprotein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to oviductal glycoprotein 1 . Also: ovgp1, Chitinase-3-like protein 1, chio1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=ovgp1+AND+danio%5BOrganism%5D	177606	none given	
A26M	Ovulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ovulin. Also: Accessory gland-specific peptide 26Aa, Male accessory gland secretory protein 355A, Acp26Aa, Mst26Aa, mst355a, CG8982.	ECOTOX and http://www.uniprot.org/uniprot/P10333	170845		
OBPM	Oxysterol binding protein-like 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to oxysterol binding protein-like 1A. Also: osbpl1a, oxysterol-binding protein-related protein 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=BC162978.1	177172	BC162978.1	GenBank
OB2M	Oxysterol-binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Oxysterol-binding protein 2. Also: Osbp2.	ECOTOX and http://www.uniprot.org/uniprot/Q5QNQ6			
P21M	p21 (CDKN1A)-activated kinase 2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to p21 (CDKN1A)-activated kinase 2a. Also: pak2a, Pak2a protein, cb422, pak2, redhead, rhd.	ECOTOX, http://zfin.org/act ion/marker/view/ZDB-GENE-021011-2 and http://www.uniprot.org/uniprot/Q6DG42			
P2LM	p21 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the p21 protein. Also: Ha-ras	ECOTOX and https://www.ncbi.nlm.nih.gov/nuc core/DQ078265	95944	DG078265	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
21PM	p21-ras protein mRNA, long form	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the long form p21-ras protein. Also: Ki-ras, KRAS prot-oncogene GTPase	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/AY886900	95944	AY886900	GenBank
21SM	p21-ras protein mRNA, short form	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the short form p21-ras protein. Also: Ki-ras	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/?term=AY886901	95944	AY886901	GenBank
PAMR	P450-17alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to P450-17alpha. Also: CYP17A.	ECOTOX			
P4MR	P450scc mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cholesterol side-chain cleavage enzyme, mitochondrial. Also:P450scc, Cholesterol side chain cleavage CYPXIA1, cyp11a1, Cholesterol desmolase, Cytochrome P450 11A1, Cytochrome P450(scc), Cholesterol monooxygenase (side-chain-cleaving), Cholesterol 20-22-desmolase, Cholesterol C(20-22) desmolase., Cholesterol side-chain cleavage enzyme, Steroid 20-22 desmolase, Steroid 20-22-lyase, EC 1.14.15.6. ,	ECOTOX, http://enzyme.expasy.org/EC/1.14.15.6 and http://www.uniprot.org/uniprot/Q07217			
P53M	p53 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to p53. Also: protein 53,, tumor protein 53, brp53, drp53, fb40d06, wu:fb40d06, zgc:111919, etID22686.5, tp53.	ECOTOX, http://www.uniprot.org/uniprot/G1K2L5 and https://www.ncbi.nlm.nih.gov/genbank/?term=NM_001271820	170362	NM_001271820	GenBank

ECOTOX Code Appendix

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Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PACH	Pachytene	The stage of meiotic prophase that immediately follows the zygotene and that is characterized by paired chromosomes thickened and visibly divided into chromatids and by the occurrence of crossing-over.				
PX2M	Paired box protein Pax-2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paired box protein Pax-2a. Also: PAX2a, No isthmus protein, Pax[Zf-b], noi, pax2.1, paxzf-b.	ECOTOX and http://www.uniprot.org/uniprot/Q90268	170179		
PX8M	Paired box protein Pax-8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paired box protein Pax-8. Also: Paired box gene Pax-8.	ECOTOX and http://www.uniprot.org/uniprot/A0JMA6			
PT1M	Pancreas associated transcription factor 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pancreas associated transcription factor 1a. Also: ptf1a, ptfa, Pancreas-specific transcription factor 1a, and bHLH transcription factor p48.	ECOTOX, http://zfin.org/ZDB-GENE-030616-579 and https://www.uniprot.org/uniprot/Q7ZSX3	175217	none given	
PDHM	Pancreatic and duodenal homeobox 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pancreatic and duodenal homeobox 1. Also: pdx1, pdx-1, and ipf1.	ECOTOX and http://zfin.org/ZDB-GENE-990415-122	175217	none given	
PLRM	Paramyosin-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Paramyosin-like mRNA.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729458	171021	CO729458	GenBank
PVAM	Parvalbumin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Parvalbumin.	ECOTOX and http://www.uniprot.org/uniprot/Q8UUS2			
P6MR	pax6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pax6.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PCNA	PCNA Index	Proliferating cell nuclear a. (PCNA) a 36-kd nuclear acidic protein whose levels in the body correlate with the rates of DNA synthesis and cellular proliferation in transformed cells of certain tumors. Called also cyclin.	http://www.merc ksource.com/pp/ us/			
MS3R	Peptide methionine sulfoxide reductase A3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine sulfoxide reductase A3. Also: MSRA3	ECOTOX and http://www.unipr ot.org/uniprot/A8 I70	172734		
MS5R	Peptide methionine sulfoxide reductase A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine sulfoxide reductase A5. Also: MSRA5	ECOTOX and http://www.unipr ot.org/uniprot/A8 I1K5	172734		
MS2R	Peptide methionine-S-sulfoxide reductase A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptide methionine-S-sulfoxide reductase A2. Also: MSRA2	ECOTOX and http://www.unipr ot.org/uniprot/A8 HXY3	172734		
MS4R	Peptidyl-prolyl cis-trans isomerase A4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peptidyl-prolyl cis-trans isomerase A4. Also: MSRA4	ECOTOX and http://www.unipr ot.org/uniprot/A8 HPB8	172734		
R2MM	Perilipin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to perilipin 2. Also: PLIN2, ADFP, perilipin-2, adipocyte differentiation-related protein, adipose differentiation-related protein.	ECOTOX and https://www.ncbi. nlm.nih.gov/gen e/?term=NM_00 1031420	175777	NM_00103 1420	GenBank
PP3M	Period circadian clock 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian clock 3. Also: per3, period3.	ECOTOX and http://www.ncbi. nlm.nih.gov/gen e/58107	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PP1M	Period circadian protein homolog 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian protein homolog 1. Also: Circadian clock protein PERIOD 1, Per1.	ECOTOX and http://www.uniprot.org/uniprot/Q8CHI5			
PP2M	Period circadian protein homolog 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Period circadian protein homolog 2. Also: Circadian clock protein PERIOD 2, Per2.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z301			
PXDR	Peroxidasin homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxidasin homolog. Also: pxdn.	ECOTOX and http://www.uniprot.org/uniprot/Q3UQ28	173808		
PRXM	Peroxin 11 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxin 11 alpha. Also: PEX11a.	ECOTOX and http://www.uniprot.org/uniprot/F8UU15	176165	none given	
PONR	Peroxinectin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to peroxinectin mRNA	ECOTOX			
POXM	Peroxiredoxin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to peroxiredoxin. Also: prx.	ECOTOX and https://www.uniprot.org/uniprot/W8EH77	177086	KF804082	GenBank
PQAM	Peroxiredoxin Q A-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxiredoxin Q A-1. Also: prxQ-A1.	ECOTOX			
DC2M	Peroxisomal 2,4-dienoyl-CoA reductase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisomal 2,4-dienoyl-CoA reductase 2. Also: DECR2, Peroxisomal 24 dienoyl CoA reductase.	ECOTOX and http://www.uniprot.org/uniprot/A9Q117	152159	EF407559	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PBEM	Peroxisomal bifunctional enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisomal bifunctional enzyme, including the following 2 domains: Enoyl-CoA hydratase/3,2-trans-enoyl-CoA isomerase and 3-hydroxyacyl-CoA dehydrogenase. Also: ehhadh, PBFE, echd.	ECOTOX and http://www.uniprot.org/uniprot/Q6NYL3	168071	NM_207068	GenBank
P14M	Peroxisomal membrane protein PEX14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisomal membrane protein PEX14. Also: PEX14, ped2, peroxin-14, peroxin 14, peroxisome defective 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9FXT6	176597	none given	
PB1M	Peroxisome biogenesis protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome biogenesis protein 1. Also: PEX1, Peroxin-1.	ECOTOX and http://www.uniprot.org/uniprot/Q9FNP1	176597	none given	
PPBM	Peroxisome proliferator activated receptor alpha b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator activated receptor alpha b. Also: PPARalphab.	ECOTOX and http://zfin.org/act ion/marker/sequence/view/ZDB-GENE-990415-211			
PBAM	Peroxisome proliferator activated receptor alpha Ba mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor alpha Ba. Also: pparaBa.	ECOTOX and http://www.uniprot.org/uniprot/A0A1W6IZA5	176165	none given	
PBBM	Peroxisome proliferator activated receptor alpha Bb mRNA	Peroxisome proliferator activated receptor alpha Bb mRNA	ECOTOX and http://www.uniprot.org/uniprot/A0A1W6IZA9	176165	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PGCR	Peroxisome proliferator activated receptor gamma coactivator 1 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator activated receptor gamma coactivator 1 alpha. Also: pgc-1alpha, ppargc1a.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide /AY998087 and http://www.uniprot.org/uniprot/Q52MY8	170323	AY998087	GenBank
AAAM	Peroxisome proliferator-activated receptor alpha a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor alpha a. Also: PPARalphaaa, pparaa.	ECOTOX and http://zfin.org/ZDB-GENE-041210-169			
PAAM	Peroxisome proliferator-activated receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor alpha.	ECOTOX			
PABM	Peroxisome proliferator-activated receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor beta.	ECOTOX			
PDBM	Peroxisome proliferator-activated receptor delta b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor delta b. Also: PPARdb.	ECOTOX and http://www.uniprot.org/uniprot/A9C4A5			
PPDM	Peroxisome proliferator-activated receptor delta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor delta. Also: PPARda.	ECOTOX and http://www.genscript.com/cgi-bin/orf/refseq.pl?acc=XM_694808			
PPRM	Peroxisome proliferator-activated receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor gamma. Also: pparg, ppar, arf6, nr1c3, and nr1c3.	ECOTOX and http://zfin.org/ZDB-GENE-990415-213	171290	ES475236	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PAGM	Peroxisome proliferator-activated receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Peroxisome proliferator-activated receptor gamma.	ECOTOX			
PHFQ	Phenotype frequencies	The frequency at which a phenotype is displayed. A phenotype is the total characteristics displayed by an organism under a particular set of environmental factors, regardless of the actual genotype of the organism. Results from interaction between the genotype and the environment.	http://cancerweb.ncl.ac.uk/omd/			
PHMR	Phenylalanine Hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phenylalanine Hydroxylase.	ECOTOX			
PA1M	Phorbol-12-myristate-13-acetate-induced protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phorbol-12-myristate-13-acetate-induced protein 1. Also: noxa, pmaip1.	ECOTOX, http://zfin.org/act ion/marker/view/ZDB-GENE-070119-3 and http://www.uniprot.org/uniprot/Q0GKC8			
PPPM	Phosphate transport system permease protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate transport system permease protein. Also: pstA.	ECOTOX and http://www.uniprot.org/uniprot/B0JWH8			
PBPM	Phosphate-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate-binding protein. Also: pstS.	ECOTOX and http://www.uniprot.org/uniprot/B0JWI0			
PTAM	Phosphate-specific transport system accessory protein PhoU mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphate-specific transport system accessory protein PhoU. Also: phoU.	ECOTOX and http://www.uniprot.org/uniprot/B0JY50			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
P10R	Phosphodiesterase 10A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphodiesterase 10A. Also: pde10a, zgc:56689.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/394077	170801		
PCGM	Phosphoenolpyruvate carboxykinase (GTP) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase (GTP). Also: pckG, PEPCK, EC 4.1.1.32.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z755			
PCRN	Phosphoenolpyruvate carboxykinase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase 1	ECOTOX			
PC2M	Phosphoenolpyruvate carboxykinase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoenolpyruvate carboxykinase 2. Also: pck2, zgc:77867.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=BC063985	170520	BC063985	GenBank
PTCM	Phosphoinositide phospholipase C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoinositide phospholipase C. Also: plcg1, 1-phosphatidyl-D-myo-inositol-4,5-bisphosphate inositoltrisphosphohydrolase, 1-phosphatidylinositol-4,5-bisphosphate phosphodiesterase, Monophosphatidylinositol phosphodiesterase, Phosphatidylinositol phospholipase C, Phosphoinositidase C, PI-PLC, Triphosphoinositide phosphodiesterase, EC 3.1.4.11.	ECOTOX, http://enzyme.expasy.org/EC/3.1.4.11 and http://www.uniprot.org/uniprot/Q804J6			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
P3KM	Phosphoinositide-3-kinase regulatory subunit 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphoinositide-3-kinase regulatory subunit 1. Also: PIK3R1. Phosphoinositide-3-kinase, regulatory subunit 1 (Alpha).	ECOTOX and http://www.uniprot.org/uniprot/H2QR04	175651	none given	
PA2M	Phospholipase A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase A2.	ECOTOX			
P2AM	Phospholipase A2-activating protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase A2-activating protein. Also: plaa.	ECOTOX and http://www.uniprot.org/uniprot/Q7SXM2			
NAP4	Phospholipase C gamma-binding protein (NAP4) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phospholipase C gamma-binding protein (NAP4).	ECOTOX			
PHCM	Phospholipase C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phospholipase C.	ECOTOX			
PGPR	Phospholipid glutathione peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phospholipid glutathione peroxidase. Also: phgpx.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/KF804081	177086	KF804081	GenBank
PD1R	Phosphotyrosine interaction domain containing 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phosphotyrosine interaction domain containing 1. Also: pid1, wu:fb36h10, zgc:113478.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/541377	170801		
PIBM	Photosystem I reaction center protein subunit B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem I reaction center protein subunit B (psaB) .	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PD1M	Photosystem II D2 protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II D2 protein 1. Also: psbD1, Photosystem Q(A) protein 1.	ECOTOX and http://www.uniprot.org/uniprot/Q5N3Q7			
PD2M	Photosystem II D2 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II D2 protein. Also: Photosystem Q(A) protein, psbD.	ECOTOX and http://www.uniprot.org/uniprot/P56319			
PBCM	Photosystem II psbC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem II psbC protein.	ECOTOX			
PQBM	Photosystem Q(B) protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Photosystem Q(B) protein. Also: 32 kDa thylakoid membrane protein, Photosystem II protein D1, psbA.	ECOTOX and http://www.uniprot.org/uniprot/P56318			
PYDM	Phytoene desaturase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Phytoene desaturase.	ECOTOX and http://www.uniprot.org/uniprot/A1YEB2	171826	DQ924534	GenBank
PY1M	Phytoene synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phytoene synthase 1. Also: Fruit-ripening-specific protein, PSY1.	ECOTOX and http://www.uniprot.org/uniprot/P08196	176551	none given	
PY2M	Phytoene synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phytoene synthase 2. Also: PSY2.	ECOTOX and http://www.uniprot.org/uniprot/P37273	176551	none given	
PY3M	Phytoene synthase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to phytoene synthase 3. Also: PSY3.	ECOTOX and http://www.uniprot.org/uniprot/A0A097F715	176551	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PLCR	Piccolo presynaptic cytomatrix protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Piccolo presynaptic cytomatrix protein. Also: pclo, pcloa, wu:fj53e09, si:dkey-108d22.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100148002	170801		
PTE5	PiggyBac transposable element derived 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to PiggyBac transposable element derived 5. Also: PGBD5.	ECOTOX and http://www.uniprot.org/uniprot/F1NDK6	175651	none given	
PH2M	Pituitary homeobox 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pituitary homeobox 2. Also: ALL1-responsive protein ARP1, BRX1 homeoprotein, Homeobox protein PITX2, Orthodenticle-like homeobox 2, Paired-like homeodomain transcription factor 2, Paired-like homeodomain transcription factor Munc 30, Solurshin, Pitx2, Arp1, Brx1, Otlx2, Ptx2, Rgs, PITX2.	ECOTOX and http://www.uniprot.org/uniprot/P97474			
PSMR	Pituitary specific transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.				
PM1R	Plasma membrane H+-ATPase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane H+-ATPase 1. Also: HA1, proton-exporting ATPase 1.	ECOTOX and http://www.uniprot.org/uniprot/Q5ZN71	176525	AJ703810	GenBank
PM2R	Plasma membrane H+-ATPase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane H+-ATPase 2. Also: HA2, proton-exporting ATPase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q5ZN70	176525	AJ703811	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
P1AM	Plasma membrane intrinsic protein 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane intrinsic protein 1A. Also: ATP1P1, PIP1, PIP1-1, plasma membrane intrinsic protein 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=825316	177807	none given	
P1BM	Plasma membrane intrinsic protein 1B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane intrinsic protein 1B. Also: PIP1.2, PIP1-1, plasma membrane intrinsic protein 1.2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=819204	177807	none given	
P25M	Plasma membrane intrinsic protein 2;5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane intrinsic protein 2;5. Also: PIP2D, plasma membrane intrinsic protein 2d.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=824647	177807	none given	
PM2M	Plasma membrane intrinsic protein 2A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane intrinsic protein 2A. Also: PIP2, PIP2A, PIP2-1, ATPIP2-1, plasma membrane intrinsic protein 2-1, plasma membrane intrinsic protein 2A.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=824510	177807	none given	
P2EM	Plasma membrane intrinsic protein 2E mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasma membrane intrinsic protein 2E. Also: PIP2E, PIP2;6, plasma membrane intrinsic protein 2;6.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=818487	177807	none given	
PATM	Plasminogen activator, tissue mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasminogen activator, tissue. Also: PLAT.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/426791	177175	none given	
PLGM	Plasminogen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to plasminogen. Also: PLG.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=XM_419618	177175	XM_419618	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PO2R	Pleckstrin homology domain containing, family O member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pleckstrin homology domain containing, family O member 2. Also: plekho2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/100334463	170801		
PK1M	Polyketide synthase type 1 McyD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Polyketide synthase type 1 McyD. Also: mycD.	ECOTOX and http://www.uniprot.org/uniprot/L8NTG4			
PTPM	Polypyrimidine tract binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Polypyrimidine tract binding protein 1. Also: PTBP1.	ECOTOX and http://www.uniprot.org/uniprot/A0A1D5PRK6	175651	none given	
P10M	Polyubiquitin 10 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to polyubiquitin 10. Also: UBXN10, UBI10, ubiquitin 10.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/30190	175228	none given	
PCTR	Potassium channel tetramerisation domain containing 15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Potassium channel tetramerisation domain containing 15. Also: kctd15, kctd15b.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/445133	170801		
P2HR	POU class 2 homeobox 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to POU class 2 homeobox 1 (POU2F1).	ECOTOX and https://www.ncbi.nlm.nih.gov/ncucore/NM_205472	175195	NM_205472	GenBank
P2FM	POU domain, class 2, transcription factor 3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to POU domain, class 2, transcription factor 3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gen/?term=727092			
LX1M	PREDICTED: leucine-rich repeat-containing protein 16A-like isoform X1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to PREDICTED: leucine-rich repeat-containing protein 16A-like isoform X1. Also: Amel\CLR.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/328788969	167678	XP_003251213	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PXMR	Pregnane X receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pregnane X receptor (also known as NR1I2 (nuclear receptor subfamily 1, group I, member 2).	ECOTOX and http://www.uniprot.org/uniprot/A5A0Y5			
PPIN	Preproinsulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Preproinsulin. Also: ins, zgc:109842, insa, preproinsulin a.	ECOTOX, http://zfin.org/ZDB-GENE-980526-110 , and http://www.ncbi.nlm.nih.gov/genbank/?term=NM_131056	169181	NM_131056	GenBank
MCHM	Prepro-melanin-concentrating hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prepro-melanin-concentrating hormone (pp-MCH).	ECOTOX			
PYYM	Prepropeptide YY mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prepropeptide YY.	ECOTOX and http://www.uniprot.org/uniprot/R4I355			
PPVM	Preprovasotocin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Preprovasotocin.	ECOTOX and http://www.uniprot.org/uniprot/D9IFL6			
DX5M	Probable ATP-dependent RNA helicase DDX5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable ATP-dependent RNA helicase DDX5 (DDX5). Also: DEAD (Asp-Glu-Ala-Asp) box helicase 5, probable ATP-dependent RNA helicase DDX5, DEAD box protein 5.	ECOTOX and http://www.geneCards.org/cgi-bin/carddisp.pl?gene=DDX5			
PCTM	Probable cation-transporting ATPase 13A3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable cation-transporting ATPase 13A3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=410527			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PC5M	Probable copper-transporting ATPase HMA5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable copper-transporting ATPase HMA5. Also: Probable copper-transporting ATPase 3, Protein HEAVY METAL ATPASE 5.	ECOTOX and http://www.uniprot.org/uniprot/Q9SH30			
P12M	Probable cytochrome P450 12d1 proximal, mitochondrial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable cytochrome P450 12d1 proximal, mitochondrial. Also: Cyp12d1-p, CYPXIID1, Cyp12d1.	ECOTOX and http://www.uniprot.org/uniprot/P82712			
GS5R	Probable glutathione S-transferase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable glutathione S-transferase 5. Also: gst-5, GST class-sigma.	ECOTOX and http://www.uniprot.org/uniprot/Q09596			
GH3M	Probable indole-3-acetic acid-amido synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable indole-3-acetic acid-amido synthetase. Also: GH3.2, and GH3-2.	ECOTOX and http://www.uniprot.org/uniprot/P0C0M2	171223		
L8CR	Probable lipoxygenase 8, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable lipoxygenase 8, chloroplastic. Also: cm-lox2.	ECOTOX and http://www.uniprot.org/uniprot/Q84YK8	170364		
PMIM	Probable maleylacetoacetate isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable maleylacetoacetate isomerase. Also: MAAI, Glutathione S-transferase gst-42, gst-42.	ECOTOX and http://www.uniprot.org/uniprot/Q18938			
PO2M	Probable oxygen-evolving enhancer protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Probable oxygen-evolving enhancer protein 2. Also: PsbP subunit of photosystem II, psbP1.	ECOTOX and http://www.uniprot.org/uniprot/Q6XNL9	169205	AY222741	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VSTM	Probable vesicular acetylcholine transporter-B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to probable vesicular acetylcholine transporter-B. Also: VACHT-B, Solute carrier family 18 member 3-B.	ECOTOX and https://www.uniprot.org/uniprot/P59845	118453	NM_201107.1	GenBank
PEGM	Pro-epidermal growth factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pro-epidermal growth factor. Also: Epidermal Growth Factor, HOMG4, URG, Epidermal Growth Factor (Beta-Urogastrone), beta-urogastrone, egf.	ECOTOX, http://www.geneCards.org/cgi-bin/carddisp.pl?gene=EGF and http://www.uniprot.org/uniprot/P01132			
PRAM	Progesterone membrane receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progesterone membrane receptor alpha.	ECOTOX			
PRMR	Progesterone receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progesterone receptor. Also: pgr, gb:dq017620, nr3c3, pr.	ECOTOX and http://zfin.org/ZDB-GENE-990415-214	170323	NM_001166335	GenBank
PM1M	Progestin membrane receptor component 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progestin membrane receptor component 1. Also: PGMRC1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AY40			
PR2M	Progestin membrane receptor component 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to progestin membrane receptor component 2	ECOTOX			
PN1M	Progonadotropin-releasing hormone 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progonadotropin-releasing hormone 1. Also: Progonadotropin-releasing hormone, GNRH1, MDGNRH, MFGNRH.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=AB041336	177316	AB041336	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PM3M	Progonadoliberin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progonadoliberin 3. Also: Progonadoliberin-3, prepro-gonadotropin-releasing hormone, progonadoliberin III, GNRH3, SGNRH.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=AB041332	177316	AB041332	GenBank
PG2M	Progonadoliberin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Progonadoliberin-2. Also: Chicken-type II gonadotropin-releasing hormone, Progonadoliberin II, cGnRH-II, gnrh2.	ECOTOX and http://www.uniprot.org/uniprot/Q9DGC9			
PCAM	Programmed cell death activator egl-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Programmed cell death activator egl-1. Also: Egg-laying defective protein 1, egl-1.	ECOTOX and http://www.uniprot.org/uniprot/O61667			
PLMR	Prolactin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins. Prolactin is a protein hormone produced by the adenohypophysis; stimulates lactation and promotes functional activity of the corpus luteum.				
PR1R	Prolactin receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prolactin receptor 1. Also: prl1, prlr1, prla, prlra, prolactin receptor a.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/GU270842.1	170526		
PR2R	Prolactin receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prolactin receptor 2. Also: prl2, prlr2, prlb, prlrb, prolactin receptor b.	ECOTOX	170526		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PRLM	Proline--tRNA ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proline--tRNA ligase. Also: Prolyl-tRNA Synthetase(mitochondrial).	ECOTOX and http://www.uniprot.org/uniprot/Q58635			
POOM	Pro-opiomelanocortin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Pro-opiomelanocortin. Also: POMC, Proopiomelanocortin, Proopiomelanocortin a, Corticotropin-lipotropin.	ECOTOX and http://www.uniprot.org/uniprot/P10000			
PPOM	Prophenoloxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prophenoloxidase.	ECOTOX			
PC1M	Proprotein Convertase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proprotein Convertase 1. Also: Neuroendocrine Convertase PC1, PC1 Endoprotease, PC1 Prohormone Convertase, PC3 Endoprotease, PC3 Prohormone Convertase, Prohormone Convertase 1, Prohormone Convertase 3, Prohormone Convertase PC1, Proinsulin Convertase 1, Proprotein Convertase SPC3.	ECOTOX and http://www.nlm.nih.gov/cgi/mesh/2011/MB.cgi?mode=&term=Protein+Convertase+1			
PRMM	Prosaposin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to prosaposin. Also: psap, surfactant protein b, sp-b.	ECOTOX and http://zfin.org/ZDB-GENE-020108-1	177131	none given	
PE2M	Prostaglandin E synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin E synthase 2. Also: ptgsl, ptges2, pges2, ptgesl, Microsomal prostaglandin E synthase 2, mPGES-2.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZUC7			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PS1M	Prostaglandin G/H synthase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin G/H synthase 1. Also: ptgs1.	ECOTOX and http://www.uniprot.org/uniprot/Q8JH44			
PS2M	Prostaglandin G/H synthase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin G/H synthase 2. Also: Prostaglandin-endoperoxide synthase 2a, ptgs2, ptgs2a.	ECOTOX and http://www.uniprot.org/uniprot/Q8JH43			
P2SM	Prostaglandin I2 synthase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin I2 synthase. Also: ptgis.	ECOTOX and http://www.uniprot.org/uniprot/A9LLA5			
PR1M	Prostaglandin reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Prostaglandin reductase 1. Also: 15-oxoprostaglandin 13-reductase, NADP-dependent leukotriene B4 12-hydroxydehydrogenase, Ltb4dh.	ECOTOX and http://www.uniprot.org/uniprot/Q9EQZ5			
PTKM	Protachykinin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protachykinin. Also: Gamma-preprotachykinin.	ECOTOX and http://www.uniprot.org/uniprot/P25421			
PTMM	Protamine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protamine.	ECOTOX and http://www.uniprot.org/uniprot/Q91185			
PIKM	Protease inhibitor 11, Kazal mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protease inhibitor 11, Kazal.	ECOTOX			
PTBM	Proteasome subunit beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proteasome subunit beta. Also: Proteasome beta, 20S proteasome beta subunit Proteasome core protein PsmB, psmB.	ECOTOX and http://www.uniprot.org/uniprot/P28061			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PCKM	Protein C kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the Protein C kinase.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest /CO729466	171021	CO729466	GenBank
CA9M	Protein CBR-CYP-34A9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CBR-CYP-34A9. Also: cyp-34a9, Cbr-cyp-34A9.	ECOTOX and http://www.uniprot.org/uniprot/A8WQ02			
PG1M	Protein CBR-PGRN-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CBR-PGRN-1. Also: pgrn-1, Cbr-pgrn-1.	ECOTOX and http://www.uniprot.org/uniprot/A8XM14			
CB1R	Protein CYP-35B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein CYP-35B1. Also: cyp-35b1, cyp-35B1.	ECOTOX and http://www.uniprot.org/uniprot/O44650			
PD3M	Protein disulfide isomerase family A, member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to protein disulfide isomerase family A, member 3. Also: pdia3, protein disulfide isomerase associated 3.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=FJ457023	177149	FJ457023	GenBank
G38R	Protein GST-38 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein GST-38. Also: gst-38.	ECOTOX and http://www.uniprot.org/uniprot/O45451			
PKCM	Protein kinase C delta type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein kinase C delta type. Also: prkcd, nPKC-delta, pkcd, EC 2.7.11.13.	ECOTOX and http://www.uniprot.org/uniprot/P09215	168602	JX470751	source unknown
L2GM	Protein lethal(2) giant larvae mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein lethal(2) giant larvae (l(2)gl) Also: p127, Dpsel\l(2)gl.	ECOTOX and http://www.uniprot.org/uniprot/Q08470			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NOGM	Protein NOV mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein NOV. Also: CCN family member 3, Nephroblastoma-overexpressed gene protein, NOV, CCN3.	ECOTOX and http://www.uniprot.org/uniprot/P28686	175651	none given	
PPMR	Protein phosphatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein phosphatase. Also: cdc25b, cdc25, cdc25A, sb:cb317, cell division cycle 25B.	ECOTOX, http://www.ncbi.nlm.nih.gov/genie/?term=nm_00115095 and http://www.uniprot.org/uniprot/B5LY73	170362	NM_001115095	GenBank
SG1M	Protein SGT1 homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to protein SGT1 homolog. Also: SGT1.	ECOTOX and http://www.uniprot.org/uniprot/I7CH62	175432	JN587293	GenBank
PRDN	Protein to DNA ratio	The amount of protein as compared to the amount of DNA in a sample.	ECOTOX			
PRRN	Protein to RNA ratio	The ratio of Protein to RNA in a sample.	ECOTOX			
W8AM	Protein Wnt-8a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Protein Wnt-8a. Also: wnt8a, wnt-8, wnt8.	ECOTOX and http://www.uniprot.org/uniprot/P51028	169192	JQ950331	source unknown
LOXM	Protein-lysine 6-oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to protein-lysine 6-oxidase. Also: LOX, Lysyl oxidase, Protein- lysine 6 oxidase.	ECOTOX and https://www.uniprot.org/uniprot/Q05063	177959	none given	
PA4M	Proton-coupled amino acid transporter 4-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Proton-coupled amino acid transporter 4-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=413117			
PSBM	psaB mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to psaB.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PSCM	psbC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to psbC.	ECOTOX			
PNPR	Purine nucleoside phosphorylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Purine nucleoside phosphorylase. Also: PNP.	ECOTOX and http://www.uniprot.org/uniprot/P85973	174395	JK729393	GenBank
PNPM	Purine nucleoside phosphorylase-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Purine nucleoside phosphorylase-like protein.	ECOTOX and http://www.uniprot.org/uniprot/A0A061ILE8			
MT1R	Putative Cu-metallothionein (MTT1) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative Cu-metallothionein (MTT1).	ECOTOX and http://www.uniprot.org/uniprot/B3G3J6	172379	EU627174	
MT2M	Putative Cu-metallothionein (MTT2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative Cu-metallothionein (MTT2).	ECOTOX and http://www.uniprot.org/uniprot/B3G3J7	172379	EU627175	
PKDM	Putative protein kinase C delta type homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative protein kinase C delta type homolog. Also: Pkcdelta, PKC-delta.	ECOTOX and http://www.uniprot.org/uniprot/P83099	169813	JX470751	
UBCM	Putative ubiquitin-conjugating enzyme mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative ubiquitin-conjugating enzyme.	ECOTOX and http://www.uniprot.org/uniprot/Q6PPH5			
PUPR	Putative uncharacterized protein OJ1123_C08.7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Putative uncharacterized protein OJ1123_C08.7. Also: oj1123_c08.7.	ECOTOX and http://www.uniprot.org/uniprot/Q5WMR3	170366		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
PDKM	Pyruvate dehydrogenase kinase 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pyruvate dehydrogenase kinase 4. Also: PDK4, Pyruvate dehydrogenase kinase isozyme 4.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=PDK4+AND+gallus%5BOrganism%5D	177255	none given	
PK2M	Pyruvate kinase M1/2a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pyruvate kinase M1/2a. Also: Pyruvate kinase M1/2a, pkma.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/NM_199333.1	176948	NM_199333.1	GenBank
PKAM	Pyruvate kinase M1/2b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pyruvate kinase M1/2b. Also: Pyruvate kinase M1/2b, pkmb.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/NM_001003488.1	176948	NM_001003488.1	GenBank
PYKM	Pyruvate kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to pyruvate kinase. Also: Pyruvate kinase L/R, pklr.	ECOTOX, https://www.ncbi.nlm.nih.gov/nucore/NM_201289.1 , and https://www.uniprot.org/uniprot/Q7SXK3	176948	NM_201289.1	GenBank
RD1M	Ras association (RalGDS/AF-6) domain family 1mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ras association (RalGDS/AF-6) domain family 1. Also: Ras-association domain family member 1, rassf1.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=nm_001004550.1	166328	NM_001004550.1	GenBank
RASO	Ras Oncogene mutation	A gene that causes cancer in an animal. The gene specifies the structure of an enzyme that catalyzes events that can induce cancerous growth. Ras is a protein found in chromosomes and when mutated it is permanently switched on telling the cell to grow regardless of whether the receptors on the cell surface are activated or not.	McGraw-Hill, 1994			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RBCM	rbcL mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to rbcL.	ECOTOX			
RO1R	Reactive oxygen species modulator 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Reactive oxygen species modulator 1. Also, romo1, zgc:73345	ECOTOX and http://zfin.org/ZD-B-GENE-040426-1768	171802	HO056270	GenBank
RO1M	Red-sensitive opsin-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Red-sensitive opsin-1. Also: opn1lw1, Opsin-1 long-wave-sensitive 1, Opsin 1 (cone pigments) long-wave-sensitive 1, Opsin LWS-1, Red cone photoreceptor pigment 1, lws1, rdops, zfred.	ECOTOX, http://www.uniprot.org/uniprot/Q9W6A7 and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131175	166633	NM_131175	GenBank
RLNR	Reelin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Reelin. Also: reln.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/260303	170801		
RX3R	Relaxin/insulin-like family peptide receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Relaxin/insulin-like family peptide receptor 3. Also: rxfp3, zgc:194824, zgc:194855, rxfp3-1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=NM_001128788 and http://zfin.org/ZD-B-GENE-080723-67	169181	NM_001128788	GenBank
RB1M	Respiratory burst oxidase homolog protein C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Respiratory burst oxidase homolog protein C. Also: AtRBOHC, NADPH oxidase RBOHC, RHD2.	ECOTOX and http://www.uniprot.org/uniprot/O81210	174967		
RB2M	Respiratory burst oxidase homolog protein D mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Respiratory burst oxidase homolog protein D. Also: AtRBOHD, NADPH oxidase RBOHD.	ECOTOX and http://www.uniprot.org/uniprot/Q9FIJ0	174967		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RB3M	Respiratory burst oxidase homolog protein F mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Respiratory burst oxidase homolog protein F. Also: Cytochrome b245 beta chain homolog RbohAp108, NADPH oxidase RBOHF, AtRBOHF.	ECOTOX and http://www.uniprot.org/uniprot/O48538	174967		
RD2M	Retinal dehydrogenase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinal dehydrogenase 2. Also: aldh1a2, raldh2, Aldehyde dehydrogenase 1 family member A2, Retinaldehyde-specific dehydrogenase type 2.	ECOTOX and http://www.uniprot.org/uniprot/Q63639	166633	AF339837	GenBank
RBSR	Retinoblastoma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the tumor suppressor Retinoblastoma. Also: Rb.	ECOTOX	170525		
RAAM	Retinoic acid receptor alpha-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoic acid receptor alpha-A. Also: raraa, rara, zRAR, rara2a, zRAR-alpha, zRAR alpha, Retinoic acid receptor alpha a, Nuclear receptor subfamily 1 group B member 1-A, Retinoic acid receptor alpha, Retinoic acid receptor alpha-2.A, RAR-alpha-2.A, nr1b1a.	ECOTOX, http://www.uniprot.org/uniprot/Q90271 and http://www.ncbi.nlm.nih.gov/gene/?term=NM_131406	166633	NM_131406	GenBank
RXRM	Retinoic acid receptor gamma B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to retinoic acid receptor gamma B. Also: rxrgb, Retinoic acid receptor RXR-gamma-B.	ECOTOX and http://www.uniprot.org/uniprot/Q6DHP9	175649	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RRAM	Retinoic acid receptor RXR-gamma-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoic acid receptor RXR-gamma-A. Also: Nuclear receptor subfamily 2 group B member 3-A, Retinoic acid receptor RXR-alpha, Retinoid X receptor alpha, Retinoid X receptor gamma-A, rxrga, nr2b1, nr2b3a, rxra, rxrg.	ECOTOX and http://www.uniprot.org/uniprot/Q90416			
RXAM	Retinoid X Receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor alpha.	ECOTOX			
RXBM	Retinoid X Receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor beta.	ECOTOX			
RXGM	Retinoid X Receptor gamma mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinoid X Receptor gamma.	ECOTOX			
R1AM	Retinol binding protein 1a, cellular mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol binding protein 1a, cellular. Also: Rbp1a protein, rbp5, rbp1a.	ECOTOX, http://www.ncbi.nlm.nih.gov/genie/?term=nm_199528 and http://www.uniprot.org/uniprot/Q6NYP2	166633	NM_199528	GenBank
RD1R	Retinol dehydrogenase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase 1. Also: rdh1, RDHB.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=NM_198069	166633	NM_198069	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RD8M	Retinol dehydrogenase 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase 8. Also: rd8, NADP-retinol dehydrogenase, Photoreceptor outer segment all-trans retinol dehydrogenase, PRRDH.	ECOTOX and http://www.uniprot.org/uniprot/Q9N126			
RDMR	Retinol dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol dehydrogenase.	ECOTOX			
RB4M	Retinol-binding protein 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Retinol-binding protein 4. Also: Plasma retinol-binding protein, RBP4.	ECOTOX and http://www.uniprot.org/uniprot/P18902	166633	NM_130920	GenBank
RBPR	Retinol-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to retinol-binding protein	ECOTOX			
RHOM	Rhodopsin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Rhodopsin. Also: RHO, RH1, zfo2, zfrho.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=nm_131084 and http://www.uniprot.org/uniprot/P02699			
PRPM	Ribose-phosphate pyrophosphate kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribose-phosphate pyrophosphate kinase. Also: prps1	ECOTOX and http://www.uniprot.org/uniprot/H2TMA8	174559	H2TMA8	GenBank
136M	Ribosomal protein 136a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein 136a.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RL4M	Ribosomal protein L4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ribosomal protein L4. Also: RPL4.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/64302	177258	none given	
R11M	Ribosomal protein L11 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L11. Also: rpL11.	ECOTOX and http://www.uniprot.org/uniprot/A2IA71			
P13M	Ribosomal protein L13a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L13a. Also: 60S ribosomal protein L13a, rpl13a.	ECOTOX and http://zfin.org/ZDB-GENE-030131-168	177212	none given	
R15M	Ribosomal protein L15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L15. Also: L15.	ECOTOX and http://www.uniprot.org/uniprot/F6GPK6			
R23M	Ribosomal protein L23a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein L23a.	ECOTOX			
S12M	Ribosomal protein s12 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s12.	ECOTOX	166557	AJ626437	GenBank
S15M	Ribosomal protein s15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s15.	ECOTOX			
R19M	Ribosomal protein S19 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein S19. Also: rps19.	ECOTOX, http://www.ncbi.nlm.nih.gov/nucleotide/BC150459 and http://www.uniprot.org/uniprot/Q6PBW7	169101	BC150459	NCBI/UNIPROT

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RS2M	Ribosomal Protein S2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal Protein S2.	ECOTOX			
S27M	Ribosomal protein s27 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribosomal protein s27.	ECOTOX	166557	AJ625324	GenBank
RRNA	Ribosomal RNA	A molecule in cells that forms part of the protein-synthesizing organelle known as a ribosome and that is exported to the cytoplasm to help translate the information in messenger RNA (mRNA) into protein.	http://www.britannica.com/science/ribosomal-RNA	156029		
RCLM	Ribulose-bisphosphate carboxylase large subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ribulose-bisphosphate carboxylase large subunit (rbcL).	ECOTOX			
RNAC	RNA Concentration	Ammount of RNA in a sample	ECOTOX			
RHMR	RNA helicase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to RNA helicase.	ECOTOX and http://www.uniprot.org/uniprot/O57652			
RNAM	RNA Metabolism	The cellular chemical reactions and pathways involving RNA, ribonucleic acid.	http://www.yeastgenome.org/go/GO:0016070/overview	175131		
RNAS	RNA Synthesis Rate	No definition available.				
RNDN	RNA to DNA Ratio	The ratio of RNA to DNA in a sample	ECOTOX			
RNPR	RNA to protein ratio	A ratio of RNA to protein.	ECOTOX			
RP8M	rpl8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to rpl8. Also: Ribosomal protein L8, rpl8, zgc:73105.	ECOTOX and http://www.uniprot.org/uniprot/Q6P0V6			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
RS1R	R-ras1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene R-ras1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU616727.1	170525		
RS3R	R-ras3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to the oncogene R-ras3.	ECOTOX and http://www.ncbi.nlm.nih.gov/nuccore/EU616728.1	170525		
ELH3	rtERalphaL mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of rtERalphaL mRNA to histone H3 mRNA	ECOTOX			
ESH3	rtERalphaS mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of rtERalphaS mRNA to histone H3 mRNA	ECOTOX			
RR2M	Runt-related transcription factor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Runt-related transcription factor 2. Also: Runx2, Acute myeloid leukemia 3 protein, Core-binding factor subunit alpha-1, CBF-alpha-1, Oncogene AML-3, Osteoblast-specific transcription factor 2, OSF-2, Polyomavirus enhancer-binding protein 2 alpha A subunit, PEA2-alpha A, PEBP2-alpha A, SL3-3 enhancer factor 1 alpha A subunit, SL3/AKV core-binding factor alpha A subunit, Aml3, Cbfa1, Osf2, Pebp2a.	ECOTOX and http://www.uniprot.org/uniprot/Q08775			
RYRM	Ryanodine receptor 2a (cardiac) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ryanodine receptor 2a (cardiac).	ECOTOX and http://zfin.org/ZDB-GENE-071001-1	174562	XM_003199664	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
AMSR	S-adenosylmethionine synthetase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to S-adenosylmethionine synthetase mRNA	ECOTOX			
SA2M	Salmo salar vomeronasal receptor-like protein (SVRA2) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Salmo salar vomeronasal receptor-like protein (SVRA2). Also: SVRA2.	ECOTOX, http://getentry.ddbj.nig.ac.jp/getentry/ddbj/DQ375532?filetype=html , and http://www.uniprot.org/uniprot/Q1KY04			
SB1M	Salmo salar vomeronasal receptor-like protein (SVRB1) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Salmo salar vomeronasal receptor-like protein (SVRB1). Also: SVRB1 .	ECOTOX, http://getentry.ddbj.nig.ac.jp/getentry/ddbj/DQ375537?filetype=html and http://www.uniprot.org/uniprot/Q1KY00			
SE1M	Sarcoplasmic/endo plasmic reticulum calcium ATPase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sarcoplasmic/endoplasmic reticulum calcium ATPase 1. Also: Sarcoendoplasmic reticulum Ca ATPase, ATP2A1, SERCA1, SR Ca(2+)-ATPase 1, Calcium pump 1, Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform, Endoplasmic reticulum class 1/2 Ca(2+) ATPase, EC 3.6.3.8.	ECOTOX and http://www.uniprot.org/uniprot/P04191	169409	GU564437	GenBank
SRBM	Scavenger receptor class B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to scavenger receptor class B member 1. Also: SCARB1, scavenger receptor class B type I.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=EU159466	177316	EU159466	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SFRM	Secreted frizzled-related protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Secreted frizzled-related protein 2. Also: SFRP2.	ECOTOX and http://www.uniprot.org/uniprot/Q9IA96	175651	none given	
SBPM	Selenium-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenium-binding protein.	ECOTOX and http://www.uniprot.org/uniprot/D2JPI4			
SP1M	Selenoprotein P, plasma, 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Selenoprotein P, plasma, 1. Also: sepp1, selp, au018766, and d15ucla1.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/20363	171290		
ST4R	Septin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Septin 4. Also: SEPT4, H5, ARTS, MART, SEP4, CE5B3, PNUTL2, hucep-7, BRADEION, hCDCREL-2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/5414	156369		
S14M	Serine protease 14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 14. Also: SP14.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725154			
S22M	Serine protease 22	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 22. Also: SP22.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=413645			
S40M	Serine protease 40 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine protease 40. Also: Prss40, Testicular serine protease 2, Tesp2, SP40.	ECOTOX and http://www.uniprot.org/uniprot/A6H6T1			
STKM	Serine/Threonine protein kinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine/Threonine protein kinase.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SEIM	Serine-type endopeptidase inhibitor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine-type endopeptidase inhibitor.	ECOTOX			
STPM	Serotonin transporter protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serotonin transporter protein.	ECOTOX			
SRPM	Serpentine mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serpentine. Also: serp.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408365			
SP3R	Serpina3M mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serine (or cysteine) peptidase inhibitor, clade A, member 3M, mRNA. Also: 3e46, spi2, MMC7, Spi-2I, Spi2.4, AI195004, MMSPi2.4, Spi-2rs1, Spi2-rs1, alpha-1 antiproteinase, antitrypsin, serine protease inhibitor-2 related sequence 1, serpin A3M.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=NM_009253	170332	NM_009253	GenBank
SR1M	Serpin family A member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to serpin family A member 1. Also: serpina1, Spi1, serine (or cysteine) proteinase inhibitor, clade A (alpha-1 antiproteinase, antitrypsin), member 1, serine (or cysteine) proteinase inhibitor, clade A, member 1, serine protease inhibitor alpha 1, serpin a1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/24648	104399	NM_022519	GenBank
SA4M	Serum amyloid A-4 protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Serum amyloid A-4 protein. Also: SAA4, Serum Amyloid A-5 protein, Amyloid A-5 protein, SAA5.	ECOTOX and http://www.uniprot.org/uniprot/P31532			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SEXE	Sex Expression Change	No definition available.				
SFPM	Sfrs1 protein, partial mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sfrs1 protein, partial.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/27503247	166650	AAH42354	GenBank
G1H3	sGnRH1 mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of sGnRH1 mRNA to histone H3 mRNA	ECOTOX			
G2H3	sGnRH2 mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of sGnRH2 mRNA to histone H3 mRNA	ECOTOX			
SNKR	SH3 and multiple ankyrin repeat domains protein 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SH3 and multiple ankyrin repeat domains protein 3. Also: shank3.	ECOTOX and www.ncbi.nlm.nih.gov/gene/793484	170801		
S1TM	Signal transducer and activator of transcription 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Signal transducer and activator of transcription 1. Also: Signal transducer and activator of transcription 1, STAT1.	ECOTOX and http://www.uniprot.org/uniprot/P42224	170604		
STTM	Signal transducer and activator of transcription 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Signal transducer and activator of transcription. Also: Signal transducer and activator of transcription 3, STAT3.	ECOTOX and http://www.uniprot.org/uniprot/Q6DVF3			
SC1M	similar to calmodulin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to calmodulin 1.	ECOTOX and http://www.itb.cn/r.it/estree_sept2006/blast_output.php?ID=PP_LEa0028C11f			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
POTR	Similar to canarigranin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to canarigranin (LOC768940).	ECOTOX and https://www.ncbi.nlm.nih.gov/nucore/XM_001232109.1?report=genbank	175195	XM_001232109	GenBank
SFBM	similar to F-box only protein 21 isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to F-box only protein 21 isoform 2. Also:LOC567738, F-box only protein 21 isoform 2 Predicted.	ECOTOX http://www.gene-profiles.org/gene/loc567738-danio-rerio-567738			
SNGM	similar to Neurogranin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Neurogranin (LOC567663).	ECOTOX and http://www.gene-profiles.org/gene/loc567663-danio-rerio-567663			
SR7M	similar to Ribosomal protein L7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Ribosomal protein L7.	ECOTOX, http://www.ncbi.nlm.nih.gov/sites/entrez?cmd=Retrieve&db=protein&dopt=GenPep&tlist_uids=29841446 and http://www.ncbi.nlm.nih.gov/nucore/AF401559			
SR8M	similar to Ribosomal protein S8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to similar to Ribosomal protein S8 (LOC100117715).	ECOTOX and http://www.ncbi.nlm.nih.gov/UniGene/clust.cgi?ORG=Nvi&CID=180			
SC2M	simliar to Cornifelin isoform 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to simliar to Cornifelin isoform 2. Also:LOC567858, Cornifelin isoform 2 Predicted.	ECOTOX and http://www.gene-profiles.org/gene/loc567858-danio-rerio-567858			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SCEX	Sister chromatid exchange	The process whereby, during DNA replication, two sister chromatids break and rejoin with one another, physically exchanging regions of the parental strands in the duplicated chromosomes.	http://www.sciencedirect.com/science/article/pii/S0027510706003174			
S55M	SLC5A5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SLC5A5. Also called: solute carrier family 5 (sodium iodide symporter), member 5, Solute carrier family 5 member 5, (NIS).	ECOTOX and https://www.uniprot.org/uniprot/Q99PN0			
SH2M	Slit homolog 2 protein-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Slit homolog 2 protein-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=725041			
SYDM	SMYD1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Cardiac muscle specific SET and MYND domain containing 1 (SMYD1).	ECOTOX and http://www.uniprot.org/uniprot/F5B7X4	156047	HQ662331	GenBank
SCDM	Sodium- and chloride-dependent GABA transporter 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sodium- and chloride-dependent GABA transporter 1. Also: slc6a1, Solute carrier family 6 member 1, gat1, gat-1, gabt1.	ECOTOX and https://www.uniprot.org/uniprot/P23978	179291	none given	
SC3M	Sodium- and chloride-dependent GABA transporter 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium- and chloride-dependent GABA transporter 3. Also: GAT-3, Solute carrier family 6 member 11, Slc6a11, Gabt3, Gat-3, Gat-b.	ECOTOX and http://www.uniprot.org/uniprot/P31647			
NISM	Sodium Iodide symporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium Iodide symporter (NIS).	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
NH2M	Sodium/hydrogen exchanger 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sodium/hydrogen exchanger 2. Also: Na+/H+ exchanger 2, NHE2, Slc9a2, Na(+)/H(+) exchanger 2, Solute carrier family 9 member 2, H7.	ECOTOX and http://www.uniprot.org/uniprot/P48763			
SJAM	SOJA Elicitin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SOJA elicitin. Composed of four isotypes of sojein (1-4).	ECOTOX	177190	none given	
SBAM	SOJB Elicitin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SOJB Elicitin.	ECOTOX and https://www.uniprot.org/uniprot/Q84L73	177190	AY183409	GenBank
S16M	Solute carrier family 16, member 9a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 16, member 9a. Also: slc16a9a.	ECOTOX, https://www.ncbi.nlm.nih.gov/genie/?term=slc16a9a and http://www.uniprot.org/uniprot/A0A1A8QRR1	174959		
SG2M	Solute carrier family 2, facilitated glucose transporter member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 2, facilitated glucose transporter member 2. Also: Glucose transporter type 2 liver, GLUT-2, Slc2a2, Glut-2, Glut2.	ECOTOX and http://www.uniprot.org/uniprot/P14246			
SG4M	Solute carrier family 2, facilitated glucose transporter member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 2, facilitated glucose transporter member 4. Also: Glucose transporter type 4 insulin-responsive, Glut-4, Glut4, Slc2a4.	ECOTOX and http://www.uniprot.org/uniprot/P19357			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SCFM	Solute carrier family 38, member 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 38, member 4 . Also: slc38a4, slc38a4 protein, zgc:103694, zgc:113830.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=BC083465	170520	BC083465	GenBank
SC4M	Solute carrier family 4, member 1a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier family 4, member 1a. Also: slc4a1.	ECOTOX and http://zfin.org/ZDB-GENE-010525-1	177252	none given	
AIMR	Solute carrier family 45, member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 45, member 2. Also: aim1, slc45a2, im:7138762.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/558311	170801		
S64M	Solute carrier family 6 (neurotransmitter transporter), member 4a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier family 6 (neurotransmitter transporter), member 4a. Also: slc6a4a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=slc6a4a			
S6BM	Solute carrier family 6 (neurotransmitter transporter), member 4b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier family 6 (neurotransmitter transporter), member 4b. Also: slc6a4b.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/664770			
SC6M	Solute carrier family 6 member 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier family 6 member 3. Also: slc6a3, dat.	ECOTOX and http://zfin.org/ZDB-GENE-010316-1	179291	none given	
SOTM	Solute carrier organic anion transporter family member 1A2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier organic anion transporter family member 1A2. Also: SLCO1A2.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=SLCO1A2+AND+gallus%5BOrganism%5D	177255	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
S1DM	Solute carrier organic anion transporter family, member 1D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier organic anion transporter family, member 1D1. Also: slco1d1.	ECOTOX and http://zfin.org/ZD B-GENE-030131-5044	175760	none given	
S2BM	Solute carrier organic anion transporter family, member 2B1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Solute carrier organic anion transporter family, member 2B1. Also: slco2b1.	ECOTOX and http://zfin.org/ZD B-GENE-051023-6	175760	none given	
SO3M	Solute carrier organic anion transporter family, member 3A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier organic anion transporter family, member 3A1. Also: slco3a1, oatp3a1.	ECOTOX and http://zfin.org/ZD B-GENE-030131-8662	177166	none given	
SO4M	Solute carrier organic anion transporter family, member 4A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to solute carrier organic anion transporter family, member 4A1. Also: slco4a1, OATP4A1.	ECOTOX and http://zfin.org/ZD B-GENE-060606-4	177166	none given	
SLTM	Somatolactin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Somatolactin. Also: SL.	ECOTOX and http://www.uniprot.org/uniprot/Q93262			
SS2M	Somatostatin-2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Somatostatin-2. Also: Somatostatin II, Somatostatin 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9YGH4			
SHAM	Sonic hedgehog a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sonic hedgehog a. Also: shha, vhh-1	ECOTOX, http://www.uniprot.org/uniprot/P86839 and https://www.ncbi.nlm.nih.gov/gene/?term=100150939	174516		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SHHM	Sonic hedgehog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sonic hedgehog protein. Also: SHH, HHG-1.	ECOTOX and http://www.uniprot.org/uniprot/Q62226	168257	JQ973865	Genbank
S17M	sox17alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sox17alpha.	ECOTOX			
S2MR	sox2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sox2.	ECOTOX			
S9BM	Sox9b protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sox9b protein.	ECOTOX and http://www.uniprot.org/uniprot/Q6NXE1			
SP1R	Sp1 transcription factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sp1 transcription factor. Also: sp1, fc18h09, wu:fc18h09, zgc:85950.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/nm_212662 and http://www.uniprot.org/uniprot/Q6NW60	170323	NM_212662	GenBank
SP4M	Spalt-like transcription factor 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to spalt-like transcription factor 4. Also: drrs, hsal4, znf797, and sall4.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/407860	175725	none given	
SANM	Spectrin alpha chain, non-erythrocytic 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Spectrin alpha chain, non-erythrocytic 1. Also: Alpha-II spectrin, Fodrin alpha chain, Sptan1, Spna2, Spta2.	ECOTOX and http://www.uniprot.org/uniprot/P16546	166650	P16546	GenBank
AP4M	Spermatogenesis-associated protein 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to spermatogenesis-associated protein 4. Also: spata4.	ECOTOX and https://www.ncbi.nlm.nih.gov/nuccore/HQ435556.1/	177077	HQ435556	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
A17M	Spermatogenesis-associated protein 17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to spermatogenesis-associated protein 17. Also: spata17.	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/HQ435555	177077	HQ435555	GenBank
SPGM	Spiggin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Spiggin.	ECOTOX and http://www.uniprot.org/uniprot/B1PN15			
SHR2	SpSHR2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SpSHR2 (Orphan Steroid Hormone Receptor 2)	ECOTOX			
SX9M	SRY-related HMG box protein 9a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SRY-related HMG box protein 9a (Sox9a).	ECOTOX and http://www.uniprot.org/uniprot/E3SC19			
ST1R	StAR-related lipid transfer domain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to StAR-related lipid transfer domain. Also: START1.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/6036421	158275		
SH1M	Stathmin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Stathmin 1.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148231458	166650	NP_001080672	GenBank
SARM	Sterile alpha and HEAT-Armadillo motifs mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sterile alpha and HEAT-Armadillo motifs. Also: sarm and sarm1.	ECOTOX and http://www.uniprot.org/uniprot/Q6TQG1	172465		
SAHM	Steroid 17-alpha-hydroxylase/17,20 lyase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroid 17-alpha-hydroxylase/17,20 lyase. Also: 17-alpha-hydroxyprogesterone aldolase, CYPXVII, Cytochrome P450 17A1, Cytochrome P450-C17, cyp17a1.	ECOTOX and http://www.uniprot.org/uniprot/P70085			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
S52M	Steroid 5 alpha reductase type 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroid 5 alpha reductase type 2 . Also: steroid-5-alpha-reductase, alpha polypeptide 2, 3-oxo-5 alpha-steroid delta 4-dehydrogenase alpha 2, srd5alpha2, and srd5a2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=srd5alp ha2	170601		
SRRN	Steroidogenic Acute Regulatory protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steroidogenic Acute Regulatory protein. Also StAR mRNA	ECOTOX			
SDF1	Steroidogenic factor-1 expression	The orphan nuclear receptor that controls the expression of many of the enzymes associated with the steroidogenic metabolic pathway	ECOREF#94090			
SCPM	Sterol carrier protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sterol carrier protein 2. Also: Scp2, NSLIPTR.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/25541	177317	none given	
SRBR	Sterol regulatory element binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sterol regulatory element binding protein 1. Also: SREBP1, SREBF1, SREBF-1, SREBP-1, sterol regulatory element binding transcription factor 1.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=373915	175777		
SR2M	Sterol regulatory element binding protein 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sterol regulatory element binding protein 1. Also: SREBP2, SREBF2.	ECOTOX and http://www.uniprot.org/uniprot/Q60429	176554	XM_416222	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SSTM	Steryl-sulfatase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Steryl-sulfatase. Also: Arylsulfatase C, Steroid sulfatase, Steryl-sulfate sulfohydrolase, sts, EC 3.1.6.2.	ECOTOX and http://www.uniprot.org/uniprot/P15589			
S3MR	Stromelysin-3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Stromelysin-3.	ECOTOX			
SYNM	Structural toxin protein RtxA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Structural toxin protein RtxA. Also: sync_1217.	ECOTOX and http://www.uniprot.org/uniprot/Q0IAU6	167909		
SDIM	Succinate dehydrogenase iron-sulfur subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Succinate dehydrogenase iron-sulfur subunit. Also: Succinate dehydrogenase complex, subunit B, iron sulfur, SDHB.	ECOTOX, http://zfin.org/ZDB-GENE-030131-8005 , and https://www.uniprot.org/uniprot/A5PL98	156137	NM_001098740	GenBank
SDMR	Succinate Dehydrogenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Succinate Dehydrogenase.	ECOTOX and http://www.uniprot.org/uniprot/Q9Z7B7			
SA1M	Sulfate anion transporter 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sulfate anion transporter 1. Also: Solute carrier family 26 member 1, SLC26A1, SAT1.	ECOTOX and http://www.uniprot.org/uniprot/Q9H2B4			
S1EM	Sulfotransferase 1 family member D1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sulfotransferase 1 family member D1. Also: Sulfotransferase family 1E, estrogen-preferring, member 1, SULT1E1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genie/?term=SULT1E1+AND+gallus%5BOrganism%5D	177255	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
S1CM	Sulfotransferase family 1, cytosolic sulfotransferase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sulfotransferase family 1, cytosolic sulfotransferase 2. Also: SULT1st2, Cytosolic sulfotransferase 2, sult2.	ECOTOX, http://www.uniprot.org/uniprot/Q7ZUS4 and http://www.ncbi.nlm.nih.gov/gene/?term=sult1st2	169114	DT317390.1	GenBank
SF2M	Sulfotransferase family 2, cytosolic sulfotransferase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sulfotransferase family 2, cytosolic sulfotransferase 3. Also: sult2st3.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=sult2st3	176943	none given	
S2AM	Sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to sulfotransferase family 2A, dehydroepiandrosterone (DHEA)-preferring, member 1. Also: SULT2A1, Bile salt sulfotransferase 1, Dehydroepiandrosterone sulfotransferase, Hydroxysteroid sulfotransferase, Std, Sth1, ST2A1, mSTA1.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/20859 and http://www.uniprot.org/uniprot/Q06520	169114	DT167241.1	GenBank
S1BM	Sulfotransferase family cytosolic 1B member 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Sulfotransferase family cytosolic 1B member 1. Also: SULT1B1, Sulfotransferase 1B1, SULT1B.	ECOTOX and https://www.uniprot.org/uniprot/Q8JG30	177255	none given	
ST5M	SULT1 isoform 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 isoform 5. Also: ST5, sult1st5.	ECOTOX and http://www.uniprot.org/uniprot/Q49IK6			
ST6M	SULT1 isoform 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 isoform 6. Also: ST6, sult1st6.	ECOTOX and http://www.uniprot.org/uniprot/Q52UP7			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ST4M	SULT1 sulfotransferase isoform 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to SULT1 sulfotransferase isoform 4. Also: ST4, Sulfotransferase family 1, cytosolic sulfotransferase 4, sult1st4.	ECOTOX and http://www.uniprot.org/uniprot/Q6XZC1			
SD1M	Superoxide dismutase [Cu-Zn] mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Cu-Zn] 1. Also: Superoxide dismutase 1, sod-1, copper zinc superoxide dismutase 1, copper-zinc superoxide dismutase, CSD1.	ECOTOX, http://www.uniprot.org/uniprot/P34697 , and https://www.ncbi.nlm.nih.gov/gene/837405		DQ286039	
SD2R	Superoxide dismutase [Cu-Zn] 2, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Cu-Zn] 2, chloroplastic. Also: CSD2, Copper/zinc superoxide dismutase 2, KD-SOD.	ECOTOX and http://www.uniprot.org/uniprot/O78310	174967		
SD3R	Superoxide dismutase [Cu-Zn] 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Cu-Zn] 3. Also: CSD3, Copper/zinc superoxide dismutase 3.	ECOTOX and http://www.uniprot.org/uniprot/Q9FK60	174967		
SF1M	Superoxide dismutase [Fe] 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Fe] 1. Also: FSD1, Fe superoxide dismutase 1, Iron superoxide dismutase 1.	ECOTOX and http://www.uniprot.org/uniprot/P21276			
FD2R	Superoxide dismutase [Fe] 2, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Fe] 2, chloroplastic. Also: FSD2, APG8, Protein FE Superoxide Dismutase 2.	ECOTOX and http://www.uniprot.org/uniprot/Q9LU64	174967		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
FD3R	Superoxide dismutase [Fe] 3, chloroplastic mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Fe] 3, chloroplastic. Also: FSD3, Protein FE Superoxide Dismutase 3.	ECOTOX and http://www.uniprot.org/uniprot/Q9FMX0	174967		
SM1M	Superoxide dismutase [Mn] 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 1. Also: Manganese Superoxide dismutase 1, MSD1, Maternal effect embryo arrest 33, MEE3.	ECOTOX and http://www.uniprot.org/uniprot/O81235			
SM2M	Superoxide dismutase [Mn] 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 2. Also: Manganese Superoxide dismutase 2, MSD2, sod3, sod-3.	ECOTOX, http://www.uniprot.org/uniprot/Q9LYK8 , and https://www.uniprot.org/uniprot/P41977			
SM3M	Superoxide dismutase [Mn] 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase [Mn] 3. Also: Manganese Superoxide dismutase 3, MSD3.	ECOTOX and http://www.uniprot.org/uniprot/A8J3M8			
SD2M	Superoxide dismutase 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase 2.	ECOTOX			
SODM	Superoxide dismutase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Superoxide dismutase. Also: SOD mRNA	ECOTOX			
SC5R	Suppressor of cytokine signaling 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Suppressor of cytokine signaling 5. Also: socs5, socs5a, zgc:153506.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/768142	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
S2AR	Synapsin IIa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Synapsin IIa. Also: Synapsin 2a, syn2a, zgc:92311, syn1, syn2.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=%22nm+001002597%22	170534	NM_001002597	GenBank
SV2M	Synaptic vesicle glycoprotein 2C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to synaptic vesicle glycoprotein 2C. Also: sv2c.	ECOTOX and http://zfin.org/ZDB-GENE-060526-233	177212	none given	
S25M	Synaptosomal-associated protein, 25kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Synaptosomal-associated protein, 25kDa. Also: SNAP25b, Snap25-prov protein, snap25.	ECOTOX, http://www.ncbi.nlm.nih.gov/protein/148223071 and http://www.uniprot.org/uniprot/Q8AXM1			
TL1M	Talin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Talin 1.	ECOTOX			
TORM	Target of rapamycin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Target of rapamycin. Also: TOR.	ECOTOX and http://www.uniprot.org/uniprot/Q9VK45	168602	FJ899680	GenBank
TABM	TATA-box-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TATA-box-binding protein. Also: TATA-box binding protein, TATA sequence-binding protein, TATA-binding factor, TATA-box factor, Transcription initiation factor TFIID TBP subunit.	ECOTOX and http://www.uniprot.org/uniprot/P20227			
TX2M	TAX2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TAX2. Also: Tax 2, Tax-2.	ECOTOX and http://www.uniprot.org/uniprot/G5EEE2	166810		
TBXM	T-box 5a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to T-box 5a. Also: tbx5.1, tbx5, zf-tbx5, zTbx5	ECOTOX and http://zfin.org/ZDB-GENE-991124-7	174562	NM_130915	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TM1R	T-cell lymphoma invasion and metastasis 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to T-cell lymphoma invasion and metastasis 1. Also: tiam1, tiam1a.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/567621	170801		
T1EM	T-complex protein 1 subunit epsilon mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to T-complex protein 1 subunit epsilon. Also: Cct5, TCP-1-epsilon, CCT-epsilon, Chaperonin CCT5, chaperonin containing TCP1 subunit 5(epsilon).	ECOTOX and http://www.uniprot.org/uniprot/O04450	166650	O04450	GenBank
TRTM	Telomerase reverse transcriptase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Telomerase reverse transcriptase. Also: Telomerase catalytic subunit, Tert.	ECOTOX and http://www.uniprot.org/uniprot/O70372	166328	NM_001083866	GenBank
TMTM	Telomeric transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Telomeric transcript.	ECOTOX			
TT1R	Ten-eleven-translocation 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ten-eleven-translocation 1. Also: tet1.	ECOTOX and http://www.uniprot.org/uniprot/F1R3C6	173761		
TT2R	Ten-eleven-translocation 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ten-eleven-translocation 2. Also: tet2.	ECOTOX and http://www.uniprot.org/uniprot/E7F958	173761		
TT3R	Ten-eleven-translocation 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ten-eleven-translocation 3. Also: tet3.	ECOTOX and http://www.uniprot.org/uniprot/A2CEA2	173761		
TMDM	Tenomodulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to tenomodulin. Also: tnmd, surfactant protein c, sp-c.	ECOTOX and http://zfin.org/ZDB-GENE-080220-31	177131	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TG1M	Teratocarcinoma-derived growth factor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Teratocarcinoma-derived growth factor 1. Also: Cripto-1 growth factor, Epidermal growth factor-like cripto protein CR1, TDGF1, CRIPTO, Cripto-1.	ECOTOX and http://www.uniprot.org/uniprot/P13385			
TD3M	Testosterone 17-beta-dehydrogenase 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Testosterone 17-beta-dehydrogenase 3. Also: Hydroxysteroid (17-beta) dehydrogenase 3, 17-beta-hydroxysteroid dehydrogenase type 3, Testicular 17-beta-hydroxysteroid dehydrogenase, HSD17B3, Edh17b3, EC 1.1.1.64.	ECOTOX and http://www.uniprot.org/uniprot/P70385			
T16M	Tetraspanin-16 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tetraspanin-16. Also: Tetraspanin 16, TSPAN16, Tspan-16, Tetraspanin TM4-B, Transmembrane 4 superfamily member 16, TM4SF16.	ECOTOX and http://www.uniprot.org/uniprot/Q9UKR8			
TR2M	Thioredoxin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin 2. Also: Thioredoxin-2, Thioredoxin II, TRX2, TRX-2.	ECOTOX and http://www.uniprot.org/uniprot/P22803	104399	none given	
TRXM	Thioredoxin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin. Also: TXN.	ECOTOX and http://www.uniprot.org/uniprot/P10599	110754		
TPXM	Thioredoxin peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin peroxidase. Also: tpx1, tpx-1, crisp2, tsa1.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucleotide/320091323	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TRSM	Thioredoxin reductase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thioredoxin reductase. Also: TrxR.	ECOTOX and https://www.uniprot.org/uniprot/W8EG20	177086	KF804083	GenBank
TR1R	Thioredoxin reductase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin reductase 1. Also: txnrd1, trxr1, and cb682.	ECOTOX and http://zfin.org/ZDB-GENE-030327-2	171290	EG641174	GenBank
TX5R	Thioredoxin reductase 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thioredoxin reductase 5. Also: TRXR5.	ECOTOX	172755		
TPOM	Thrombopoietin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thrombopoietin. Also: TPO, THPO.	ECOTOX, https://www.ncbi.nlm.nih.gov/nucleotide/EU267076.1/ , and https://www.uniprot.org/uniprot/B5L331	177092	EU267076	GenBank
T1MM	Thrombospondin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thrombospondin 1. Also: thrombospondin-1.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/?term=373987	175777	none given	
T17R	Thrombospondin, type I, domain containing 7B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thrombospondin, type I, domain containing 7B. Also: thsd7b, thsd7bb.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/100333732	170801		
TB4M	Thymosin beta-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thymosin beta-4.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148226106	166650	NP_001084321	GenBank
TGMR	Thyroglobulin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroglobulin.	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
THRA	Thyroid hormone receptor alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid hormone receptor alpha.	ECOTOX			
TRAB	Thyroid hormone receptor alpha mRNA to Thyroid hormone receptor beta mRNA ratio	Ratio of Thyroid hormone receptor alpha mRNA to Thyroid hormone receptor beta mRNA	ECOTOX			
TAAM	Thyroid hormone receptor alpha-A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone receptor alpha-A. Also: Nuclear receptor subfamily 1 group A member 1-A, Thyroid hormone receptor alpha-1, thraa, nr1a1a, thra, thraa1, tra1.	ECOTOX and http://www.uniprot.org/uniprot/Q98867			
TRBM	Thyroid Hormone Receptor beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid hormone receptor beta. Also: Nuclear receptor subfamily 1 group A member 2, Thyroid hormone receptor beta-1, thrb, nr1a2, trb.	ECOTOX and http://www.uniprot.org/uniprot/Q9PVE4			
TBTM	Thyroid hormone regulated basic transcription element-binding protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone regulated basic transcription element-binding protein (BTEB).	ECOTOX			
T14M	Thyroid hormone responsive spot 14 alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone responsive spot 14 alpha. Also: THRSP alpha	ECOTOX and http://www.uniprot.org/uniprot/Q6Q127	174730	NM_213577	GenBank
ZIPM	Thyroid hormone-induced bZip protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid hormone-induced bZip protein. Also: thibz, thyroid hormone-induced basic leucine zipper protein, th/bzip, th-bzip.	ECOTOX and https://www.uniprot.org/uniprot/F6V0W1	177269	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
THRR	Thyroid hormone-inducible hepatic protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid hormone-inducible hepatic protein. Also, Thrsp, Spot 14 protein, S14, SPOT14, Thyroid hormone responsive spot 14.	ECOTOX and http://www.uniprot.org/uniprot/Q62264	171802	HO056262, HO056263, HO056264	GenBank
TPMR	Thyroid peroxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid peroxidase. Also: Iodide peroxidase, Iodinase, Iodotyrosine deiodase, Iodotyrosine deiodinase, Thyroperoxidase, TPO, EC 1.11.1.8.	ECOTOX, http://www.uniprot.org/uniprot/P07202 and http://enzyme.expasy.org/EC/1.1.1.8			
TAMR	Thyroid Stimulating Hormone alpha mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid stimulating hormone alpha.	ECOTOX			
TBMR	Thyroid Stimulating Hormone beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyroid stimulating hormone beta. Also: tshba, tshb.	ECOTOX, http://ghr.nlm.nih.gov/gene/TSHB and http://www.uniprot.org/uniprot/Q801K4			
TSHM	Thyroid Stimulating Hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyroid Stimulating Hormone.	ECOTOX			
TTRM	Thyrotropin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyrotropin receptor. Also: TSHR, Thyroid-stimulating hormone receptor, TSH-R.	ECOTOX and http://www.uniprot.org/uniprot/P56495			
TYHM	Thyrotropin-releasing hormone mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to thyrotropin-releasing hormone. Also: Pro-thyrotropin-releasing hormone, trh, Pro-TRH, Prothyroliberin.	ECOTOX, https://www.uniprot.org/uniprot/Q5EDF9 and http://zfin.org/ZDB-GENE-020930-1	177209	NM_001012365	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TR1M	Thyrotropin-releasing hormone receptor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Thyrotropin-releasing hormone receptor 1. Also: TRHR1, trhrb, thyrotropin-releasing hormone receptor b, and trhr.	ECOTOX, http://www.uniprot.org/uniprot/D2KVP3 , and https://www.ncbi.nlm.nih.gov/gene/?term=NM_00114688	176951	NM_001114688	GenBank
TRIM	TIR-domain containing adaptor inducing IFN-beta mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TIR-domain containing adaptor inducing IFN-beta. Also: trif, and ticam1.	ECOTOX and http://www.uniprot.org/uniprot/B0L0T7	172465		
TIMM	Tissue inhibitor of metalloproteinases mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tissue inhibitor of metalloproteases. Also: TIMP.	ECOTOX and http://www.uniprot.org/uniprot/Q9VH14			
TTNM	Titan a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Titan a.	ECOTOX and http://www.uniprot.org/uniprot/A5X6X5			
TR6M	TNF receptor-associated factor 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to TNF receptor-associated factor 6. Also: traf6.	ECOTOX and http://www.uniprot.org/uniprot/Q6IWL4	172465		
TL2M	Toll-like receptor 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Toll-like receptor 2. Also: tlr2, toll like receptor 2.	ECOTOX and http://zfin.org/ZDB-GENE-040219-6	177073	AY388399	GenBank
TL3M	Toll-like receptor 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Toll-like receptor 3. Also: TLR3.	ECOTOX, http://zfin.org/ZDB-GENE-040219-7 , and http://www.uniprot.org/uniprot/Q32PW5	172465		
TCMR	Transcription corepressor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription corepressor.	ECOTOX and http://www.ncbi.nlm.nih.gov/nucest/CO729465	171021	CO729465	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TF3M	Transcription factor 3a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor 3a. Also: tfc3a.	ECOTOX, https://www.ncbi.nlm.nih.gov/geo/30310 , and http://zfin.org/ZDB-GENE-990415-51	175223	none given	
TP1M	Transcription factor AP-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor AP-1. Also: Jun, AH119, Activator protein 1, Proto-oncogene c-Jun, V-jun avian sarcoma virus 17 oncogene homolog, Jun A.	ECOTOX and http://www.uniprot.org/uniprot/P05627	166328	NM_199987.1	GenBank
TFCM	Transcription factor cep-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor cep-1. Also: C.elegans p53-like protein 1, cep-1.	ECOTOX and http://www.uniprot.org/uniprot/Q20646			
TG4M	Transcription factor GATA-4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor GATA-4. Also: GATA-binding factor 4, Gata-4, Gata 4.	ECOTOX and http://www.uniprot.org/uniprot/Q08369			
TG1R	Transcription factor mafG1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor mafG1. Also: mafga, mafg1, V-maf musculoaponeurotic fibrosarcoma oncogene family protein g (Avian) 1.	ECOTOX and http://www.uniprot.org/uniprot/Q6I6N2	168602	JX470754	source unknown
TG2R	Transcription factor mafG2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor mafG2. Also: mafgb, magg2, V-maf musculoaponeurotic fibrosarcoma oncogene homolog g (Avian) 2.	ECOTOX and http://www.uniprot.org/uniprot/Q6NW89	168602	JX470755	source unknown

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
SO9M	Transcription factor SOX-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transcription factor SOX-9. Also: Sox9.	ECOTOX and http://www.uniprot.org/uniprot/Q04887			
TFNR	Transferrin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to transferrin	ECOTOX			
TB1M	Transforming growth factor beta-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transforming growth factor beta-1. Also: tgfb1, tgfb1a, ai39657, wu:fb13a07, xx:ai39657, transforming growth factor beta 1a.	ECOTOX, http://www.uniprot.org/uniprot/P01137 and http://zfin.org/ZDB-GENE-030618-1			
TGBM	Transforming Growth Factor Beta-induced mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transforming Growth Factor Beta-induced. Also: Transforming Growth Factor Beta.	ECOTOX and http://www.uniprot.org/uniprot/D6NLA9	169409	GU564442	GenBank
TGMM	Transglutaminase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transglutaminase.	ECOTOX	166302		
TERM	Transitional endoplasmic reticulum ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transitional endoplasmic reticulum ATPase. Also: TER ATPase, Vcp, 15S Mg(2+)-ATPase p97 subunit, Valosin-containing protein.	ECOTOX and http://www.uniprot.org/uniprot/P46462	166650	P46462	GenBank
TCTM	Translationally Controlled Tumor Protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Translationally Controlled Tumor Protein.	ECOTOX			
TSLE	Translocation Efficiency	No definition available.				

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TSPM	Translocator protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Translocator protein. Also: Mitochondrial benzodiazepine receptor, PKBS, Peripheral-type benzodiazepine receptor. Also: PBR, Tspo, Bzrp, Mbr.	ECOTOX and http://www.uniprot.org/uniprot/P50637			
T72R	Transmembrane protein 72 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transmembrane protein 72. Also: tmem72, si:dkey-112k13.	ECOTOX and www.ncbi.nlm.nih.gov/gene/562321	170801		
TTRR	Transthyrethin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to transthyrethin	ECOTOX			
TSRM	Transthyrethin (prealbumin, amyloidosis type I) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transthyrethin (prealbumin, amyloidosis type I). Also: Transthyrethin, Ttr protein.	ECOTOX and http://www.uniprot.org/uniprot/Q642J8			
TRHM	Trehalase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trehalase. Also: alpha,alpha-Trehalase, a,a-Trehalase, alpha,alpha-Trehalase glucohydrolase, a,a-Trehalase glucohydrolase, Trehalase 1, AtTRE1, TRE1, EC 3.2.1.28.	ECOTOX and http://www.uniprot.org/uniprot/Q9SU50			
TBPM	Tributyltin binding protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tributyltin binding protein 1 (TBT-bp1).	ECOTOX			
TBTR	Tributyltin binding protein type 2-like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tributyltin binding protein type 2-like protein.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/ACJ26846.1	173763	ACJ26846.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TPIR	Triosephosphate isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Triosephosphate isomerase. Also: TIM, TPI1, Triose-phosphate isomerase, Triose phosphoisomerase, Triosephosphate isomerase, Triosephosphate mutase, EC 5.3.1.1.	ECOTOX, http://enzyme.expasy.org/EC/5.3.1.1 , http://www.uniprot.org/uniprot/P00940	166650	GI:148236351	GenBank
RDMM	tRNA dimethylallyltransferase, mitochondrial-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to tRNA dimethylallyltransferase, mitochondrial-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=724336			
T2AM	Troponin T type 2a (cardiac) mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Troponin T type 2a (cardiac). Also: tnnt2a, cTnT, tnnt2	ECOTOX and http://zfin.org/ZDB-GENE-991124-7	174562	AF434187	GenBank
TP1R	Trypsin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trypsin 1 mRNA	ECOTOX			
TRYN	Trypsinogen mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trypsinogen.	ECOTOX and http://www.uniprot.org/uniprot/Q7T1R8	156217	AY316360	GenBank
T5HM	Tryptophan 5-hydroxylase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tryptophan 5-hydroxylase. Also: Tryptophan 5-monooxygenase, tph, EC 1.14.16.4, Indoleacetic acid-5-hydroxylase, L-tryptophan hydroxylase, Tryptophan hydroxylase.	ECOTOX, http://enzyme.expasy.org/EC/1.14.16.4 and http://www.uniprot.org/uniprot/Q92142			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TRLM	Tryptophan-tRNA ligase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tryptophan-tRNA ligase. Also: Tryptophanyl-tRNA synthetase, L-tryptophanyl-tRNA(Trp) ligase (AMP-forming), TrpRS, Tryptophan translase, Tryptophanyl ribonucleic synthetase, Tryptophanyl-transfer ribonucleate synthetase, Tryptophanyl-transfer ribonucleic acid synthetase, Tryptophanyl-transfer ribonucleic synthetase, Tryptophanyl-transfer RNA synthetase, Tryptophanyl-tRNA synthetase, Tryptophanyl-tRNA synthetase, EC 6.1.1.2.	ECOTOX, http://enzyme.expasy.org/EC/6.1.1.2 and http://www.uniprot.org/uniprot/P0954			
TRYM	Trypsin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Trypsin mRNA. Also: try.	ECOTOX	175217	none given	
TBBM	Tubulin alpha 1b mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha 1b. Also: tuba1b, cb944, fb22g06.	ECOTOX and http://zfin.org/ZDB-GENE-030822-1	170534	NM_194388	GenBank
ATBM	Tubulin alpha chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha chain. Also: Alpha-tubulin.	ECOTOX and http://www.uniprot.org/uniprot/P41351			
TBAM	Tubulin alpha-1A chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin alpha-1A chain. Also: Tuba1a, Tuba1, Alpha-tubulin 1, Alpha-tubulin isotype M-alpha-1, Tubulin alpha-1 chain.	ECOTOX and http://www.uniprot.org/uniprot/P68369	166650	GI:74220042	GenBank
TB5M	Tubulin beta-5 chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin beta-5 chain. Also: Tubb5.	ECOTOX and http://www.uniprot.org/uniprot/P99024	166650	P99024	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
TB8R	Tubulin, alpha 8 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tubulin, alpha 8 . Also: tuba8.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/53857	171290	EX724202	GenBank
TNDM	Tumor Necrosis Factor Decoy Receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor Necrosis Factor Decoy Receptor. Also: TNF decoy receptor.	ECOTOX and http://www.uniprot.org/uniprot/D6NLB0	169409	GU564443	GenBank
TNFM	Tumor necrosis factor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor necrosis factor. Also: Cachectin, TNF-alpha, Tumor necrosis factor ligand superfamily member 2, TNF-a, Tnf, Tnfa, Tnfsf2.	ECOTOX and http://www.uniprot.org/uniprot/P16599			
T1AM	Tumor necrosis factor receptor superfamily member 1A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tumor necrosis factor receptor superfamily member 1A. Also: TNR1A.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001141773.1 and http://www.uniprot.org/uniprot/B5X3D9			
1IDM	Type I iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type I iodothyronine deiodinase. Also: Iodothyronine deiodinase, deiodinase iodothyronine type I, dio1, Deio1, cb685, zgc:92323.	ECOTOX, http://zfin.org/act ion/marker/view/ZDB-GENE-030328-41 and http://www.uniprot.org/uniprot/Q6DHG6			
2IDM	Type II iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type II iodothyronine deiodinase. Also: T4 outer-ring deiodinase, T4ORD, outer ring iodothyronine deiodinase activity (T4 ORD activity), thyroxine 5'-deiodinase, 5DII, DIOII, Dio2, Type 2 DI, Type-II 5'-deiodinase, deiodinase iodothyronine type II, Deio2, EC 1.97.1.10.	ECOTOX, http://www.brenda-enzymes.org/ph p/result_flat.php?ecno=1.97.1.10 , http://zfin.org/act ion/marker/view/ZDB-GENE-030327-4 and http://www.uniprot.org/uniprot/Q9Z1Y9			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
3IDM	Type III iodothyronine deiodinase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type III iodothyronine deiodinase. Also: 5DIII, DIOIII, Type 3 DI, Type-III 5'-deiodinase, Dio3, Thyroxine 5-deiodinase, Diiodothyronine 5'-deiodinase, Iodothyronine 5-deiodinase, Iodothyronine inner ring monodeiodinase, EC 1.97.1.11.	ECOTOX, http://www.uniprot.org/uniprot/Q91Z18 and http://enzyme.expasy.org/EC/1.97.1.11			
GA2R	Type-II gonadotrophin alpha subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type-II gonadotrophin alpha subunit.	ECOTOX			
GB2R	Type-II gonadotrophin beta subunit mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Type-II gonadotrophin beta subunit.	ECOTOX			
T3MM	Tyrosine 3-monoxygenase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine 3-monoxygenase. Also: Tyrosine 3-hydroxylase, Tyrosine hydroxylase, TH, EC 1.14.16.2.	ECOTOX and http://www.uniprot.org/uniprot/A0A060X6Z0	169754	GE829062.1	
TTBM	Tyrosine 3-monoxygenase/tryptophan 5-monoxygenase activation protein, beta polypeptide a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine 3-monoxygenase/tryptophan 5-monoxygenase activation protein, beta polypeptide a (ywhab1).	ECOTOX and https://www.qiagen.com/geneglobe/geneview.aspx?GeneID=362247&RootElementID=362247			
TPPM	Tyrosine-protein phosphatase non-receptor type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Tyrosine-protein phosphatase non-receptor type. Also: Protein-tyrosine-phosphatase, Phosphotyrosine phosphatase, PTPase, ptpn1, PTP1B, PTP 1B, EC 3.1.3.48.	ECOTOX, http://enzyme.expasy.org/EC/3.1.3.48 and http://www.uniprot.org/uniprot/Q9PT91			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
UB1M	Ubinuclein-1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubinuclein-1. Also: HIRA-binding protein, Protein VT4, Ubiquitously expressed nuclear protein, UBN1.	ECOTOX and http://www.uniprot.org/uniprot/Q9NPG3			
U52R	Ubiquitin A-52 residue ribosomal protein fusion product 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin A-52 residue ribosomal protein fusion product 1. Also: uba52.	ECOTOX and http://zfin.org/ZDB-GENE-051023-7	171290	EX735613	GenBank
UQBM	Ubiquitin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin B.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/42490818	166650	AAH66197	GenBank
UCHM	Ubiquitin carboxy-terminal hydrolase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin carboxy-terminal hydrolase. Also: UCH.	ECOTOX and https://www.ncbi.nlm.nih.gov/genbank/33397	76804		
UBIM	Ubiquitin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin.	ECOTOX			
UCER	Ubiquitin-conjugating enzyme E2-17 kDa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-conjugating enzyme E2-17 kDa mRNA	ECOTOX			
UB2R	Ubiquitin-conjugating enzyme E2lb mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-conjugating enzyme E2lb. Also: ubc9, ube2i, zubc9, ube2ib, sumo-conjugating enzyme UBC9-A.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=NM_131351	170323	NM_131351	GenBank
UE2M	Ubiquitin-conjugating protein (E2)-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-conjugating protein (E2)-like.	ECOTOX and http://www.uniprot.org/uniprot/I3K0Z8	174559	I3K0Z8	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
UQPM	Ubiquitin-like protein ISG15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitin-like protein ISG15. Also: isg15, Interferon-induced 15 kDa protein, Interferon-induced 17 kDa protein, IP17, Ubiquitin cross-reactive protein, G1p2, Ucrp.	ECOTOX and http://www.uniprot.org/uniprot/Q64339			
UH1M	Ubiquitinyl hydrolase 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ubiquitinyl hydrolase 1 mRNA. Also: Ubiquitin carboxyl-terminal hydrolase isozyme L1, Ubiquitin C-terminal hydrolase, Ubiquitin carboxyl-terminal hydrolase, Ubiquitin thioesterase, Neuron cytoplasmic protein 9.5, PGP 9.5, Ubiquitin thioesterase L1, UCH-L1, Uchl1, EC 3.4.19.12.	ECOTOX, http://enzyme.expasy.org/EC/3.4.19.12 and http://www.uniprot.org/uniprot/Q9R0P9			
UP2M	UCP2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UCP2, also known as mitochondrial uncoupling protein 2.	ECOTOX			
U15M	UDP-glucuronosyltransferase 1-5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 1-5. Also: Ugt1A5, B5, UDP-glucuronosyltransferase 1A5.	ECOTOX and http://www.uniprot.org/uniprot/Q64638			
U19M	UDP-glucuronosyltransferase 1-9 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 1-9. Also: Ugt1a9, UGT1.9, UDP-glucuronosyltransferase 1A9	ECOTOX and http://www.uniprot.org/uniprot/Q62452	174730	XM_421883	GenBank
U2AM	UDP-glucuronosyltransferase 2A1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2A1. Also: Ugt2A1.	ECOTOX and http://www.uniprot.org/uniprot/Q80X89			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
U15R	UDP-glucuronosyltransferase 2B15 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2B15. Also: UGT2B15, UDP glucuronosyltransferase 2B15, UDP-glucuronosyltransferase 2B36, UDPGT 2B36, UDP glucuronosyltransferase 2 family, polypeptide B15.	ECOTOX, http://www.ncbi.nlm.nih.gov/geo/83808 and http://www.uniprot.org/uniprot/P36511	169114	DT183511.1	GenBank
U2BM	UDP-glucuronosyltransferase 2B17 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UDP-glucuronosyltransferase 2B17. Also: UDP-glucuronyltransferase 2 family b5, 17-beta-hydroxysteroid-specific DPGT, RLUG38, Testosterone, dihydrotestosterone, and beta-estradiol-specific UDPGT, UDP-glucuronosyltransferase 2B5, UDPGT 2B5, UDPGT 2B17, UDPGTr-3, Ugt2b17, Ugt2b3, Ugt2b5, EC 2.4.1.17.	ECOTOX and http://www.uniprot.org/uniprot/P08542			
UDMR	UDP-glucuronosyltransferase Messenger RNA	UDP-glucuronosyltransferase Messenger RNA. Also known as UGT1 mRNA, Uridine-diphosphate glucuronosyltransferase.	ECOTOX			
U1MR	UGT1a1 mRNA	UGT1A1 is the only isoform that preferentially binds the substrate bilirubin.	http://www.genes4u.comgenesg4_024.htm			
U6MR	UGT1a6 mRNA	UGT1A1 is the only isoform that preferentially binds the substrate bilirubin - wild type mutation at position 6.	http://www.genes4u.comgenesg4_024.htm			
UABM	UGT1ab mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to UGT1ab.	ECOTOX	165455	NM_213422	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
USPM	Ultraspiracle mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Ultraspiracle (usp). Also: Retinoid X receptor-like protein (RXR).	ECOTOX and http://www.uniprot.org/uniprot/A1XQQ1			
US1M	Uncharacterized arginine-serine-rich coiled-coil 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to arginine-serine-rich coiled-coil 1. Also: RSRC1	ECOTOX and http://www.uniprot.org/uniprot/H2UGI9	174559	H2UG19	GenBank
UBDM	Uncharacterized bromodomain and WD repeat domain containing 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized bromodomain and WD repeat domain containing 3. Also : brwd3	ECOTOX and http://www.uniprot.org/uniprot/H2UBH6	174559	H2UBH6	GenBank
UMRM	Uncharacterized myosin regulatory light chain mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized myosin regulatory light chain.	ECOTOX and http://www.uniprot.org/uniprot/H2SHJ9	174559	H2SHJ9	GenBank
UPBM	Uncharacterized parvalbumin beta-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized parvalbumin beta-like.	ECOTOX and http://www.uniprot.org/uniprot/H2M0U7	174559	H2M0U7	GenBank
U2YM	Uncharacterized polycomb protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized polycomb protein. Also: sfmbt2	ECOTOX and http://www.uniprot.org/uniprot/H2TYJ2	174559	H2TYJ2	GenBank
USDM	Uncharacterized short-chain dehydrogenase/reductase family mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized short-chain dehydrogenase/reductase family.	ECOTOX and http://www.uniprot.org/uniprot/H2L585	174559	H2L585	GenBank
UTCM	Uncharacterized transmembrane and coiled-coil domain family 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Uncharacterized transmembrane and coiled-coil domain family 3. Also: TMCC3	ECOTOX and http://www.uniprot.org/uniprot/H2V2L0	174559	H2V2L0	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
URXM	Urate oxidase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to urate oxidase. Also: Uricase, UOX.	ECOTOX and http://zfin.org/ZDB-GENE-030826-24	176165	none given	
URTM	Urea transporter mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Urea transporter.	ECOTOX			
UCNM	Urocortin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Urocortin 1. Also: UCN1, serpin peptidase inhibitor, clade H (heat shock protein 47), member 1, (collagen binding protein 1) S homeolog (serphinh1.S).	ECOTOX, http://www.uniprot.org/uniprot/Q6E2N9 and https://www.ncbi.nlm.nih.gov/nuccore/NM_001092960	175663	NM_001092960	GenBank
UIAP	Urotensin I mRNA to Acidic ribosomal phosphoprotein P0 mRNA ratio	Ratio of Urotensin I mRNA to Acidic ribosomal phosphoprotein P0 mRNA.	ECOTOX			
VP1M	Vanin-like protein 1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vanin-like protein 1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=100578995			
VSAM	Vasa mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vasa.	ECOTOX and http://www.uniprot.org/uniprot/Q5Q9A8			
VGFM	Vascular endothelial growth factor A	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vascular endothelial growth factor A. Also: Vascular endothelial growth factor, VEGF, VEGFA, VEGF-A, Vascular permeability factor.	ECOTOX, https://www.uniprot.org/uniprot/P67964 and https://www.ncbi.nlm.nih.gov/genbank/395909	177903	none given	
VZ1M	Vascular endothelial zinc finger 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vascular endothelial zinc finger 1. Also: vezf1.	ECOTOX and http://www.uniprot.org/uniprot/J7FVW3	169192	JQ950330	source unknown

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VIPM	Vasoactive intestinal peptide mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vasoactive intestinal peptide. Also: VIP	ECOTOX and https://www.ncbi.nlm.nih.gov/nucleotide/948284453/	174483	NM_001114553.3	GenBank
VG2M	Vesicular glutamate transporter 2-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vesicular glutamate transporter 2-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/genbank/?term=412220			
VMA2	Vesicular monoamine transporter isoform 2 (VMAT2)	The vesicular monoamine transporter is a transport protein located within the presynaptic cell, one of two isoforms namely VMAT2	http://en.wikipedia.org/wiki/Vesicular_monoamine_transporter			
VIGM	Vigilin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vigilin. Also: High density lipoprotein-binding protein, HDL-binding protein, Hdlbp.	ECOTOX and http://www.uniprot.org/uniprot/Q8VDJ3			
VIMM	Vimentin mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vimentin. Also: VIM.	ECOTOX and http://www.uniprot.org/uniprot/P09654	175651	none given	
V12M	Vimentin-1/2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vimentin-1/2.	ECOTOX and http://www.ncbi.nlm.nih.gov/protein/148232220	166650	GI:148232220	GenBank
VM1M	Vitelline outer layer membrane protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitelline membrane outer layer protein 1. Also: VMO 1.	ECOTOX and http://www.uniprot.org/uniprot/P41366			
VT1M	Vitellogenin 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin-1. Also: vitellogenin isoform 1, Vitellogenin I, vtg1.	ECOTOX and http://www.uniprot.org/uniprot/Q90508			
1ABM	Vitellogenin 1A/B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin 1A/B.	ECOTOX	176943	none given	

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VT2M	Vitellogenin 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 2 . Also: Vitellogenin-2 vitellogenin isoform 2, Major vitellogenin, vtg2, Vitellogenin II.	ECOTOX and http://www.uniprot.org/uniprot/P02845			
VT3M	Vitellogenin 3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 3 . Also: vitellogenin isoform 3, vtg3, Vitellogenin III.	ECOTOX and http://www.uniprot.org/uniprot/Q91025			
VT4M	Vitellogenin 4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 4. Also: vg4, si:rp71-23d18.3, wu:fb59b02, wu:fb59d07, wu:fb59e10, zgc:136286, zgc:136383, vtg4.	ECOTOX and http://zfin.org/ZDB-GENE-001201-3	170323		
VT5M	Vitellogenin 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 5. Also: vg5, si:rp71-23d18.5, wu:fi49a01, zgc:114012, vtg5.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/NM_001025189.2 and http://zfin.org/ZDB-GENE-001201-4	170323		
VT6M	Vitellogenin 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin 6. Also: vit6, vit-6.	ECOTOX and https://www.uniprot.org/uniprot/P18948	178025	none given	
VTG7	Vitellogenin 7 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin 7. Also: vtg7, si:dkey-4c23.1, wu:fb62f05.	ECOTOX and http://zfin.org/ZDB-GENE-001201-6	170801		
VGAM	Vitellogenin A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin A. Also: VgA.	ECOTOX and http://www.uniprot.org/uniprot/I1TPY0			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VA1M	Vitellogenin Ao1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin Ao1.	ECOTOX			
VGBM	Vitellogenin B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin B.	ECOTOX			
VGCM	Vitellogenin C mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin C. Also: Vg-C.	ECOTOX and http://www.uniprot.org/uniprot/Q49MF2			
VDNA	Vitellogenin cDNA	cDNA is DNA that is synthesized from a messenger RNA template, the single-stranded form is often used as a probe in physical mapping to locate the gene or can be cloned in the double stranded form. In this case specific to the protein vitellogenin.	http://cancerweb.ncl.ac.uk/omd/			
VMRN	Vitellogenin Messenger RNA	No definition available.				
VAMR	Vitellogenin mRNA beta-actin mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of Vitellogenin to beta-actin.	ECOTOX			
VGH3	Vitellogenin mRNA to histone H3 mRNA ratio	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ratio of vitellogenin mRNA to histone H3 mRNA	ECOTOX			
VTPM	Vitellogenin precursor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to vitellogenin precursor	ECOTOX			
VGRM	Vitellogenin receptor mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Vitellogenin receptor. Also: vtgr.	ECOTOX and http://www.uniprot.org/uniprot/Q7ZTG7			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VGAR	V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Ga mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Ga. Also: mafga, mafg1.	ECOTOX and http://www.ncbi.nlm.nih.gov/ncu/core/?term=MafG1	169813	JX470754	
VGBR	V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Gb mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-maf avian musculoaponeurotic fibrosarcoma oncogene homolog Gb. Also: mafgb, mafg2.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/405877	169813	JX470755	
VMYM	v-myc Avian myelocytomatosis viral oncogene homolog a mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to v-myc avian myelocytomatosis viral oncogene homolog a. Also: myca.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=nm_131412.1	166328	NM_131412.1	GenBank
VADM	Voltage-dependent calcium channel subunit alpha-2/delta-3-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Voltage-dependent calcium channel subunit alpha-2/delta-3-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=551454			
VAOR	V-rel avian reticuloendotheliosis viral oncogene homolog A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to V-rel avian reticuloendotheliosis viral oncogene homolog A. Also: p65, nfkb3, rela, p65 transcription factor.	ECOTOX, http://www.ncbi.nlm.nih.gov/gene/?term=ay163839 and http://www.uniprot.org/uniprot/Q6K197	170323	AY163839	GenBank
VROM	V-rel avian reticuloendotheliosis viral oncogene homolog mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to v-rel avian reticuloendotheliosis viral oncogene homolog. Also: c-rel, crel.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/?term=AY163837	174704	AY163837.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
VABM	V-type proton ATPase subunit B mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Also: H+ ATPase v-type B subunit, V-ATPase 55 kDa subunit, Vacuolar proton pump subunit B, Vha55.	ECOTOX and http://www.uniprot.org/uniprot/P31409			
WP1M	Waprin-Phi1-like mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Waprin-Phi1-like.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=408864			
WTDN	Weight to DNA ratio	The weight of a sample as compared to the amount of DNA in a sample.	ECOTOX			
TS1R	Wilms' tumor suppressor 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Wilms' tumor suppressor 1 mRNA.	ECOTOX, http://www.ncbi.nlm.nih.gov/nuccore/EU867511 and http://www.uniprot.org/uniprot/E6Y5N8	156284	EU867511	GenBank
WN3M	Wingless-type MMTV integration site family, member 3A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to wingless-type MMTV integration site family, member 3A mRNA. Also: wnt3, wnt3l, wnt3 l, wnt3a.	ECOTOX and https://www.ncbi.nlm.nih.gov/gene/60632	178030	none given	
WATM	Worker-enriched antennal transcript mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Worker-enriched antennal transcript. Also: wat.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=406065			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
XTAM	Xenobiotic-transporting ATPase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Xenobiotic-transporting ATPase. Also: ATP phosphohydrolase (steroid-exporting), MDR protein, Multidrug-resistance protein, P-glycoprotein, permeability glycoprotein, PDR protein, Pleiotropic-drug-resistance protein, Steroid-transporting ATPase, ATP-binding cassette sub-family B member 1, MDR1 Protein, Multidrug Resistance Protein 1, cluster of differentiation 243, AaeL_AAEL010379, EC 3.6.6.44, previously EC 3.6.3.45.	ECOTOX, http://enzyme.ex pasy.org/EC/3.6.3.44 , http://www.nlm.nih.gov/cgi/mesh/2011/MB_cgi?mode=&term=P-Glycoprotein , http://www.ncbi.nlm.nih.gov/gene?Db=gene&Cmd=ShowDetailView&TermToSearch=5243 , http://www.ncbi.nlm.nih.gov/gene/5573277 , http://www.genome.jp/dbget-bin/www_bget?ec:3.6.3.44 , http://www.genome.jp/dbget-bin/www_bget?ag:AaeL_AAEL010379			
X81M	XK81A mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XK81A.	ECOTOX			
XLRL	X-linked recessive lethal	X-linked recessive lethal are genes which result in the premature death of the organism (homozygote). The gene on the X chromosome expresses itself only when there is no different gene present at that locus (spot on the chromosome). Also called sex-linked recessive lethal.	http://www.ncbi.nlm.nih.gov			
XPAR	XPA mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPA	ECOTOX			
XPCR	XPC mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPC	ECOTOX			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
XPDR	XPD mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPD	ECOTOX			
XPFR	XPF mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to XPF	ECOTOX			
XR5M	X-ray repair cross-complementing protein 5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to X-ray repair cross-complementing protein 5 mRNA. Also: ATP-dependent DNA helicase 2 subunit 2, ATP-dependent DNA helicase II 80 kDa subunit, CTC box-binding factor 85 kDa subunit, CTC85, CTCBF, DNA repair protein XRCC5, Ku autoantigen protein p86 homolog, Ku80, Nuclear factor IV, Xrcc5, G22p2.	ECOTOX and http://www.uniprot.org/uniprot/P27641			
XR6M	X-ray repair cross-complementing protein 6 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to X-ray repair cross-complementing protein 6. Also: 5'-deoxyribose-5-phosphate lyase Ku70, 5'-dRP/AP lyase Ku70, ATP-dependent DNA helicase 2 subunit 1, ATP-dependent DNA helicase II 70 kDa subunit, CTC box-binding factor 75 kDa subunit, CTC75, CTCBF, DNA repair protein XRCC6, Ku autoantigen protein p70 homolog, Xrcc6, G22p1, Ku70.	ECOTOX and http://www.uniprot.org/uniprot/P23475			
YE3M	Yellow-e3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Yellow-e3. Also: Ye3.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/?term=413894			
YPLM	Yolk protein like protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to yolk protein like protein mRNA. Also: yolk-protein-like protein.	ECOTOX and https://www.ncbi.nlm.nih.gov/protein/EFX79066.1	175700	EFX79066.1	GenBank

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ZXEM	Zeaxanthin epoxydase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zeaxanthin epoxydase. Also: ZEP.	ECOTOX and http://www.uniprot.org/uniprot/A0A2I6B3M6	176551	none given	
ZH1M	Zebrafish hatching enzyme 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zebrafish hatching enzyme 1. Also: ZHE1.	ECOTOX			
ZCDM	Zeta-carotene desaturase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zeta-carotene desaturase. Also: ZDS, 9,9'-dcis-zeta-carotene desaturase, Carotene 7,8-desaturase.	ECOTOX and http://www.uniprot.org/uniprot/Q9SE20	176551	none given	
ZCIM	Zeta-carotene isomerase mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zeta-carotene isomerase. Also: ZISO.	ECOTOX and http://www.uniprot.org/uniprot/A0A164SUS7	176551	none given	
ZGCM	zgc:77235 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zgc:77235. Also:hypothetical protein LOC336726, ribosomal protein L27a, 60S ribosomal protein L27a.	ECOTOX, http://www.uniprot.org/uniprot/Q6P2M0 and https://www.qiagen.com/geneglobe/qtprimerview.aspx?ID=QT02237746			
ZC2R	Zic family member 2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zic family member 2. Also: zic2, zic2a, cb851, zic2.1, fb26a03, wu:fb26a03.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/58077	170801		
Z47R	Zinc finger and BTB domain containing 47 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Transmembrane protein 72. Also: zbtb47.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/100536838	170801		
ZNFR	Zinc finger protein 729 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zinc finger protein 729. Also: znf729.	ECOTOX and http://www.ncbi.nlm.nih.gov/genie/100044381	170801		

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ZFRM	Zinc finger, RING-type mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zinc finger, RING-type.	ECOTOX			
Z14M	Zinc metalloproteinase nas-14 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to zinc metalloproteinase nas-14. Also: nas-14. Nematode astacin 14.	ECOTOX and http://www.uniprot.org/uniprot/Q19269	173808		
ZB1M	Zona pellucida B.1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.1.	ECOTOX	164063	AE199616	GenBank
ZB2M	Zona pellucida B.2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.2.	ECOTOX	164063	AE199617	GenBank
ZB3M	Zona pellucida B.3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.3.	ECOTOX	164063	AE199618	GenBank
ZB4M	Zona pellucida B.4 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.4,	ECOTOX	164063	AE199619	GenBank
ZB5M	Zona pellucida B.5 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida B.5.	ECOTOX	164063	AE199620	GenBank
ZP3M	Zona pellucida glycoprotein3 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida glycoprotein3. Also: ZPC, ZP3.	ECOTOX and http://www.ncbi.nlm.nih.gov/gene/?term=ZPc[syn]			
ZP1M	Zona pellucida protein 1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein 1. Also: ZP1.	ECOTOX and http://www.uniprot.org/uniprot/Q910B7			
ZPBM	Zona pellucida protein Bb mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein Bb.	ECOTOX and http://www.uniprot.org/uniprot/Q3ZE28			

ECOTOX Code Appendix

GEN	Genetic Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name				
Measurement Code	Measurement Name	Measurement Definition	Notes	ECOREF#	Accession#	Source
ZP2M	Zona pellucida protein2 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to Zona pellucida protein2	ECOTOX			
ZRMR	Zona radiata mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins.	ECOTOX			
ZPAM	ZPA domain containing protein mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ZPA domain containing protein. Also: Zona pellucida domain containing protein.	ECOTOX and http://www.uniprot.org/uniprot/Q9W7E4			
ZC1M	ZPC1 mRNA	mRNA (messenger RNA) is the mediating template between DNA and proteins, in this case specific to ZPC1.	ECOTOX and http://www.uniprot.org/uniprot/Q8AYL0			
ZYGO	Zygotene	The second stage of prophase in meiosis, during which strands of homologous chromosomes lineup and become pairs.	Collins English Dictionary – Complete and Unabridged, 2003			

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ASLT	Alpha Islets	One of a class of cells located in the adenohypophysis or in the pancreatic islets. Alpha cells in the pancreas produce glucagon, which raises the level of glucose in the blood.	Mosby's Medical Dictionary, 8th edition, 2009
ANAG	Anagen	The first phase of the hair cycle, during which synthesis of hair takes place.	Dorland's Medical Dictionary for Health Consumers, 2007
ANSK	Anisokaryosis	Inequality in the size of the nuclei of cells.	Dorland's Medical Dictionary
ACAP	Arterial Cuff Atrophy	Arterial - pertaining to an artery or to the arteries. Cuff - A small bandlike structure encircling a part. Atrophy - a wasting away; a diminution in the size of a cell, tissue, or organ.	Dorland's Medical Dictionary
ARTS	Arteriosclerosis	A degenerative arterial disease marked by hardening and thickening of the vessel walls.	

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ASCT	Ascites	Accumulation of serous fluid in the spaces between tissues and organs in the cavity of the abdomen.	http://www.merriam-webster.com
ATRS	Atresia	The congenital absence or closure of a normal body orifice or tubular passage such as the anus, intestine, or external ear canal.	The American Heritage Medical Dictionary, 2007
ATPH	Atrophy	A wasting away; a diminution in the size of a cell, tissue, organ, or part.	Dorland's Medical Dictionary for Health Consumers, 2007
ALYS	Autolysis	The breakdown of all or part of a cell or tissue by self-produced enzymes—called also self-digestion	http://www.merriam-webster.com/medical/autolysis
BSLT	Beta Islets	The beta-cell is one of four major types of cells present in the islets of Langerhans, which are islands of cells distributed throughout the endocrine pancreas in most mammals	http://www.ncbi.nlm.nih.gov/pubmed/14687913
BLSS	Blue Sac Syndrome	Blue-sac syndrome is a fatal abnormality characterized by the gross edema of the yolk sac. The outward symptoms of blue-sac occur two weeks before hatching.	http://www.albion.edu/library/Isaac/IsaacSympBk%202002.pdf
BODS	Bodies	A mass of matter distinct from other masses.	Webster's
CATG	Catagen	The brief portion in the hair cycle in which growth (anagen) stops and resting (telogen) starts	Dorland's Medical Dictionary for Health Consumers, 2007
CTRT	Cataracts	A clouding of the lens of the eye or of its surrounding transparent membrane that obstructs the passage of light.	http://www.m-w.com/cgi-bin/dictionary
DISO	Cellular Disorganization	The process of destruction of any organic tissue; any profound change in the tissues of an organ or structure which causes the loss of most or all of its proper characters	Dorland's Medical Dictionary for Health Consumers, 2007
CSTD	Cestodiasis	Tapeworm infestation, infestation with cestodes, a group of flattened and tape-like hermaphroditic worms that are intestinal parasites in humans and other animals, producing larvae that may invade body tissues.	http://www.britannica.com/EBchecked/topic/103879/cestodiasis
CLPG	Clumping Pigment Granules	No definition available.	
CLFL	Collapsed Follicles	Follicle - A sac or pouch-like depression or cavity.	Dorland's Medical Dictionary
CTHN	Colloid thinning	Thinning of the colloid layer	ECOTOX

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CLLD	Colloids	A system in which finely divided particles, which are approximately 1 to 1,000 millimicrons in size, are dispersed within a continuous medium in a manner that prevents them from being filtered easily or settled rapidly.	American Heritage Dictionary of the English Language, 2011
CNGT	Congestion	The accumulation of excessive blood or tissue fluid in a vessel or organ.	American Heritage Dictionary of the English Language, 2011
CORN	Cornification	The conversion of squamous epithelial cells into a keratinized horny material, such as hair, nails, or feathers.	American Heritage Dictionary of the English Language, 2011
CRYT	Crystals	Formations of small irregular solid material often composed of calcium, uric acid and phosphate.	http://cancerweb.ncl.ac.uk/omd/
CSTS	Cyst	A closed sac having a distinct membrane and developing abnormally in a body cavity or structure	http://www.merriam-webster.com/medical/cyst
CYTM	Cytomegaly	Enlargement of both the cytoplasm and nucleus while maintaining a normal N/C ratio.	www.csinet.net/suzanne/page22.htm
CYTP	Cytoplasm	The organized complex of inorganic and organic substances external to the nuclear membrane of a cell and including the cytosol and membrane-bound organelles (as mitochondria or chloroplasts).	http://www.merriam-webster.com
CYIN	Cytoplasmic Inclusions	Describes foreign substances contained within a cell membrane. It pertains to nutrients, such as proteins, carbohydrates, and lipids, as well as pigment granules. Other inclusions may be secretory products stored within the cell body, and these can be expelled from the cell through exocytosis.	http://www.wisegeekhealth.com/what-are-cytoplasmic-inclusions.htm
CYVC	Cytoplasmic Vacuoles	Spaces or cavities within the cytoplasm.	ECOTOX
DBRS	Debris	An accumulation of fragments.	http://www.merriam-webster.com
DEGN	Degeneration	Deterioration of a tissue or an organ in which its function is diminished or its structure is impaired	http://www.merriam-webster.com/dictionary/degeneration
DLAT	Dilation	To grow wide; to enlarge or expand in bulk or extent	http://www.merriam-webster.com/dictionary/dilate

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EDMA	Edema	Edema is a condition of abnormally large fluid volume in the circulatory system or in tissues between the body's cells (interstitial spaces).	Gale Encyclopedia of Medicine, 2008
ENCP	Encephalopathy	Degeneration of brain function, caused by any of various acquired disorders, including metabolic disease, organ failure, inflammation, and chronic infection. Also called cephalopathy, cerebropathy.	The American Heritage Medical Dictionary, 2007
ENDR	Endarteritis	Chronic inflammation of the inner layer of arteries.	Gale Encyclopedia of Medicine, 2008
EHYP	Erythroid Hyperplasia	An abnormal increase in the number of cells in an organ or a tissue with consequent enlargement in the erythroid	ECOTOX and The American Heritage Medical Dictionary, 2007
ESPH	Esophagitis	Inflammation of the esophagus	Dorland's Medical Dictionary for Health Consumers, 2007
XCPH	Exencephaly	A congenital defect in which the brain is completely exposed or protrudes through a defect in the cranial vault.	Saunders Comprehensive Veterinary Dictionary, 2007
EXPT	Exophthalmia	An abnormal condition characterized by a marked protrusion of the eyeballs (exophthalmos, exophthalmus), usually resulting from the increased volume of the orbital contents caused by a tumor; swelling associated with cerebral, intraocular, or intraorbital edema or hemorrhage; paralysis of or trauma to the extraocular muscles; or cavernous sinus thrombosis. It may also be caused by endocrine disorders such as hyperthyroidism and Graves' disease, varicose veins within the orbit, or injury to orbital bones.	Mosby's Medical Dictionary, 2009
EXCS	Extracellular space	Interstitial space between cells, occupied by interstitial fluid as well as amorphous and fibrous substances. For organisms with a cell wall, the extracellular space includes everything outside of the cell membrane including the periplasm and the cell wall.	http://www.ncbi.nlm.nih.gov/mesh?Db=mesh&term=Extracellular+Space
FBRS	Fibrosis	A condition marked by increase of interstitial fibrous tissue.	http://www.merriam-webster.com
FUSE	Fuse, fused	To become blended or joined by or as if by melting together.	http://www.merriam-webster.com
GRNM	Granuloma	A relatively small nodular inflammatory lesion containing grouped mononuclear phagocytes, caused by infectious and noninfectious agents.	http://www.ncbi.nlm.nih.gov

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GLSN	Gross Lesions	A lesion plainly visible to the naked eye	Farlex Partner Medical Dictionary, 2012
HEMR	Hemorrhage	A copious discharge of blood from the blood vessels	http://www.merriam-webster.com/dictionary/hemorrhage
HRNA	Hernia	The protrusion of an organ or the fascia of an organ through the wall of the cavity that normally contains it	The American Heritage Medical Dictionary, 2007
GHIS	Histological Changes, General	Presence of physical damage or change to tissues or cells (for example, lesions, neoplasms); gross histological effects such as whole plant injury; disintegration of roots, stems or leaves; root fragmentation. For animals such effects include cell sloughing.	The specifics of the histology effect will be reported in Measurement Remarks.
HDPC	Hydropericardium	The noninflammatory accumulation of watery fluid in the pericardial cavity.	The American Heritage Medical Dictionary, 2007
HYDS	Hydropic Swelling	Cellular swelling due to accumulation of water	http://quizlet.com/9596054/patho-week-1-ch-4-5-flash-cards/
HYCR	Hyperchromicity	An increase in the absorption of ultraviolet light by polynucleotide solutions due to a loss of the ordered secondary structure.	McGraw-Hill Dictionary of Scientific & Technical Terms, 2003
HFLX	Hyperflexion	Flexion of a limb or part beyond the normal limit. Synonym: superflexion.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, Seventh Edition, 2003
HYPL	Hyperplasia	An abnormal increase in the number of normal cells in normal arrangement in an organ or tissue, which increases its volume	Dorland's Medical Dictionary for Health Consumers, 2007
HYPT	Hypertrophy	An enlargement or overgrowth of an organ or part due to increase in size of its constituent cells.	Dorland's Medical Dictionary for Health Consumers, 2007
HYCE	Hypocellularity	An abnormal decrease in the number of cells present, as in bone marrow.	Saunders Comprehensive Veterinary Dictionary, 2007

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
IHGT	Increased Height	Increase in height of an object such as cells or cellular components.	
IMVL	Increased Medullary Volume	Medullary - pertaining to the marrow or to any medulla. Medulla - The inmost part. A general term for the most interior portion of an organ or structure. Called also marrow.	Dorland's Medical Dictionary
IPHM	Increased Perivenous Homogeneity	Perivenous - around the vein.	Dorland's Medical Dictionary
IPDY	Increased Portal Density	Portal: Of or relating to a point of entrance to an organ, especially the transverse fissure of the liver, through which the blood vessels enter	The American Heritage Medical Dictionary, 2007
ININ	Intranuclear inclusions	A gaseous, liquid, or solid foreign body enclosed within the nucleus of a cell.	http://www.merriam-webster.com/dictionary/inclusion and ECOTOX
LMLL	Lamellae, Lamella	A thin layer, plate, or membrane, esp any of the calcified layers of which bone is formed	http://www.collinsdictionary.com/dictionary/english/lamella
LESI	Lesions	Any visible, local abnormality of the tissues of the skin, such as a wound, sore, rash, or boil.	Gale Encyclopedia of Medicine, 2008
LPHD	Lymphoid depletion	The reduction of lymphocytes might be due to reduced production in the bone marrow, reduced proliferation in secondary lymphoid tissues, or due to increased loss of lymphocytes in the bone marrow or peripheral blood or secondary lymphoid tissues via necrosis or apoptosis.	http://vetmed.iastate.edu/research/labs/pcv2/pathogenesis/lymphoid-depletion
MELM	Melanomacrophages	The pigmented cells present in the hematopoietic organs. Besides melanin, hemosiderin and lipofuscin are also observed.	http://www.ncbi.nlm.nih.gov/pubmed/24482416
MAPH	Microphthalmia and anophthalmia	Microphthalmia is a disorder in which one or both eyes are abnormally small. Anophthalmia is the absence of one or both eyes. These rare disorders develop during pregnancy and can be associated with other birth defects.	https://www.nei.nih.gov/health/anophthalmia
MALN	Misalign, misaligned	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com
MHYP	Myeloid Hyperplasia	Greater than normal number of nucleated cells of the myeloid lineage (a monocyte, granulocyte, or mast cell), found in blood or other tissue	http://www.informatics.jax.org/searches/Phat.cgi?id=MP:0010373
MYOP	Myopathy	Any of various abnormal conditions or diseases of the muscular tissues, especially one involving skeletal muscle.	The American Heritage Medical Dictionary, 2007

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NCRO	Necrosis	The morphological changes indicative of cell death caused by progressive enzymatic degradation; it may affect groups of cells or part of a structure or an organ.	Dorland's Medical Dictionary for Health Consumers, 2007
NPHG	Nephrogenesis	Development or growth of the kidney.	http://www.merriam-webster.com/medical/nephrogenesis
NPHR	Nephrosis	Any kidney disease characterized by purely degenerative lesions of the renal tubules.	Dorland's Medical Dictionary for Health Consumers, 2007
NCVS	Nuclear Vesiculation	The presence or formation of vesicles in the nucleus	ECOTOX
PKTO	Parakeratosis	The persistence of the nuclei of keratinocytes as they rise into the stratum corneum of the epidermis	Dorland's Medical Dictionary for Health Consumers, 2007
PNCH	Parenchyma	The essential or functional elements of an organ, as distinguished from its stroma or framework	Dorland's Medical Dictionary for Health Consumers, 2007
CTYP	Percent Cell Type	No definition available.	
PRLF	Proliferation	The reproduction or multiplication of similar forms, especially of cells	Dorland's Medical Dictionary for Health Consumers, 2007
PRVN	Proventriculitis	Inflammation of the proventriculus of a bird usually due to nutritional deficiencies or to parasitism	http://www.merriam-webster.com/medical/proventriculitis
RCVL	Reduced Corticle Volume	Decrease in corticle volume.	ECOTOX
RFSZ	Reduced Follicle Size	Decrease in follicle size.	ECOTOX
RPCD	Reduced Periarteriolar Lymphocyte Sheath Cell Density	As an arteriole leaves a septum and enters the interior volume of the spleen it immediately acquires a continuous coating of lymphocytes. This "sleeve" of lymphocytes is the periarteriolar lymphocyte sheath, or PALS.	http://education.vetmed.vt.edu/Curriculum/VM8054/Labs/Lab13/Lab13.htm
SMLN	Severe misalignment	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com

ECOTOX Code Appendix

HIS	Histology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SCNG	Sinus Congestion	Blockage of one or more of the four pairs of sinus passageways in the skull. Blockage may result from inflammation and swelling of the nasal tissues, obstruction by one of the small bones of the nose (deviated septum) or from secretion of mucus	http://www.healthweb.com/healthnotes/Concern/Sinus_Congestion.cfm
SHMT	Sinus Haematopoiesis	The formation of blood or blood cells in the living body - in the sinus	The American Heritage Medical Dictionary, 2007
SHYP	Sinus Hyperplasia	An abnormal increase in the number of normal cells in normal arrangement in an organ or tissue, which increases its volume – in the sinus	Dorland's Medical Dictionary for Health Consumers, 2007
SMMN	Slight to moderate misalignment	Not to be in or come into precise adjustment or correct relative position.	http://www.merriam-webster.com
STET	Steatosis	A process of tissue degeneration marked by the deposition of fat globules in the cells. Also called fatty degeneration.	https://www.merriam-webster.com/medical/fatty%20degeneration
SOSS	Surpernumerary ossification	Beyond the normal number of ossifications.	ECOTOX
SWEL	Swelling	A transient abnormal enlargement of a body part or area not caused by proliferation of cells.	Dorland's Medical Dictionary for Health Consumers, 2007
SNAP	Synapses	The point at which a nervous impulse passes from one neuron to another.	http://www.merriam-webster.com
TELG	Telogen	The quiescent or resting phase of the hair cycle, following catagen; the hair has become a club hair and does not grow further.	Dorland's Medical Dictionary for Health Consumers, 2007
TFLR	Tissue Damage Measured by Fluorescence under Dyes or in Uv Light	No definition available.	
USTR	Ultrastructural Changes	Changes in the sub-cellular structures	ECOTOX
VCLZ	Vacuolization	The process of forming vacuoles; the condition of being vacuolated.	Dorland's Medical Dictionary for Health Consumers, 2007

GRO Growth Group

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ABNM	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	ECOTOX makes every effort to code the specific abnormalities (e.g. imposex, limb deformities , lesions, etc.), but when an author does not clearly state the specific type of abnormality or combines multiple types of abnormalities into one data point DVP ABNM is used.
AAFR	Age at first reproduction	The age when an organism starts to reproduce. A life table parameter	ECOTOX
ANGG	Angiogenesis	Angiogenesis is the formation and differentiation of blood vessels.	http://www.merriam-webster.com/dictionary
AOPT	Anophthalmia	Congenital absence of the eye or eyes. Also Anophthalmos	http://www.ncbi.nlm.nih.gov
BSCY	Blastocyst stage	An early metazoan embryo typically having the form of a hollow fluid-filled rounded cavity bounded by a single layer of cells	http://www.merriam-webster.com/dictionary/blastula
CCLV	Cell Cleavage	The act or state of splitting or dividing of a cell, particularly during the telophase of (animal) cell division.	http://www.biology-online.org/dictionary/Cleavage
CLFT	Cleft palate	Fairly common congenital disorder in which a fissure forms in the roof of the mouth. It may affect only the soft palate or extend through the hard palate, so that the nasal cavity opens into the mouth. The septum (dividing wall) between the nostrils is often absent.	http://www.merriam-webster.com/dictionary/cleft%20palate
COAT	Coat development	Development of primary coat.	ECOTOX
COLR	Color	No definition available.	

ECOTOX Code Appendix

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CORK	Cryptorchidism	A developmental defect in which a testis or both testes failed to descend from high in the abdomen to the bottom of the scrotum. Testicular descent is essential to normal spermatogenesis which requires temperature lower than the body temperature. Cryptorchidism can be subclassified by the location of the maldescended testis	http://www.ncbi.nlm.nih.gov
DFRM	Deformation/ Malformations	A morphologic defect resulting from an intrinsically abnormal developmental process.	http://www.biology-online.org/dictionary/Malformations
GDVP	Development, General	Change in ability to grow to a more mature life stage and in time between separate life stages. Used when more than one measurement is coded.	
EARO	Ear opening	The development stage when the ears open	ECOTOX
EARP	Ear pinna detachment	The detachment of the ear pinna	ECOTOX
EMRG	Emergence	Change in the act or an instance of emerging, e.g. developing from the larval stage into the adult stage. Also penetration of the soil surface by a newly germinated plant	http://www.merriam-webster.com/dictionary/emergence
ENDD	Endoderm Differentiation	The differentiation of the innermost of the three primary germ layers of an embryo that is the source of the epithelium of the digestive tract and its derivatives and of the lower respiratory tract.	http://www.merriam-webster.com/medlineplus/Endoderm
EVFO	Envelope Formation	Toward the end of mitosis, neighboring chromosomes gather closely to form a compact cluster. This is important for reassembling the nuclear envelope around the entire chromosome mass but not individual chromosomes. This protection is especially important during the very early stages of development, when the embryonic cells are rich in ooplasm.	http://www.cell.com/abstract/S0092-8674(08)00129-3?switch=standard
EYOP	Eye opening	The development stage when the eyes open.	ECOTOX
FIRM	Firmness	Having a solid or compact structure that resists stress or pressure.	http://www.merriam-webster.com/dictionary/firmness
FLDG	Fledged/Female or /Brood	To rear until ready for flight or independent activity	http://www.merriam-webster.com/dictionary/fledge
FURR	Fur Development	Development of fur.	ECOTOX

ECOTOX Code Appendix

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GSTL	Gastrulation	During embryonic development of most animals a complex and co-ordinated series of cellular movements occurs at the end of cleavage. The details of these movements, gastrulation, vary from species to species, but usually result in the formation of the three primary germ layers, ectoderm, mesoderm and endoderm.	http://www.biologyonline.org/dictionary/Gastrulation
GRRT	Growth Rate	The rate, or speed, at which the number of organisms in a population increases. This can be calculated by dividing the change in the number of organisms from one point in time to another by the amount of time in the interval between the points of time. The phrase is most often used to describe growth of cells or microorganisms in laboratory cultures and usually expressed as the generation time.	http://www.biologyonline.org/dictionary/Growth_rate
INCT	Incubation time	To maintain (as an embryo or a chemically active system) under conditions favorable for hatching, development, or reaction.	http://www.merriam-webster.com
LRCF	Loricae formation	A tubular, conical, or vaselike structure secreted by some protozoans (e.g., Stentor) and many rotifers. Many species incorporate sand grains and other particles into the lorica for reinforcement. The loose-fitting case, closed at one end, has a large opening at the anterior end through which part of the organism (or its appendages) may be extended. The lorica is of taxonomic importance among protozoologists.	http://www.britannica.com/EBchecked/topic/348199/lorica
MCZN	Masculinization	The condition marked by the attainment of male characteristics physiologically as part of maturation.	https://medical-dictionary.thefreedictionary.com/masculinization
MATR	Maturation	Having completed natural growth and development.	http://www.merriam-webster.com/dictionary/mature
MMPH	Metamorphosis	A major change in the form or structure of some animals or insects that happens as the animal or insect becomes an adult.	http://www.merriam-webster.com/dictionary/metamorphosis
MOPT	Microphtalmia	Congenital or developmental anomaly in which the eyeballs are abnormally small. Also Microphthalmos	http://www.ncbi.nlm.nih.gov
MOLT	Molting	To lose a covering of hair, feathers, etc., and replace it with new growth in the same place.	http://www.merriam-webster.com/dictionary/molt

ECOTOX Code Appendix

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MRLA	Morula stage	The sphere or globular mass of cells (blastomeres), formed by the cleavage of the ovum or egg in the first stages of its development; -- called also mulberry mass, segmentation sphere, and blastosphere.	http://www.lexic.us/definition-of/morula
NORM	Normal	Conforming to a type, standard, or regular pattern.	http://www.merriam-webster.com/dictionary/normal
FORM	Organ/Tissue Formation	The formation of a tissue or organ	ECOTOX
PHRV	Post Harvest Character Influenced	No definition available.	
PHRN	Post Harvest Character No Effect	No definition available.	
PUPA	Pupation	Completing the an intermediate usually quiescent stage of a metamorphic insect (as a bee, moth, or beetle) that occurs between the larva and the imago, is usually enclosed in a cocoon or protective covering, and undergoes internal changes by which larval structures are replaced by those typical of the imago. Also the change in percent pupation or pupation duration.	http://www.merriam-webster.com/dictionary/pupa and ECOTOX
RSPN	Resorption (Tail Resorption in Frogs)	To break down and assimilate the components	http://www.merriam-webster.com/dictionary/resorb
SXDP	Sexual Development	To acquire secondary sex characteristics and reach reproductive maturity	http://www.merriam-webster.com/dictionary/develop and ECOTOX
DVLP	Slowed, Retarded, Delayed or Non-development	A slowing or stopping of the time of development.	ECOTOX
STGE	Stage of development	A period or step in a progress, activity, or development; especially: one of the distinguishable periods of growth and development of a plant or animal.	http://www.merriam-webster.com
TERA	Teratogenesis	The origin or mode of production of a malformed foetus; the disturbed growth processes involved in the production of a malformed neonate. Use this code when exposure of adults results in quantifiable occurrence of abnormal offspring.	
TEMR	Time to First Emergence	No definition available.	

ECOTOX Code Appendix

DVP	Development Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TFLW	Time to Flower	The time it takes a plant to flower or inflorescence. One of the major developmental phase changes that a plant makes during its life. Also: time to anthesis.	ECOTOX
THED	Time to heading	The time it takes for grain to reach maturity.	ECOTOX
TRRA	Transformation Ratio	(Weight of Roots + Sprouts/weight of Original Seed)	
WEAN	Weaned	To accustom (as a young child or animal) to take food otherwise than by nursing	http://www.merriam-webster.com/dictionary/wean
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitational force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
YLKA	Yolk sac absorption, Yolk sac utilization	A bag-like ventral extension of the gut containing nutritive materials that first appears in the fish embryo and is later absorbed by the larva during the stage after hatching and before feeding.	filaman.uni-kiel.de/LarvalBase/Glossary
68CL	6-8 Cell stage	Cleavage stage embryos are typically at the 6-8 cell stage by day 3 of culture.	http://www.ivfpittsburgh.com/fertility-news-blog/

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
<ABNM>	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	DO not code GRO ABNM. ABNM should be coded under MPH (when adult body structures are changing) or DVP (when embryo or juveniles are becoming abnormal throughout different lifestages)

ECOTOX Code Appendix

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AREA	Area	A particular extent of space or surface or one serving a special function.	http://www.merriam-webster.com/dictionary/area GRO (Growth) AREA is used for a change in area of an entire organism. (Use AREA MPH (Morphology) when measuring specific response sites.)
BMAS	Biomass	The amount of living matter in a unit area or volume of habitat. Includes harvest yield, fruit or seed yield, mass of population, standing crop, productivity.	http://www.merriam-webster.com/dictionary/biomass and ECOTOX
<BDBN>	Body Burden	No definition available.	This will need maintenance. If the measurement occurs with an endpoint than the measurement should change to EBCN.
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference
COND	Condition Index or Condition Factor	Fitness factor. Condition factor (K) is measured by $K = \text{wt}/\text{length}^3 \times 100$.	Condition Factor ECOREF#61168
DNSY	Density	The quantity per unit volume, unit area, or unit length: as a : the mass of a substance per unit volume	http://www.merriam-webster.com/dictionary/density
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.m-w.com/dictionary/diameter
DIST	Distance grown	No definition available.	
NNOD	Dry Mass/Plant Roots Not Nodulated	No definition available.	
DWGT	Dry Weight (Aquatic Only)	Measurable change in dry weight of test organism.	ECOTOX

ECOTOX Code Appendix

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	
GREI	Growth Efficiency Index	As a measure of competition or as an aid in defining the relative importance of various stresses.	http://people.forestry.oregonstate.edu/richard-waring/sites/people.forestry.oregonstate.edu.richard-waring/files/publications/42.pdf
<GGRT>	Growth Rate Index	No definition available.	
GGRO	Growth, General	Unspecified or multiple growth measurements	ECOTOX
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height (Used for measurement of an entire organism)
LGTH	Length	A distance determined by the extent of something specified.	https://www.dictionary.com/browse/length
LGWR	Length to weight ratio	The ratio of length to weight of an organism.	ECOTOX
RGNR	Limb/ Body Part Regeneration	Change in ability to regenerate a body part, byssus/byssal thread production.	ECOTOX
LINT	Lint	A fibrous coat of thick convoluted hairs borne by cotton seeds that yields the cotton staple.	http://www.merriam-webster.com
NGAN	Net gain	Total weight gain is the most commonly employed measurement of gestational weight gain. A variation on this method is net weight gain, in which the weight of the infant/offspring and placenta is subtracted from total weight gain.	http://ije.oxfordjournals.org/content/36/6/1275.full
NODE	Nodulated Plant Roots /# Nodules	No definition available.	
NLEF	Number of leaves	Number of leaves found on a plant.	
NROT	Number of roots	Number of roots	ECOTOX
PMTR	Perimeter	The outside edge of an area or surface	http://www.merriam-webster.com/dictionary/perimeter
RADI	Radius	A line segment extending from the center of a circle or sphere to the circumference or bounding surface.	http://www.merriam-webster.com/dictionary/radius

ECOTOX Code Appendix

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RLGR	Relative Growth Rate	A measurement of the productivity of a plant, defined as the increase in dry mass per unit of plant mass over a specified period of time.	http://www.encyclopedia.com/doc/1O6-relativegrowthrate.html
SIZE	Size	The physical magnitude, extent, or bulk : relative or proportionate dimensions	http://www.merriam-webster.com/dictionary/size
SPGR	Specific Growth Rate	Is the increase in cell mass per unit time, e.g., grams cells (g) per gram cells (g) per hour: $(g*g-1)/h-1$. The specific growth rate is commonly given by the symbol, μ (mu), and the most common units are in reciprocal hours ($h-1$); however, it can also be expressed in reciprocal seconds ($s-1$) or minutes ($min-1$) or any other units of time.	http://en.wikipedia.org/wiki/Specific_growth_rate
STNT	Stunting	Stunt: A stop or hindrance in growth or development; arrested development; a plant or animal hindered from attaining its proper growth; a disease of plants, characterized by a dwarfing or stunting of the plant.	http://dictionary.reference.com/browse/stunted
THIK	Thickness	The smallest of three dimensions, length, width, and thickness	http://www.merriam-webster.com/dictionary/thickness
THRV	Time to harvest	Amount of time until a crop can be gathered	ECOTOX
VGOR	Vigor	Active healthy well-balanced growth especially of plants	http://www.merriam-webster.com/dictionary/vigor
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitational force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
GAIN	Weight gain	Increase in body weight over existing weight.	http://www.oxforddictionaries.com/us/definition/english/weight-gain
WTLR	Weight to length ratio	The ratio of weight to length of an organism.	ECOTOX

ECOTOX Code Appendix

GRO	Growth Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
WWGT	Wet Weight (Aquatic Only)	Measurable change in the wet weight of an organism.	ECOTOX
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width (Change in width of test organism)

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ABNM	Abnormal	An anomaly, deformity, malformation, impairment, dysfunction or deviation from the normal or from the typical.	http://www.biology-online.org/dictionary/Abnormality
ABST	Absence, absent, Missing	Not present. Agenesis. A tissue, organ, or bodily structure missing or failing to develop in an organism.	ECOTOX and http://www.merriam-webster.com/dictionary
ANGG	Angiogenesis	Angiogenesis is the formation and differentiation of blood vessels.	http://www.merriam-webster.com/dictionary
ABDS	Apex to Base Distance	No definitions available.	
AREA	Area	A spot or small marked space; the surface included within any given lines.	http://www.biology-online.org/dictionary/Area
BVSL	Blood vessels	Any of the vessels through which blood circulates in the body	http://www.merriam-webster.com/medical/blood%20vessel
CAWT	Calcium weight	The ratio of calcium in the bone to the weight of the bone. A measure of bone density.	ECOTOX
COSC	Caudal Ossification Center	No definition available.	
CRCM	Circumference	The length of a line that goes around something or that makes a circle or other round shape; the outer edge of a shape or area; the perimeter of a circle; the external boundary or surface of a figure or object.	http://www.merriam-webster.com/dictionary/circumference

ECOTOX Code Appendix

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.m-w.com/dictionary/diameter (Used when measuring an organ or response site)
NLRG	Enlargement	to make larger	http://www.merriam-webster.com/dictionary/enlarge
FSSR	Fissure	Any cleft or groove, normal or otherwise, especially a deep fold in the cerebral cortex which involves the entire thickness of the brain wall.	http://www.biology-online.org/dictionary/Fissure
GMPH	General Morphological Changes	Unspecified or multiple morphological measurement	ECOTOX
HGHT	Height	The distance from the bottom to the top of something standing upright	http://www.merriam-webster.com/dictionary/height
IMPS	Imposex, Intersex Conditions	Simultaneous presence of both male and female reproductive organs	http://epa.gov/endocrine/Pubs/ankley.pdf
IPOS	Inter-parietal Ossification	The formation of bone or of a bony substance, the conversion of fibrous tissue or of cartilage into bone or a bony substance between the parietal bones or cartilages.	http://cancerweb.ncl.ac.uk/omd/
LGTH	Length	A distance determined by the extent of something specified.	https://www.dictionary.com/browse/length
LFLV	Lens focal length variability	Measure of the sharpness of focus	ECOREF#57008
MOSC	Metacarpal Ossification Center	No definition available.	
NORM	Normal	Conforming to a type, standard, or regular pattern.	http://www.m-w.com/
RIBS	Number of ribs	Amount of rib bones present.	ECOTOX
OSSC	Ossification center	Ossification center: any point at which the process of ossification begins in a bone; in a long bone there is a primary center for the diaphysis and one secondary center for each epiphysis.	http://medical-dictionary.thefreedictionary.com/ossification+center
POSC	Parietal Ossification	The formation of bone or of a bony substance, the conversion of fibrous tissue or of cartilage into bone or a bony substance located near the parietal bone	http://cancerweb.ncl.ac.uk/omd/

ECOTOX Code Appendix

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PULP	Pulp	The soft succulent portion of a fruit.	McGraw-Hill, 1994
QNTY	Quantity	Quantity, number, count, or amount of an anatomical structure or tissue that can be quantified.	ECOTOX and http://wordnet.princeton.edu
RADI	Radius	A line segment extending from the center of a circle or sphere to the circumference or bounding surface.	http://www.merriam-webster.com/dictionary/radius
RATO	Ratio	The relationship in quantity, amount, or size between two or more things.	http://www.merriam-webster.com/dictionary/ratio
CTTK	Ratio of cortical thickness to diameter	The ratio of cortical thickness to the diameter.	ECOTOX
STBD	Seminiferous tubule diameter	The diameter of any of the coiled threadlike tubules that make up the bulk of the testis and are lined with a layer of epithelial cells from which the spermatozoa are produced.	
SHPE	Shape	The form or outline of an object	http://www.merriam-webster.com/dictionary/shape
DEPO	Shell Deposition	Change in the ability to grow a shell.	
SSRB	Short supernumerary rib	A partial rib that exceed the expected number of ribs.	ECOTOX
SIZE	Size	The physical magnitude, extent, or bulk : relative or proportionate dimensions	http://www.merriam-webster.com/dictionary/size
SMIX	Somatic Index	Organ Weight in Relationship to Body Weight.	ECOTOX
SMTE	Somite	One of the longitudinal series of segments into which the body of many animals (as articulate animals and vertebrates) is divided	http://www.merriam-webster.com/medical/somite
SOSC	Sternal Ossification Center	No definition available.	
STTO	Strength and Tone	No definition available.	
STRC	Structural Changes	No definition available.	
SFRB	Supernumerary full rib	A full rib that exceed the expected number of ribs.	ECOTOX
SRIB	Supernumerary Ribs	Having more than the expected number of ribs.	ECOTOX
SVTE	Supernumerary vertebrae	Having more than the expected number of vertebrae.	ECOTOX

MPH	Morphology Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
THIK	Thickness	The smallest of three dimensions, length, width, and thickness	http://www.merriam-webster.com/dictionary/thickness
TKWD	Thickness:width	Ratio of thickness to width.	ECOTOX
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters) : cubic capacity	http://www.merriam-webster.com/dictionary/volume
WEAR	Wearing	To cause to deteriorate by use. To impair or diminish by use or attrition. To consume or waste gradually.	http://www.merriam-webster.com
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitational force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width

MOR Mortality or Survivorship Group

MOR	Mortality Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BDAY	Bird days	This is a measure of survivorship. Bird days is equal to the number of birds alive on day X * X days.	ECOREF 36364
DTTM	Death with tumors	Mortalities that occurred with tumors.	ECOTOX
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	
<HTCH>	Hatch	Change in percent hatch, time to hatch or number of eggs hatched.	
TKNO	Knockdown	The inability to fly or stand	www.icup.org.uk/reports%5CICUP897.pdf

ECOTOX Code Appendix

MOR	Mortality Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LBCN	Lethal Body Concentration	Also Lethal Body Burden. The body residue of a chemical that is associated with mortality.	<i>Use this effect-measurement pair if the author reports an endpoint based on lethal body burden or lethal body concentration (internal chemical concentrations).</i>
LIFE	Life Expectancy	An expected time to live as calculated on the basis of statistical probabilities	The American Heritage Medical Dictionary, 2007
LFSP	Lifespan or longevity	The average or maximum length of time an organism, material, or object can be expected to survive or last	The American Heritage Medical Dictionary, 2007
MDTH	Mean Time of Death	No definition available.	
MORT	Mortality	<p>Death</p> <p>Effect expressed as % death or % survival. A lethal effect may describe mortality (MORT) or an observed behavior that indicates mortality (e.g., shell valve closures for bivalves (VACL), immobilization (IMBL) for invertebrates, or detachment (DTCH) for sessile organisms). "MORT" differs from "ABND" in that an initial number of organisms is known for the mortality effect and results are expressed in terms of the initial number (e.g., percent survival).</p> <p>If the author defines criteria used to determine that the organism was dead, and then identifies the effect as a lethal effect, "MORT" will be coded in the EFFECT field. MORT may be coded as an effect with LC, EC, LD, NOEC, or LOEC endpoints.</p> <p>If authors report hatch data where the intitial life stage is eggs, code the hatch data as mortality with a measurement comment AS HATCH. If the initial life stage is not eggs or is a life-cycle study where hatch is measured on a future generation, code the hatch data as REP HTCH.</p>	http://www.merriam-webster.com/dictionary/mortality
GMOR	Mortality/Survival, General	Used when more than one measurement is coded.	ECOTOX

MOR	Mortality Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PSUR	Probability of Survival	Survival probability, $g(x)$, describes the probability of survival from age x to age $x+1$, given that an individual has already survived to age x . To calculate $g(x)$, divide the survivorship schedule at age $x+1:l(x+1)$ by the survivorship schedule at age	http://www.uvm.edu/rsern/vtcfwru/spreadsheets/ecologyevolution/EE_Exercises/Exercise12/12%20Donovan%20pages%20311%20EE.pdf
SURV	Survival	To continue to live	http://www.merriam-webster.com/dictionary/survive
SVVS	Survivorship	The probability of surviving to a particular age; also : the number or proportion of survivors (as of an age group or population)	http://www.merriam-webster.com/dictionary/survivorship
TLET	Time to 100% Mortality	Time to complete mortality	ECOTOX
TDTH	Time to Death	Time until a death occurs	ECOTOX

PHY Physiological Group

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ABSC	Abscess	An enclosed collection of liquefied tissue, known as pus, somewhere in the body. It is the result of the body's defensive reaction to foreign material.	Gale Encyclopedia of Medicine. Copyright 2008
PARA	Amount or Percent Organisms Infested with Parasites	Number of organisms with parasites	ECOTOX
ABDT	Antibody Titres	Measure of the amount of antibody present, usually given in units per millilitre of serum.	http://www.pestmanagement.co.uk/lib/glossary/glossary_a.shtml
ASHG	Anti-sheep Red Blood Cell Hemagglutinin	No definition available.	
DHYP	Delayed Type Hypersensitivity	No definition available.	

ECOTOX Code Appendix

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ENMR	Encapsulation or Melanization Response	Melanization is an immediate immune response in arthropods leading to the physical encapsulation of pathogens in a dense melanin coat.	http://journals.plos.org/plospathogens/article?id=10.1371/journal.ppat.1003029
ENCY	Endocytosis	A process of cellular ingestion by which the plasma membrane folds inward to bring substances into the cell.	The American Heritage Medical Dictionary, 2007
FRDC	Free Radical	An especially reactive atom or group of atoms that has one or more unpaired electrons. Especially one that is produced in the body by natural biological processes or introduced from an outside source (such as tobacco smoke, toxins, or pollutants) and that can damage cells, proteins, and DNA by altering their chemical structure.	https://www.merriam-webster.com/dictionary/free%20radical
PTST	H+ Transport	The directed movement of protons (hydrogen ions) into, out of or within a cell, or between cells, by means of some agent such as a transporter or pore. Also: Proton transport, hydrogen ion transport, passive proton transport, down the electrochemical gradient.	http://www.rsc.org/publishing/journals/prospect/ontology.asp?id=GO:0015992&MSID=B611613M
HEAL	Healing	To make sound or whole [heal a wound]	http://www.merriam-webster.com/dictionary/heal
HTPL	Heterophiles	A finely granular polymorphonuclear leukocyte represented by neutrophils in human, but characterized in other mammals by granules that have variable sizes and staining characteristics.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
HMRL	Humoral immunity	A form of immunity mediated by circulating antibodies (immunoglobulins IgA, IgB, and IgM), which coat the antigens and target them for destruction by polymorphonuclear neutrophils.	The American Heritage Medical Dictionary, 2007
GIMM	Immunity, General	Used when more than one measurement is coded.	
IGMT	Immunoglobulin	A protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues; abbreviated Ig. There are five distinct classes based on structural and antigenic properties: IgA, IgD, IgE, IgG, and IgM. Also: Immunoglobin.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX

ECOTOX Code Appendix

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
IGMA	Immunoglobulin A	One of five distinct classes based on structure and antigenetic properties (IgA) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues. Also: Immunoglobin A.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX
IGME	Immunoglobulin E	One of five distinct classes based on structure and antigenetic properties (IgM) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues. Also: Immunoglobin E.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX
IGMG	Immunoglobulin G	One of five distinct classes based on structure and antigenetic properties (IgG) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues. Also: Immunoglobin G.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX
IGMM	Immunoglobulin M	One of five distinct classes based on structure and antigenetic properties (IgM) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues. Also: Immunoglobin M.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX
IGMY	Immunoglobulin Y	One of five distinct classes based on structure and antigenetic properties (IgY) is a protein of animal origin with known antibody activity, synthesized by lymphocytes and plasma cells and found in serum and in other body fluids and tissues. Also: Immunoglobin Y.	Dorland's Medical Dictionary for Health Consumers, 2007 and ECOTOX
IGYM	Immunoglobulin Y and Immunoglobulin M	Immunoglobulin Y (IgY), an antibody present in birds, reptiles, and amphibians, is actively transported from the serum to egg yolks, where it is stored in large quantities and immunoglobulin M, a class of immunoglobulins found in blood and lymph fluid that are the first type of antibody made in response to an infection. Also: Immunoglobin Y and Immunoglobin M.	https://www.tandfonline.com/doi/abs/10.1080/15321819.2018.1500375 , https://www.medicinenet.com/script/main/art.asp?articlekey=21068 , and ECOTOX
IFCT	Infected	Contaminated with a disease-producing substance or agent.	http://www.merriam-webster.com
INTS	Intussusception	A serious disorder in which part of the intestine slides into an adjacent part of the intestine. This "telescoping" often blocks food or fluid from passing through.	http://www.mayoclinic.org/diseases-conditions/intussusception/basics/definition/con-20026823

ECOTOX Code Appendix

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LKMA	Leukemia	Leukemia is a cancer of the early blood-forming cells. Most often, leukemia is a cancer of the white blood cells, but some leukemias start in other blood cell types.	http://www.cancer.org/cancer/leukemia
LYMP	Lymphocyte Activity	No definition available.	
LYPA	Lymphoma	Lymphoma is a cancer that starts in cells that are part of the body's immune system.	http://www.cancer.org/cancer/lymphoma/index
MCPG	Macrophage activity	Activity of any of the large, mononuclear, highly phagocytic cells derived from monocytes that occur in the walls of blood vessels (adventitial cells) and in loose connective tissue (histiocytes, phagocytic reticular cells). They are components of the reticuloendothelial system	Dorland's Medical Dictionary for Health Consumers, 2007
MPHG	Microphage Function, Activity	Activity of a small phagocyte; an actively motile neutrophil capable of phagocytosis.	Dorland's Medical Dictionary for Health Consumers, 2007
NKCA	Natural Killer Cell Activity	A type of lymphocyte (a white blood cell) and a component of innate immune system.	http://www.scienceaily.com/terms/natural_killer_cell.htm
PRNF	Parasitic Infection	No definition available.	
PHAG	Phagocytosis	The engulfing of microorganisms or other cells and foreign particles by phagocytes	Dorland's Medical Dictionary for Health Consumers, 2007
PFCR	Plaque forming cell response	Plaque forming cell - An antibody-producing cell detected in vitro by its ability to lyse antigen-sensitized erythrocytes in the presence of complement.	http://www.fleshandbones.com/immunology/roitt/glossary.cgi?letter=P
PNMA	Pneumonia	A disease of the lungs characterized especially by inflammation and consolidation of lung tissue followed by resolution and by fever, chills, cough, and difficulty in breathing and that is caused especially by infection	http://www.merriam-webster.com/dictionary/pneumonia
PRTU	Proteuria	The presence of an excess of serum proteins in the urine; called also albuminuria (also known as proteinuria).	Dorland's Medical Dictionary
PSFM	Pseudopodia formation	A dynamic actin-rich extension of the surface of an animal cell used for locomotion or prehension of food. Also: Axopodia, Cell Surface Microspike, Filopodia, Lamellipodia.	https://www.online-medical-dictionary.org/definitions-p/pseudopodia.html
RBST	Respiratory Burst activity	Respiratory activity of cell measured as an immune response; production of extra- and intra-cellular radicals	ECOREF 80857

ECOTOX Code Appendix

IMM	Immunity Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RSTT	Rosette Response, Rosette Forming Cell Concentration	No definition available.	
THYM	Thymocyte Activity	The activity of a lymphocyte within the thymus gland.	Dorland's Medical Dictionary for Health Consumers, 2007

INJ	Injury Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ABSN	Abrasion	An injury caused by something that rubs or scrapes against the skin	http://www.merriam-webster.com/dictionary/abrasion
ADNM	Adenoma	A benign epithelial tumor in which the cells form recognizable glandular structures or in which the cells are clearly derived from glandular epithelium.	Dorland's Medical Dictionary for Health Consumers, 2007
AMLD	Amyloidosis	Amyloidosis is a progressive, incurable, metabolic disease characterized by abnormal deposits of protein in one or more organs or body systems.	Gale Encyclopedia of Medicine, 2008
AUTO	Autotomy	Constriction and/or loss of segments. The act of casting off a body part as a means of escape.	ECOREF 47717 http://cancerweb.ncl.ac.uk
BTMR	Benign tumor	A tumor that does not metastasize or invade and destroy adjacent normal tissue.	The American Heritage Medical Dictionary, 2007
CLRS	Chlorosis	A diseased condition in green plants marked by yellowing or blanching	http://www.merriam-webster.com/dictionary/chlorosis
CURV	Curvature	An abnormal curving (as of the spine); a curved surface of an organ	http://www.merriam-webster.com/dictionary/curvature
DAMG	Damage	Loss or harm caused by a mistake, wrong action, etc.	http://www.merriam-webster.com/dictionary/damage
DESI	Desiccation	To dry up	http://www.merriam-webster.com/dictionary/desiccate

ECOTOX Code Appendix

INJ	Injury Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DCDP	Dyschondroplasia	A rare disorder characterized by hamartomatous proliferation of cartilage in the metaphyses of several bones causing distorted growth in length and pathologic fractures. Also: Enchondromatosis.	https://medical-dictionary.thefreedictionary.com/dyschondroplasia
HDCP	Hydrocephaly	An abnormal expansion of cavities (ventricles) within the brain that is caused by the accumulation of cerebrospinal fluid.	Gale Encyclopedia of Medicine, 2008
IFLM	Inflammation	A local response to cellular injury that is marked by capillary dilatation, leukocytic infiltration, redness, heat, and pain and that serves as a mechanism initiating the elimination of noxious agents and of damaged tissue	http://www.merriam-webster.com/dictionary/inflammation
GINJ	Injury, General	Used when more than one measurement is coded.	
MTMR	Malignant tumor	A tumor that invades surrounding tissues, is usually capable of producing metastases, may recur after attempted removal, and is likely to cause death unless adequately treated.	The American Heritage Medical Dictionary, 2007
MUTI	Mutogenesis	Any event that changes genetic structure; any alteration in the inherited nucleic acid sequence of the genotype of an organism	http://www.thefreedictionary.com/mutagenesis
OCTB	Occult blood	Blood that is present in amounts too small to be seen and can be detected only by chemical analysis or microscopic examination.	The American Heritage Medical Dictionary, 2007
WART	Papilloma, wart	A benign epithelial tumor projecting from the surrounding surface. Also called papillary tumor, villoma.	The American Heritage Medical Dictionary, 2007
PLYP	Polyp	A usually nonmalignant growth of tissue protruding from the mucous lining of an organ such as the nose, bladder, or intestine, often causing obstruction.	The American Heritage Medical Dictionary, 2007
SYMP	Symptom Severity Index	No definition available.	
THMB	Thrombosis	Formation of a clot in the blood that either blocks, or partially blocks a blood vessel. The thrombus may lead to infarction, or death of tissue, due to a blocked blood supply.	Gale Encyclopedia of Medicine, 2008
TUMR	Tumor Induction	No definition available.	
ULCR	Ulcer	A local defect or excavation, of the surface of an organ or tissue, which is produced by the sloughing of inflammatory necrotic tissue.	Dorland's Medical Dictionary for Health Consumers, 2007
VASC	Vascular Disruption	No definition available.	

ECOTOX Code Appendix

ITX	Intoxication Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ANOR	Anorexia	A loss of appetite especially when prolonged	http://www.merriam-webster.com/dictionary/anorexia
ATAX	Ataxia	An inability to coordinate voluntary muscular movements that is symptomatic of some central nervous system disorders and injuries and not due to muscle weakness —called also incoordination	http://www.merriam-webster.com/dictionary/ataxia
CONV	Convulsions	An abnormal violent and involuntary contraction or series of contractions of the muscles	http://www.merriam-webster.com/dictionary/convulsion
IMBL	Immobile	Incapable of moving or being moved	http://dictionary.reference.com/browse/immobile
INCO	Incoordination	lack of coordination; especially : ataxia	http://www.merriam-webster.com/dictionary/incoordination
GITX	Intoxication, General	Used when more than one measurement is coded.	
MBLT	Mobility	Capability of movement, of being moved	http://www.merriam-webster.com/dictionary/mobile
PARL	Paralysis	A complete or partial loss of function especially when involving the motion or sensation in a part of the body	http://www.merriam-webster.com/dictionary/paralysis
TINT	Time to Signs of Intoxication	No definition available.	

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
DPUP	2,4-Dichlorophenol uptake	Amount of 2,4-Dichlorophenol taken in by an organism or an organism's tissues.	ECOTOX
2DOG	2-deoxy-D-glucose	Amount of L-2-deoxy-D-glucose taken in by an organism or an organism's tissues.	ECOTOX
5HTU	5-Hydroxytryptamine uptake	Amount of 5-hydroxytryptamine taken in by an organism or an organism's tissues. Also: Serotonin, 5-HT.	ECOTOX

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
AECG	Abnormal ECG	A test that records the electrical activity of the heart Abnormality in ECG report generally means that the electrical system of your heart is not working properly. Electrocardiogram (ECG / EKG).	http://www.nlm.nih.gov/medlineplus/ency/article/003868.htm
ABSC	Abscission	The natural separation of flowers, fruit, or leaves from plants at a special separation layer	http://www.merriam-webster.com/dictionary/abscission
AMER	Active Metabolic Rate	Metabolism per unit time especially as estimated by food consumption, energy released as heat, or oxygen used in metabolic processes during activity.	ECOTOX and http://www.merriam-webster.com/medical/metabolic%20rate
ADUP	Adenine uptake	Amount of Adenine taken in by an organism or an organism's tissues.	ECOTOX
AECH	Adenylate energy charges (AEC)	The Adenylate energy charge (AEC) accounts for the regulation of enzymatic activity by ATP, ADP and/or AMP.	digital.library.okstate.edu/oas/oas_pdf/v74/p31_36.pdf
ADPE	Adsorption Efficiency	No definition available.	
APCT	Aerobic Protein Catabolism	No definition available.	
AHIN	A-H Intervals	The time from the initial rapid deflection of the atrial wave to the initial rapid deflection of the His bundle (H) potential; it approximates the conduction time through the A-V node (normally 50-120 msec).	http://cancerweb.ncl.ac.uk/omd/
HLSS	Alopecia, Hair loss	The loss of hair, wool, or feathers	http://www.merriam-webster.com/dictionary/alopecia
ALEX	Aluminum excretion	Aluminum excreted by organism	ECOTOX
ALAE	Aminolevulinic acid excretion	Aminolevulinic acid excreted by organism	
AEXR	Ammonia Excretion	No definition available.	
AMQU	Ammonia Quotient (AQ)	Ammonia quotient is the ratio between ammonia excreted and oxygen consumed (mol/mol).	ECOTOX
NHUP	Ammonia uptake	The uptake of ammonia into an organism or tissue	ECOTOX
ANBC	Aniline Binding Capability	No definition available.	
ANUP	Aniline uptake	Amount of aniline taken in by an organism or an organism's tissues.	ECOTOX

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ATFL	Aortic flow	The amount of blood flowing through the aorta.	ECOTOX
ASUP	Arsenic uptake	Amount of arsenic taken in by an organism or an organism's tissues.	ECOTOX
ASML	Assimilation Efficiency	The efficiency by which animals convert the food they ingest into energy for growth and reproduction.	http://www.britannica.com/EBchecked/topic/39344/assimilation-efficiency
AVCD	AtrioVentricular conduction delay	Delays in conduction below the bifurcation of Bundle of His cause bundle branch or fascicular blocks, while atrioventricular conduction is maintained, unless all three fascicles are simultaneously affected. The causes are both intrinsic and extrinsic. However, since the AV node and bundle of His provide a special connection of the atria to the ventricles, focal injury from heart attacks, infections, catheter trauma, is common.	
ADTH	Auditory Threshold	The audibility limit of discriminating sound intensity and pitch.	http://fred.hmc.psu.edu/ds/retrieve/fred/meshdescriptor/D01309
AXSS	Axis shift	Related to the mean electrical axis of an EKG. The mean electrical axis of the QRS complex is the average of the total depolarization of the ventricles in the frontal plane. There is a correlation between the mean electrical axis of the QRS complex and the electrical activity of the heart. Therefore, in pathologic hypertrophy of either ventricle (ie. when there is more muscle being depolarized), the axis tends to shift in the direction of the hypertrophied ventricle.	
BNDS	Bending strength	A measure of the load an object can bear if its ends are supported and a weight is attached to the middle, i.e. it is how many pounds of lateral force the object takes before it breaks. Yield strength is the amount of stress at which permanent deformation becomes measurable.	
BLUM	Bioluminescence	The emission of visible light by living organisms.	http://www.merriam-webster.com/dictionary/bioluminescence
BDFW	Blood flow	The flow or movement of blood in the cardiovascular system.	www.wikipedia.org/wiki

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BLPR	Blood pressure	The pressure exerted by the circulating volume of blood on the walls of the arteries and veins and on the chambers of the heart. Blood pressure is regulated by the homeostatic mechanisms of the body by the volume of the blood, the lumen of the arteries and arterioles, and the force of cardiac contraction. In the aorta and large arteries of a healthy young adult, blood pressure is approximately 120 mm Hg during systole and 70 mm Hg during diastole.	Mosby's Medical Dictionary, 2009
BDVL	Blood Volume	The total quantity of blood in the body; the plasma volume added to the red cell volume.	Miller-Keane Encyclopedia and Dictionary of Medicine, Nursing, and Allied Health, 2003
BTMP	Body Temperature	The level of heat natural to a living being	Dorland's Medical Dictionary for Health Consumers, 2007
BEXC	Boron Excretion	Boron excreted by organism	ECOTOX
BTFT	Butter fat	The natural fat of milk and chief constituent of butter consisting essentially of a mixture of glycerides (as those derived from butyric, capric, caproic, and caprylic acids).	http://www.merriam-webster.com
CDEX	Cadmium excretion	Cadmium excreted by organism	ECOTOX
CDUP	Cadmium Uptake	No definition available.	
CAAS	Calcium assimilation	Amount of calcium assimilated.	ECOTOX
CAEX	Calcium excretion	Calcium excreted by organism.	ECOTOX
CANU	Calcium not excreted	Calcium utilized/Calcium ingested * 100.	
CARE	Calcium retained	Calcium retained/Calcium ingested * 100.	
CARU	Calcium retention to utilization ratio	Ratio of Calcium retained (Utilized - Transferred to Egg) to Calcium utilized (ingest - excreted).	
CATR	Calcium transfer	Per cent of calcium transferred to the egg, Calcium in egg/Calcium utilized x 100.	
CATU	Calcium transfer to utilization ratio	Per cent of calcium transferred to the egg in relation to calcium utilized.	
CAUP	Calcium Uptake	No definition available.	
CLRC	Caloric content	The energy derived from food is described by its caloric content.	

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CPCT	Capacitance	The property of an electric nonconductor that permits the storage of energy as a result of the separation of charge that occurs when opposite surfaces of the nonconductor are maintained at a difference of potential	http://www.merriam-webster.com
CASS	Carbon assimilation	Assimilation of carbon into an organism or tissue.	ECOTOX
CO2A	Carbon dioxide assimilation	Assimilation of carbon dioxide into an organism or tissue.	ECOTOX
CO2T	Carbon Dioxide Tension, Partial Pressure of Carbon Dioxide, PCO2	No definition available.	
CFIX	Carbon Fixation	The conversion process of inorganic carbon (carbon dioxide) to organic compounds by living organisms.	http://en.wikipedia.org/wiki/Carbon_cycle
CTSL	Carbon translocation	The transfer of carbon from one part of an organism to another.	ECOTOX
CDIN	Cardiac index	The heart output per unit of time over body surface, usually expressed in terms of liters per minute per square meter.	The American Heritage Medical Dictionary, 2007
CDOP	Cardiac output	The volume of blood pumped from the right or left ventricle in one minute. It is equal to the stroke volume multiplied by the heart rate.	The American Heritage Medical Dictionary, 2007
IRAX	Cell Migration Inhibition (Immune Response Activity)	Cell Migration Inhibition is cell-mediated immunity measurement of the in vitro inhibition of the migration or phagocytosis of antigen-stimulated leukocytes or macrophages. Specific cell migration assays have been developed to estimate levels of migration inhibitory factors, immune reactivity against tumor-associated antigens, and immunosuppressive effects of infectious microorganisms.	http://www.ncbi.nlm.nih.gov
CRSP	Cellular respiration	The process of metabolism in which cells obtain energy in the form of ATP by causing glucose and other food molecules to react with oxygen.	The American Heritage Dictionary of Student Science, 2014
CLCL	Chloride clearance	The rate at which chloride is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
CLEX	Chloride excretion	Chloride excreted in the urine by an organism.	ECOTOX
CLFX	Chloride flux	Rate of movement of Chloride ions across membranes.	ECOTOX
CLUP	Chloride uptake	Amount of chloride taken in by an organism or an organism's tissues.	ECOTOX

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CMRB	Cholinergic muscarinic receptor binding	Distinct from the nicotinic cholinergic receptor in having no intrinsic ion channel, the receptor is formed from one protein chain with 7 transmembrane regions. The receptors produce their effect via activation of GTP-binding proteins.	http://cancerweb.ncl.ac.uk/omd/
CREX	Chromium excretion	Chromium excreted in the urine by an organism.	ECOTOX
CRUP	Chromium uptake	Amount of chromium taken in by an organism or an organism's tissues.	ECOTOX
CLNC	Clearance	The rate at which a substance is removed from the organism.	ECOTOX
CTIM	Clotting Time	The time required for blood to coagulate; prolonged in haemophilia and in the presence of obstructive jaundice, some anemias and leukemias, and some of the infectious diseases. May be measured as partial thromboplastin time (PTT) or activated partial thromboplastin time (aPTT or APTT).	http://cancerweb.ncl.ac.uk/omd/ and http://en.wikipedia.org/wiki
CO2F	CO2 Fixation	A mean in which photosynthetic bacteria obtain carbon for biosynthesis. Most commonly utilizing the Calvin cycle to convert CO2 to organic carbon.	instruct1.cit.cornell.edu/courses/biom290/CO2FIX.html
COEX	Cobalt excretion	Cobalt excreted by organism	ECOTOX
COUP	Cobalt uptake	Amount of cobalt taken in by an organism or an organism's tissues.	ECOTOX
CCCL	Coccolith formation	Any of several minute calcite plates that make up the external covering of certain haptophyte phytoplankton and in a fossilized state form chalk and limestone deposits	American Heritage Dictionary of the English Language, 2011
COLD	Cold Hardiness	Resistance to cold	ECOTOX
CMPS	Compression strength	the capacity of a material or structure to withstand loads tending to reduce size.	http://encyclopedia.thefreedictionary.com/Compression+strength
CNVY	Conductivity	The ability or power to conduct or transmit heat, electricity, or sound.	http://www.thefreedictionary.com/Conductivity
CRAT	Contraction rate	The rate at which a site contracts	ECOTOX
CUEX	Copper excretion	Copper excreted by organism	ECOTOX
CUUP	Copper Uptake	No definition available.	
CFLW	Coronary flow	The amount of blood flowing through the coronary artery.	
CSTT	Cost of Transport	The calories needed above baseline metabolism to move a given distance, per unit body mass.	http://en.wikipedia.org/wiki/Animal_locomotion

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
COGH	Cough	To expel air from the lungs suddenly with an explosive noise	http://www.merriam-webster.com/dictionary/cough
COCE	Coupling coefficient	The voltage change observed in a neuron when current is injected into another cell to which it is coupled by electrical synapses.	http://www.nature.com/cgi-taf/DynaPage.taf?file=nnr/journal/v2/n6/abs/nnr0601_425ar.html
CYSU	Cystine uptake	Amount of cystine taken in by an organism or an organism's tissues.	ECOTOX
CEBS	Cytosolic estrogen-binding sites	Measure of estrogen binding with sites within cytosol.	
DPXY	De-epoxydation	The conversion of violaxanthin (Vx) to zeaxanthin (Zx) in the xanthophyll cycle. Also: Deepoxydation.	http://www.jbc.org/content/279/26/26823.abstract
QRSV	Decreased QRS voltage	QRS Complex = The deflections in an electrocardiographic tracing and represent ventricular activity of the heart.	
DRRH	Diarrhea	Abnormally frequent intestinal evacuations with more or less fluid stools.	http://www.merriam-webster.com
DSPS	Diastolic pressure	The lowest arterial blood pressure reached when the ventricles are relaxed.	American Heritage Dictionary of the English Language, 2011
DGST	Digestion	The process of making food absorbable by dissolving it and breaking it down into simpler chemical compounds that occurs in the living body chiefly through the action of enzymes secreted into the alimentary canal	http://www.merriam-webster.com/dictionary/digestion
DCRG	Discharge	A flowing or issuing out or something that is emitted.	http://www.merriam-webster.com
DPAU	Dopamine uptake	The uptake of dopamine into an organism or tissue.	ECOTOX
DORB	Dormancy Break	No definition available.	
DORI	Dormancy Induction	No definition available.	
EFFC	Efficiency	The ratio of the useful energy delivered by a dynamic system to the energy supplied to it.	http://www.m-w.com/
ECTG	Electrocorticogram	A record of the electrical activity of the brain obtained through electrodes in direct contact with the exposed cerebral cortex	http://en.wiktionary.org/wiki/electrocorticogram

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EECG	Electroencephalogram	An electroencephalogram (EEG) is a test that detects electrical activity in your brain using small, flat metal discs (electrodes) attached to your scalp.	http://www.mayoclinic.org/tests-procedures/eeg/basics/definition/prc-20014093
ETSA	Electron Transfer System Activity	No definition available.	
EOCL	Electro-oculography	Electrooculography (EOG/E.O.G.) is a technique for measuring the corneo-retinal standing potential that exists between the front and the back of the human eye.	http://en.wikipedia.org/wiki/Electrooculography
EPYR	Electrophysiological response	Pertaining to electrophysiology, the electrical results produced through physiological agencies, or by change of action in a living organism	http://www.thefreedictionary.com/electrophysiological
ERLD	Electroretinography light peak:dark trough ratio implicit time	The ratio of light peaks to dark troughs of the waves of the response of the test in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
ERWV	Electroretinography wave	Electroretinography measures the electrical responses of various cell types in the retina, including the photoreceptors (rods and cones), inner retinal cells (bipolar and amacrine cells), and the ganglion cells	http://en.wikipedia.org/wiki/Electroretinography
ERWA	Electroretinography wave amplitude	The wave amplitude response of the test in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ERWI	Electroretinography wave implicit time	The wave implicit time response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
ERWL	Electroretinography wave latent time	The wave latent time response of the test an in which an electrode is placed on the cornea of the eye to measure the electrical response of the rods and cones in the retina. It is useful in the evaluation of hereditary and acquired disorders of the retina. A normal test will show the appropriate pattern responses during moments of increased light intensity. Abnormal results can indicate arteriosclerosis of the retina, retinal detachment, temporal arteritis (with eye involvement) or vitamin A deficiency.	http://cancerweb.ncl.ac.uk/omd/
EMCN	Emaciation	To cause to lose flesh so as to become very thin; to waste away physically	http://www.merriam-webster.com/dictionary/emaciate
ENST	Encystment	To enclose or become enclosed in a cyst	http://www.merriam-webster.com/dictionary/encyst
EEUR	Endogenous Excreted Urea	No definition available.	
ECOT	Energetic Cost of Transport	The energy cost of transport quantifies the energy efficiency transporting an animal from one place to another.	https://en.wikipedia.org/wiki/Cost_of_transport
NRGA	Energy Assimilation	No definition available.	
ECPT	Energy charge potential	No definition available.	
NRGX	Energy excreted	No definition available.	
NRGI	Energy intake	No definition available.	
ESUP	Eosin uptake	Amount of eosin taken in by an organism or an organism's tissues.	ECOTOX
EYTH	Erythema	Redness of the skin caused by dilatation and congestion of the capillaries, often a sign of inflammation or infection.	American Heritage Dictionary of the English Language, Fifth Edition. Copyright 2011

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ESGM	Estrogen metabolism	The metabolism of estrogen to its breakdown products.	ECOTOX
ECYC	Estrous cycle	The correlated phenomena of the endocrine and generative systems of a female mammal from the beginning of one period of estrus to the beginning of the next.	http://www.merriam-webster.com
EPSP	Excitatory postsynaptic potential	Depolarization of membrane potentials at the synaptic membranes of target neurons during neurotransmission. Excitatory postsynaptic potentials can singly or in summation reach the trigger threshold for action potentials.	http://www.online-medical-dictionary.org/definitions-e/excitatory-postsynaptic-potential.html
EXCR	Excretion Rate	The process, act or function of discharging or ejecting waste product of metabolism, especially from the system of an organism. Including but not limited to urine.	http://www.biology-online.org/dictionary/Excretion
FABS	Factorial Aerobic Scope	Possible oxidative metabolism from rest to maximal exercise.	http://www.britannica.com/science/aerobic-scope
FEPP	Fecal production	No definition available.	
FLOP	Flower opening	Generally caused by cell expansion. Various types can be distinguished as nocturnal, diurnal, single or repetitive.	https://academic.oup.com/jxb/article/54/389/1801/534724
FVOL	Fluid volume	The amount of space occupied by a three-dimensional object as measured in cubic units.	http://www.m-w.com/
FLUX	Flux	The rate of transfer of fluid, particles, or energy across a given surface. Also: Rate of movement of ions across membranes.	http://www.merriam-webster.com/dictionary/flux
FDAR	Food absorption rate	The rate of uptake of substances from food into microorganisms, tissues, and organs.	http://www.ncbi.nlm.nih.gov and ECOTOX
FDCV	Food Conversion Efficiency	A ratio expressing the weight of food required to produce a unit gain in the live weight of an animal or the measure of feed consumed per organism to the production of eggs. Also: Food efficiency ratio, feed conversion ratio (FCR), feed conversion rate, feed conversion efficiency (FCE).	Collins English Dictionary – Complete and Unabridged, 12th Edition 2014. S.v. "Feed conversion efficiency." Retrieved November 3 2016 from http://www.thefreedictionary.com/Feed+conversion+efficiency and ECOREF 79310

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GLFO	Galactocele formation	It is defined as a cystic enlargement of the mammary gland containing milk.	http://www.americanjournalofsurgery.com/article/0002-9610%2864%2990352-6/abstract
GFRT	Glomerular Filtration Rate	No definition available.	
GLGN	Glucogenesis	Is a metabolic pathway that results in the generation of glucose from non-carbohydrate carbon substrates such as pyruvate, lactate, glycerol, and glucogenic amino acids	http://en.wikipedia.org/wiki/Gluconeogenesis
GLUP	Glucose uptake	Amount of glucose taken in by an organism or an organism's tissues.	ECOTOX
GYCU	Glycerol uptake	Amount of glycerol taken in by an organism or an organism's tissues.	ECOTOX
GLYU	Glycine uptake	Amount of glycine taken in by an organism or an organism's tissues.	ECOTOX
GLSY	Glycogen synthesis	The rate at which glycogen is produced in an organism.	ECOTOX
GYEX	Glycolate excretion	The excretion of a salt or ester of glycolic acid.	http://cancerweb.ncl.ac.uk/omd/
GAEX	Glycolic acid excretion	Excretion of glycolic acid, which often serves as a basic component of the extracellular compounds of microalgae and is also the main substrate of photorespiration.	
GRAU	Granule/Grain Creation	No definition available.	
HTDP	Heart Double Product	Heart rate * cardiac output.	
HTRT	Heart Rate	The number of heartbeats per unit of time usually expressed as beats per minute.	American Heritage Dictionary of the English Language, 2011
HPRR	Heat production rate	No definition available.	
HPSR	High pressure	Increase in pressure in an organ or tissue	ECOTOX
HYDR	Hydration	The act or process of combining or treating with water	http://www.merriam-webster.com/medical/hydration
HCFX	Hydrogen carbonate flux	Rate of movement of Hydrogen Carbonate ions across membranes	ECOTOX
HNPH	Hydronephrosis	Abnormal enlargement of a kidney, may occur secondary to acute ureteral obstruction (kidney stone) or chronic kidney disease.	http://cancerweb.ncl.ac.uk/omd/

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
HYPR	Hyperactivity	Displaying excessive physical activity sometimes associated with neurological or psychological causes	Random House Kernerman Webster's College Dictionary, 2010
HYTN	Hypertension	Elevated pressure or tension of a body fluid, as of the intraocular or cerebrospinal fluids.	American Heritage Dictionary of the English Language, 2011
INRE	Input resistance	The input resistance, is defined as the ratio between the strengths of the resultant voltage response and the current that is injected in a neuron.	http://mrb.niddk.nih.gov/hagai/publ/dec/poi/DefsMeth.html
INRS	Insulin resistance	The diminished ability of cells to respond to the action of insulin in transporting glucose (sugar) from the bloodstream into muscle and other tissues.	http://www.medicine.net.com/script/main/art.asp?articlekey=18822
IVCD	Intraventricular conduction defects	Nonspecific intraventricular conduction defects are diagnosed when the QRS is modestly prolonged (< 120 msec) and the QRS pattern and axis are not typical of a hemiblock. The conduction delay is considered to occur beyond the Purkinje's myocardial gates and arises from slow cell-to-cell conduction. The phenomenon is common in patients with acute MI. No treatment is indicated.	
IUPT	Iodine Uptake	Amount of iodine taken in by an organism or an organism's tissues.	ECOTOX
<IOUP>	Ion Uptake	No definition available.	
FEEX	Iron excretion	Iron excreted by organism	ECOTOX
FEUP	Iron Uptake	No definition available.	
IRRI	Irritation	An inflammatory reaction of a bodily part; The elicitation of a response to a stimulus in a plant or animal organ or tissue, especially in a nerve or muscle.	American Heritage Dictionary of the English Language, 2011
JRAC	Junctional resistance (AC)	Measured by AC current. Measured junctional resistance is isolated from ground potential by seals and peripheral membrane resistances.	http://link.springer-ny.com/link/service/journals/00424/fpapers/esc/contents/02/00896/paper/s00424-002-0896-8ch100 .

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
JRDC	Junctional resistance (DC)	Measured by DC current. Measured junctional resistance is isolated from ground potential by seals and peripheral membrane resistances.	http://link.springer-ny.com/link/service/journals/00424/fpapers/esc/contents/02/00896/paper/s00424-002-0896-8ch100 .
TEAR	Lacrimation, Tearing	Shedding of tears.	ECOTOX
TIRD	Languid, tired, weak	Showing or having very little strength, energy, or activity	http://www.merriam-webster.com/dictionary/languid
PBEX	Lead excretion	Lead excreted by organism.	
PBUP	Lead Uptake	No definition available.	
LABS	Leucine absorption	The absorption of leucine into an organism	
LEUT	Leucine Transport	The directed movement of leucine, 2-amino-4-methylpentanoic acid, into, out of or within a cell, or between cells, by means of some agent such as a transporter or pore.	http://www.ebi.ac.uk/QuickGO/GTerm?id=go:0015820
LPBS	Lipid biosynthesis	The building up of a chemical compound in the physiologic processes of a living organism, in this case lipids.	http://cancerweb.ncl.ac.uk/omd/
LDGT	Lipid digestion	The conversion of lipid, in the stomach and intestines, into soluble and diffusible products, capable of being absorbed by the blood.	
LDMT	Lipid metabolism	Metabolism of lipid or fat by an organism	ECOTOX
LDPX	Lipid Peroxidation	Refers to the oxidative degradation of lipids. It is the process in which free radicals "steal" electrons from the lipids in cell membranes, resulting in cell damage.	http://en.wikipedia.org/wiki/Lipid_peroxidation
LTPT	Long-term potentiation	A prolonged increase in synaptic responses that can be induced in certain neural pathways by a brief tetanic stimulation.	ECOREF#75007
TSUP	L-Tyrosine uptake	Amount of L-Tyrosine taken in by an organism or an organism's tissues.	ECOREF #98664
MGEX	Magnesium Excretion	Magnesium excreted by organism	ECOTOX
MGUP	Magnesium Uptake	No definition available.	
MCCL	Malocclusion	Faulty contact between the upper and lower teeth when the jaw is closed.	American Heritage Dictionary of the English Language, 2011
MNEX	Manganese excretion	Manganese excreted by organism	ECOTOX
MNTL	Manganese translocation	The ability of an organism to move manganese from one location to another.	

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
MNUP	Manganese Uptake	No definition available.	
MBPT	Membrane Potential	The membrane potential is the voltage difference across a membrane. For cellular membranes they are computed by subtracting the voltage measured outside the membrane from the voltage measured inside the membrane. They result from differences of inside versus outside concentration of potassium, sodium, chloride, and other ions across cells' or organelles' membranes.	http://www.ncbi.nlm.nih.gov
HGUP	Mercury uptake	Amount of mercury taken in by an organism or an organism's tissues.	
NRGF	Metabolic efficiency	Energy intake based on body weight that is required to maintain current weight.	http://running.competitor.com/2014/04/features/metabolic-efficiency-who-needs-it_6167
NRGM	Metabolized energy	Metabolized energy equals gross food energy minus gross fecal and urinary energy.	http://www.healthyk9foods.com/index.php?page=understanding_foods&sub=metabolized_energy_%28me%29
MBCR	Metallothionein Binding Capacity Ratio	The ratio of toxicant to toxicant-binding capacity of metallothionein (MT) in tissues. The ratio of unbound metal to metal binding capacity of metallothionein within an organism.	
MCCN	Microorganism Cenosis	A group of organisms in a self-sufficient community naturally occupying a small area with a uniform environment throughout.	
MILK	Milk	A fluid secreted by the mammary glands of females for the nourishment of their young.	http://www.merriam-webster.com
MNER	Mineralization	Process of converting mineral or inorganic form.	http://www.merriam-webster.com
MIOS	Miosis	Constriction of the pupil of the eye, resulting from a normal response to an increase in light or caused by certain drugs or pathological conditions.	American Heritage Dictionary of the English Language, 2011
MOEX	Molybdenum excretion	Molybdenum excreted by organism	ECOTOX
MCUS	Mucus Production	No definition available.	
MYCO	Mycorrhizal Colonization	No definition available.	
NCOS	Na and Cl osmolality	The fractional contribution of Na ⁺ and Cl ⁻ to osmolality (Na ⁺ + Cl ⁻ /osmolality).	ECOREF 48368

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NAST	Nastic Movements	Of or relating to a movement of a plant that is in response to an external stimulus but is in a direction independent of the direction of the stimulus, as in the diurnal movement of leaves.	American Heritage Dictionary of the English Language, 2011
NVAR	Nerve absolute refractory period	The absolute refractory period is the interval during which a second action potential absolutely cannot be initiated, no matter how large a stimulus is applied. In neurons, it is caused by the inactivation of the Na ⁺ channels that originally opened to depolarize the membrane.	http://en.wikipedia.org/wiki/Refractory_period_%28physiology%29
NVCV	Nerve conduction velocity	It is the speed at which an electrochemical impulse propagates down a neural pathway	http://en.wikipedia.org/wiki/Nerve_conduction_velocity
NRXN	Nerve reaction	Amount of time or a response of a nerve to a stimulus.	
NVRR	Nerve relative refractory period	The period between the effective refractory period and the end of the refractory period; fibres then respond only to high intensity stimuli and the impulses conduct more slowly than normally.	http://cancerweb.ncl.ac.uk/omd/
NPSC	Net photosynthesis rate to stomatal conductance	The ratio of net photosynthesis to stomatal conductance in a sample.	ECOTOX
NPTR	Net photosynthesis rate to transpiration rate	The ratio of net photosynthesis to transpiration rate in a sample.	ECOTOX
NPRA	Net Photosynthetic Rate	No definition available.	
NRSP	Neuroresponse	No definition available.	
NRUP	Neutral Red Uptake	No definition available.	
NIEX	Nickel excretion	Nickel excreted by organism	ECOTOX
NIUP	Nickel Uptake	No definition available.	
NO3U	Nitrate Uptake (NO ₃ -)	The ability of an organism to remove nitrate from a substrate and take nitrate into its body. Nitrate (NO ₃ -) is a salt or ester of nitric acid	http://www.merriam-webster.com and ECOTOX
NO2U	Nitrite Uptake (NO ₂ -)	The ability of an organism to remove nitrite from a substrate and take nitrite into its body. A salt of nitrous acid.	ECOTOX and http://cancerweb.ncl.ac.uk/omd/
NASM	Nitrogen assimilation	Amount of nitrogen assimilated.	ECOTOX
NEXC	Nitrogen excretion	Nitrogen excreted by organism.	ECOTOX
NFIX	Nitrogen Fixation	Change in ability of plants to fix nitrogen.	ECOTOX
NTSL	Nitrogen translocation	The ability of an organism to move nitrogen from one location to another.	ECOTOX
NUPT	Nitrogen Uptake	No definition available.	

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NMYC	Non-mycorrhizal colonization	No definition available.	
NUUP	Nutrient Uptake	The process of nutrient uptake by plants refers to the transfer of the nutrient ions across the soil root interfaces into the plant cell.	http://www.krishiworId.com/html/soil_ferti1.html
FATT	Obese	Having excessive body weight caused by the accumulation of fat; extremely fat.	American Heritage Dictionary of the English Language, 2011
OSMO	Osmolality	The concentration of a solution in terms of osmoles of solute per kilogram of solvent.	Dorland's Medical Dictionary for Health Consumers, 2007
OSML	Osmolarity	The concentration of an osmotic solution especially when measured in osmols or milliosmols per liter of solution.	http://www.merriam-webster.com/medical/osmolarity
OSFG	Osmotic fragility	A sensitivity to changes in osmotic pressure characteristic of red blood cells.	Mosby's Medical Dictionary, 2009
OSPT	Osmotic potential	A measure of the potential of water to move between regions of differing concentrations across a water-permeable membrane by using this formula: $\psi = -CRT$, where ψ is the osmotic potential, C is the concentration of solutes, R is the universal gas constant (i.e. $8.314472 \text{ J K}^{-1} \text{ mol}^{-1}$), and T is the absolute temperature.	http://www.biology-online.org/dictionary/Osmotic_Potential
OXRP	Oxidation-reduction potential	The standard potential of an atom or ion that undergoes oxidation at the anode or reduction at the cathode in an electrochemical cell as compared to the potential of a standard hydrogen electrode when it is undergoing the same process. Also called redox potential.	http://www.merriam-webster.com/medical/oxidation-reduction%20potential
OXRX	Oxidation-reduction reaction	An oxidation-reduction (redox) reaction is a type of chemical reaction that involves a transfer of electrons between two species. An oxidation-reduction reaction is any chemical reaction in which the oxidation number of a molecule, atom, or ion changes by gaining or losing an electron. Redox reactions are common and vital to some of the basic functions of life, including photosynthesis, respiration, combustion, and corrosion or rusting.	https://chem.libretexts.org/Core/Analytical_Chemistry/Electrochemistry/Redox_Chemistry/Oxidation-Reduction_Reactions
ADPO	Oxidative Phosphorylation	The formation of ATP from the energy released by the oxidation of various substrates, especially the organic acids involved in the Krebs cycle.	The American Heritage Medical Dictionary, 2007
OCCP	Oxygen Carrying Capacity	No definition available.	

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
OXYG	Oxygen Consumption	Quantifiable change in oxygen uptake by the test organism.	for plants see PSYN (photosynthesis).
OXYT	Oxygen Tension, Partial Pressure of Oxygen Dioxide, Po2	No definition available.	
TO2F	Oxygen transfer factor [TO2]	The transfer factor is a measure of the relative ability of the respiratory surface to exchange gases, and is affected by changes in surface area available for exchange, as well as the diffusion distance between blood and water. Also referred to as diffusing capacity.	Randall, et al. The Exchange Of Oxygen And Carbon Dioxide Across The Gills Of Rainbow Trout. J. Exp. Biol. (1967), 6, 339-348
PAMP	P amplitude	The P wave represents atrial depolarization - the time necessary for an electrical impulse from the sinoatrial (SA) node to spread throughout the atrial musculature.	http://www.utoledo.edu/~xflores/ekgs-interpretation.htm
PERM	Permeability, tissue, membrane	The ability of a membrane or other material to permit a substance to pass through it.	
PPEX	Phosphate excretion	Phosphate excreted by organism.	ECOTOX
PPUP	Phosphate uptake	The ability of an organism to remove phosphate from a substrate and take phosphate into its body.	
PEXC	Phosphorus excretion	Phosphorus excreted by organism.	
PNUT	Phosphorus not excreted	Phosphorus utilized/Calcium ingested * 100.	
PRET	Phosphorus retained	Phosphorus retained/Calcium ingested * 100.	
PRUT	Phosphorus retention to utilization ratio	Ratio of Phosphorus retained (Utilized - Transferred to Egg) to Phosphorus utilized (ingested - excreted).	
PTRN	Phosphorus transfer	Per cent of phosphorus transferred to the egg, Phosphorus in egg/Phosphorus utilized x 100.	
PTUT	Phosphorus transfer to utilization ratio	Percent of phosphorus transferred to the egg in relation to phosphorus utilized.	
PUPT	Phosphorus Uptake	No definition available.	
PPPL	Photophosphorylation	The synthesis of ATP from ADP and phosphate that occurs in a plant using radiant energy absorbed during photosynthesis.	http://www.merriam-webster.com/dictionary/photophosphorylation
PSYN	Photosynthesis	A process by which plants, algae, and some bacteria containing chlorophyll synthesize organic compounds, chiefly carbohydrates, from atmospheric carbon dioxide and water, using light for energy and liberating oxygen in the process.	Mosby's Medical Dictionary, 2009

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PSYI	Photosystem I (PSI) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants that involves a pigment system which is excited by wavelengths shorter than 700 nanometers and which transfers this energy to energy carriers such as NADPH that are subsequently utilized in carbon dioxide fixation. Also: cyclic photophosphorylation.	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003
PSII	Photosystem II (PSII) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants which involves a pigment system excited by wavelengths shorter than 685 nanometers and which is directly involved in the splitting or photolysis of water. The Hill reaction is a property of photosystem II. Also: non-cyclic photophosphorylation	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003,
GPHY	Physiology, General	Change in the organic processes or functions of a plant or an organism. Examples of effects in this category include caloric content, cough frequency, granule or concretion formation, heartbeat, membrane permeability, metabolic stress, osmoregulation, urine frequency, ventilatory rate. Used when more than one measurement is coded.	
PGPL	Pigment plug ejection	A disturbance of the digestive system where the ejection of pigment plugs from the rectum occurs	ECOREF#65576
PIGM	Pigmentation	Quantitative (ie., compared to the control) change in the pigment, e.g. melanization.	Does not include chlorophyll (see CLR). If pigment levels are reported code in BCM.
PBAL	Ponderal balance	Is equal to [(Urine + Feces - Drinking Water - Consumed Food + (Weight Change/Initial Weight)] * 100)	ECOREF 56796
KPCL	Potassium clearance	The rate at which potassium is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
KEXC	Potassium excretion	Potassium excreted by organism	ECOTOX
KFLX	Potassium Flux	Rate of movement of potassium ions across membranes.	ECOTOX
KUPT	Potassium Uptake	No definition available.	
PRIN	PR Intervals	In the electrocardiogram, the time elapsing between the beginning of the P wave and the beginning of the next QRS complex; it corresponds to the a-c interval of the venous pulse and is normally 0.12-0.20 sec. Synonym(s): PQ interval.	Medical Dictionary for the Health Professions and Nursing, 2012
PSSR	Pressure	The act of pressing, or the condition of being pressed; compression; a squeezing; a crushing.	http://www.merriam-webster.com

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PSRP	Pressure potential	A component of water potential, represented by the symbol psi rho. Also called Turgor potential. Pressure potentials may be negative, in which case they represent tensions. Tensions arise as a result of transpiration and are caused by resistance of the tissues to water flow. In extreme conditions very low (-150 bar) pressure potentials can develop. Pressure potential gradients are responsible for the upward movement of water in the xylem. Positive pressure potentials are termed hydrostatic pressures.	http://botanydictionary.org/pressure-potential.html
PAEX	Primary amine excretion	Excretion of an amine containing the amido group, or a derivative of ammonia in which only one atom of hydrogen has been replaced by a basic radical; -- distinguished from secondary & tertiary amines.	Merriam-Webster Medical Dictionary
PGSY	Prostaglandin synthesis	Any of a group of naturally occurring, chemically related fatty acids that stimulate contractility of the uterine and other smooth muscle and have the ability to lower blood pressure, regulate acid secretion of the stomach, regulate body temperature and platelet aggregation, and control inflammation and vascular permeability; they also affect the action of certain hormones. Nine primary types are labeled A through I, the degree of saturation of the side chain of each being designated by subscripts 1, 2, and 3. The types of prostaglandins are abbreviated PGE2, PGF2a, and so on.	Dorland's Medical Dictionary for Health Consumers, 2007
PDGT	Protein digestion	The conversion of protein, in the stomach and intestines, into soluble and diffusible products, capable of being absorbed by the blood.	ECOTOX and http://www.merriam-webster.com
PERA	Protein Efficiency Ratio	Weight gain in grams divided by protein intake in grams.	Medical Dictionary for the Health Professions and Nursing, 2012
PRSY	Protein Synthesis	No definition available.	
PTUC	Protein Utilization Coefficient	No definition available.	
PTIM	Prothrombin time	Is a blood test that measures how long it takes blood to clot., also known as coagulation time or clotting time.	http://www.webmd.com/a-to-z-guides/prothrombin-time
QAMP	Q amplitude	Depolarization of the septum. It is the first downward (negative) deflection before the R wave.	http://www.udel.edu/HESC/physLab/TorialReview.htm

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
QTIN	QT Interval	The portion of an electrocardiogram between the onset of the Q wave and the end of the T wave, representing the total time for ventricular depolarization and repolarization.	Saunders Comprehensive Veterinary Dictionary, 2007
RAMP	R amplitude	Depolarization of the apex. It is an upward (positive) deflection.	http://www.udel.edu/HESC/physLab/TotaiReview.htm
BAAT	rBAT induced amino acid transfer	The transport of amino acids via the rBAT induced system involves an electrogenic exchange of neutral and dibasic amino acids. rBAT is a protein that is located in the brush border membranes of intestine and renal proximal tubule cells.	ECOREF 45834
RFLT	Reflectivity	The ratio of the energy of a wave reflected from a surface to the energy possessed by the wave striking the surface.	American Heritage Dictionary of the English Language, 2011
RBCD	Relative bradycardia	The term relative bradycardia is used to explain a heart rate that, while not technically below 60 beats per minute, is considered too slow for the individual's current medical condition	http://en.wikipedia.org/wiki/Bradycardia
RCRA	Renal Clearance Ratio	The renal clearance ratio or fractional excretion is a measure of the speed at which a constituent of urine passes through the kidneys	http://enc.tfd.com/Renal_clearance_ratio
RSNV	Resin volume	Resin volume, amount or yield. Resin is a hydrocarbon secretion of many plants, particularly coniferous trees, containing a complex mixture of different substances including organic acids, named the resin acids. Solidified resin is known as rosin. Resins when soft are known as oleoresins. Resin is not sap. Resin flow and production can increase after injury or infestation.	http://www.wikipedia.org/wiki
RESQ	Respiration Quotient	A dimensionless number used in calculations of basal metabolic rate (BMR) when estimated from carbon dioxide production.	http://en.wikipedia.org/wiki/Respiratory_quotient
RESP	Respiration, O ₂ Production, CO ₂ Production	No definition available.	
RPRT	Respiratory Rate	Frequency of breathing, expressed as the number of breaths per minute	The American Heritage Medical Dictionary, 2007
SAMP	S amplitude	Depolarization of the ventricular wall. The S wave a downward (negative) deflection after an R wave.	http://www.udel.edu/HESC/physLab/TotaiReview.htm
SLVN	Salivation	To have a flow of saliva especially in excess.	http://www.merriam-webster.com

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SCGR	Scope for Growth	(SfG) is an integrative physiological indicator reflecting the net energy gain of an organism. It correlates well with growth and reproduction.	http://www.jstor.org/stable/2389847
SCTN	Secretion	Secretion is the discharge across the cell membrane, into the extracellular space or ducts, of endogenous substances resulting from the activity of intact cells of glands, tissues, or organs.	http://www.ncbi.nlm.nih.gov
SZRE	Seizure	A paroxysmal episode, caused by abnormal electrical conduction in the brain, resulting in the abrupt onset of transient neurologic symptoms such as involuntary muscle movements, sensory disturbances and altered consciousness. Also called convulsion.	The American Heritage Medical Dictionary, 2007
SEUP	Selenium Uptake	No definition available.	
SENI	Senescence Induced/Accelerated	No definition available.	
SENR	Senescence Retarded	No definition available.	
SIDP	Siderophore production	Production of natural iron binding compounds that chelate ferric ions (which form insoluble colloidal hydroxides at neutral pH and are then inaccessible) and are then taken up together with the metal ion.	http://microbiology.ukzn.ac.za/Libraries/MICR_307/Microbial-Metal_Interactions.fbl.ashx/
NACL	Sodium clearance	The rate at which sodium is removed from the body.	http://cancerweb.ncl.ac.uk/omd/
NAEX	Sodium excretion	Sodium excreted by organism	
NAFX	Sodium flux	Rate of movement of sodium ions across membranes.	
NAUP	Sodium uptake	The ability of an organism to remove sodium from a substrate and take sodium into its body.	
SRLO	Spectral Reflectance/Shift to Longer Wavelengths	No definition available.	
SRSH	Spectral Reflectance/Shift to Shorter Wavelengths	No definition available.	
STCG	S-T changes	ST changes generally refer to an elevation or depression in the ST segment (see Normal Heart Beat) of the EKG complex.	http://equimedcorp.com/rhythms/topic/48/
STIN	ST interval	Time interval from the ending of the S-wave until the ending of the T-wave (in milliseconds).	http://bct.tn.utwente.nl/Definitions.htm

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SMTR	Standard Metabolic Rate	An ectothermic animal's resting and fasting metabolism at a given body temperature.	http://www.cartage.org.lb/en/themes/Sciences/Zoology/AnimalPhysiology/Glossary/S/standardmetabolicate.htm
STAS	Stasis	Stoppage of the normal flow of a body substance, as of blood through an artery or of intestinal contents through the bowels.	The American Heritage Medical Dictionary, 2007
STOM	Stomatal Aperture	Stomata are minute aperture structures on plants found typically on the outer leaf skin layer, also known as the epidermis. They consist of two specialized cells, called guard cells that surround a tiny pore called a stoma.	http://www.eoearth.org/view/article/156262
STOC	Stomatal Conductance	A plant property related to the ease with which water vapor escapes from plant leaves through small pores in the leaves known as stomata.	http://www.co2science.org/dictionary/define_s.htm
SMRE	Stomatal Resistance	The opposition to transport of quantities such as water vapor and carbon dioxide to or from the stomata (pores) on the leaves of plants.	http://glossary.ametsoc.org/wiki/Stomatal_resistance
STVL	Stroke volume	The amount of blood pumped by the left ventricle of the heart in one contraction.	http://www.medicine.net.com/script/main/art.asp?articlekey=7526
STWK	Stroke Work	The work done by the ventricle to eject a volume of blood into the aorta.	http://www.oucom.ohiou.edu/CVPhysiology/CF019.htm
SUUP	Sucrose uptake	The uptake of sucrose into an organism or tissue.	ECOTOX
SOXA	Sulfide oxidation activity	No definition available.	
SUPT	Sulfur uptake	The uptake of sulfur into an organism or tissue.	ECOTOX
SOXG	Superoxide Generation	The generation of any compound containing the highly reactive and extremely toxic oxygen radical O ₂ -, a common intermediate in numerous biological oxidations.	Dorland's Medical Dictionary for Health Consumers, 2007
SWEL	Swelling	The enlargement of organs, skin, or other body parts. It is caused by a buildup of fluid in the tissues	http://www.nlm.nih.gov/medlineplus/enency/article/003103.htm
SBNF	Swim bladder inflation	The ability for inflation of the swim bladder, a gas-filled sac that is present in most fish and functions as a hydrostatic organ; it is located beneath the vertebral column primarily in the anterior abdomen and is connected with the esophagus in some species (for example, goldfish). Oxygen is transferred from a rich venous sinus into the swim bladder to increase buoyancy.	ECOTOX and Farlex Partner Medical Dictionary, 2012

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SYPS	Systolic Pressure	The blood pressure measured during the period of ventricular contraction (systole). In blood pressure readings, it is the higher of the two measurements.	Mosby's Medical Dictionary, 2009
TAMP	T amplitude	The T wave represents the repolarization of the ventricles. On rare occasions, a U wave can be seen following the T wave.	http://www.utoledo.edu/~xflores/ekgs-interpretation.htm
T34C	T3/T4 Conversion rate	The turnover of T3 divided by the turnover of T4 times 100 is the conversion rate.	ECOREF 65157
TNST	Tensile Strength	Ratio of the maximum load a material can support without fracture when being stretched to the original area of a cross section of the material.	http://www.merriam-webster.com/dictionary/tensile%20strength
TEXT	Texture Change	No definition available.	
THTS	Thermal hysteresis	Thermal hysteresis, or Thermal hysteresis activity, is the difference between the melting point and freezing point in a fluid. The addition of AFPs at the solid ice and liquid water interface inhibits the thermodynamically favored growth of the ice crystal. Ice growth is kinetically inhibited by the antifreeeae proteins (AFP) covering the water-accessible surfaces of ice.	http://en.wikipedia.org/wiki
THRG	Thermoregulation	Maintenance of a constant internal body temperature independent of the environmental temperature.	The American Heritage Medical Dictionary, 2007
TDUP	Thymidine uptake	Amount of Thymidine taken in by an organism or an organism's tissues.	ECOTOX
TYUP	Thymine uptake	The ability of an organism to remove thymine from a substrate and take thymine into its body.	ECOTOX
THBR	Thyroid Hormone Binding Ratio	Recommended nomenclature for T3 Uptake test. A ratio of the solid matrix uptake and the serum uptake.	http://www.abbottdiagnostics.com/glossary/glossary_t.htm
TEUR	Total Excreted Urea	No definition available.	
TEVG	trans-epithelial voltage gradient	Measured by an electro-olfactogram. Ions of opposite charge actively transported across the apical membrane barrier through the paracellular pathway in response to the transepithelial voltage gradient. The osmotic gradient created by the net transepithelial flow of ions thus provides the driving force for liquid movement across the airway epithelium.	http://jap.physiology.org/cgi/content/full/91/2/797
TRAN	Transpiration	The passage of watery vapor from a living body (as of a plant) through a membrane or pores	http://www.merriam-webster.com/dictionary/transpiration

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
TCO2	Transpiration Carbon Dioxide assimilation ratio	The ratio between transpiration and Carbon Dioxide (CO2) assimilation	ECOTOX
TTKG	Transtubular potassium gradient	The trans-tubular potassium gradient (TTKG) is an index reflecting the conservation of potassium in the cortical collecting ducts of the kidneys.	http://en.wikipedia.org/wiki
TRGE	Triglyceride excretion	Triglyceride excreted by organism	ECOTOX
TIIU	Triiodothyronine uptake	Amount of triiodothyronine taken in by an organism or an organism's tissues. Also: T3 uptake.	ECOTOX
TRPS	Tropism	A movement or growth response of a cell or an organism to a stimulus, which may either be positive or negative depending on the source and kind of stimulation. It is generally an involuntary orienting response of an organism to a stimulus. It is often associated with the outcome on growth rather than on the movement of an organism. This makes it different from taxis, which is a behavioral response of an organism to an external stimulus resulting in the movement of an organism either towards or away from the source of stimulation. Includes but is not limited to chemotropism, gravitropism, heliotropism, hydrotropism, phototropism, thermotropism, thigmotropism, electrotropism, ecotropism, amphotropism, neurotropism, and photoperiodism.	https://www.biology-online.org/dictionary/Tropism
URUP	Uranyl uptake	Amount of uranyl taken in by an organism or an organism's tissues.	ECOTOX
UDUP	Uridine uptake	The ability of an organism to remove uridine from a substrate and take uridine into its body.	ECOTOX
VCDT	Vascular conductance	Vascular conductance is the ease with which blood enters and flows through a vessel, the blood flow divided by the blood pressure.	The American Heritage Medical Dictionary, 2007 and ECOREF#100416
VSCR	Vascular resistance	Resistance to blood flow through blood vessels and especially arterioles, internal vessel diameter is inversely proportional to pulmonary and systemic vascular resistance	http://www.merriam-webster.com/medical/vascular%20resistance
VMRS	Vasomotor response	Relating to the nerves and muscles that cause blood vessels to constrict or dilate.	http://www.medicinenet.com/script/main/art.asp?articlekey=7979
VENT	Ventilation, Opercular Movements, Undulatory Movements	No definition available.	

ECOTOX Code Appendix

PHY	Physiological Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VISC	Viscosity	The property of resistance to flow in a fluid or semifluid.	http://www.merriam-webster.com
WATB	Water balance	Water balance is water retained to water intake ratio	ECOREF 85555
WLSS	Water loss	A decrease in water in cells, organs tissues or bodies.	ECOTOX
PH2O	Water potential, plant	Plant water potential is a mid-day measurement of the water tension, water stress or water deficit in a plant utilizing a pressure chamber.	ECOTOX and http://en.wikipedia.org/wiki
WTUP	Water uptake	No definition available.	
WILT	Wilt	Dehydration of plants to the point where the leaves lose their turgor and hang limply. Can happen in living plants which later return to normal, or to cut plants before they are fed out. Thought to be a factor in increasing toxicity.	Saunders Comprehensive Veterinary Dictionary, 2007
XCPG	Xanthophyll cycle pigments	Measurement of pigments involved in the xanthophyll cycle	ECOTOX
ZNEX	Zinc excretion	Zinc excreted by organism	ECOTOX
ZNUP	Zinc Uptake	The ability of an organism to take zinc into its body.	ECOTOX
ATUP	C-14 Acetate uptake	The uptake of C-14 Acetate into a sample	ECOTOX
C14U	C-14 Uptake	Amount or process of Carbon-14 uptake by a cell.	ECOTOX
H3UP	H-3 Uptake	Amount of H-3 taken in by an organism or an organism's tissues.	ECOTOX
H3BD	Hemicholium-3 binding	A potent inhibitor of the high affinity uptake system for choline. It has less effect on the low affinity uptake system. Since choline is one of the components of acetylcholine, treatment with hemicholinium can deplete acetylcholine from cholinergic terminals.	http://cancerweb.ncl.ac.uk/omd/

POP Population Group

ECOTOX Code Appendix

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
ABND	Abundance	<p>Abundance is an ecological concept referring to the relative representation of a species in a particular ecosystem. It is usually measured as the large number of individuals found per sample</p> <p>Abundance can be measured as number of individuals of a taxon per unit area equivalent to density, frond number</p> <p>Use for coding efficacy of removal of lice from fish.</p>	http://en.wikipedia.org/wiki/Abundance_%28ecology%29 and ECOTOX
APCY	Allophycocyanin	Allophycocyanin (APC) is a large protein (approximate molecular weight 80 kd) containing many fluors.	http://www.drmr.com/abcon/APC.html
ATIX	Autotrophic Index	The ratio of ash free dry matter to chlorophyll a is termed the autotrophic index for periphyton and is used to distinguish the relative response of inorganic (N and P) and organic (BOD) enrichment.	https://yosemite.epa.gov/oa/EAB_Web_Docket.nsf/(Filings)/752A290054FFD9CA85257527005EF1C0/\$File/Memorandum%20in%20Opposition%20...99.pdf
BMAS	Biomass	The amount of living matter in a unit area or volume of habitat. Includes harvest yield, fruit or seed yield, mass of population, standing crop, productivity.	http://www.merriam-webster.com/dictionary/biomass and ECOTOX
CARC	Carotenoid Content	Any of a group of red or yellow pigments, including carotenes, found in plants and certain animal tissues	http://www.collinsdictionary.com/dictionary/english/carotenoid
CRCA	Carotenoids Chlorophyll A ratio	The ratio of carotenoids to chlorophyll a	ECOTOX
CHLA	Chlorophyll A Concentration	A specific form of chlorophyll used in oxygenic photosynthesis. It absorbs most energy from wavelengths of violet-blue and orange-red light. It also reflects green/yellow light, and as such contributes to the observed green color of most plants. This photosynthetic pigment is essential for photosynthesis in eukaryotes, cyanobacteria and prochlorophytes because of its role as primary electron donor in the electron transport chain. Chlorophyll a also transfers resonance energy in the antenna complex, ending in the reaction center where specific chlorophylls P680 and P700 are located.	http://en.wikipedia.org/wiki/Chlorophyll_a
CHAP	Chlorophyll A to Phaeophytin A ratio	Ratio of Chlorophyll A to Phaeophytin A in a sample.	ECOTOX

ECOTOX Code Appendix

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CHAB	Chlorophyll A:Chlorophyll B	The ratio of Chlorophyll A and Chlorophyll B found in a sample.	ECOTOX
CHLB	Chlorophyll B Concentration	Chlorophyll B: A yellow-green chlorophyll pigment which occurs only in plants and green algae. It functions as a light harvesting pigment that pass on the light excitation to chlorophyll a. It absorbs well at wavelength of 450-500 nm and 600-650 nm of the electromagnetic spectrum. Its molecular formula is C55H70O6N4Mg.	www.biology-online.org/dictionary/Chlorophyll_b
CHLC	Chlorophyll C concentration	Chlorophyll C: A form of chlorophyll that occurs only in algae, specifically the diatoms, dinoflagellates and brown algae. Its role is to pass on the light excitation to chlorophyll a. Its molecular formula is C35H28O5N4Mg.	www.biology-online.org/dictionary/Chlorophyll_c
CHLO	Chlorophyll Content	Chlorophyll (also chlorophyl) is a green pigment found in cyanobacteria and the chloroplasts of algae and plants	http://en.wikipedia.org/wiki/Chlorophyll
CHCT	Chlorophyll:Carotenoids	The ratio of chlorophyll to carotenoids in a sample	ECOTOX
RCLN	Colonization Rate	Change in ability to colonize an uninhibited substrate under toxicant stress.	
CNTL	Control	To reduce the incidence or severity of, especially of weeds or insects to innocuous levels.	http://ecocoverusa.com/wp-content/uploads/2011/12/R-D-Weed-Control-1.pdf
COVR	Cover, Canopy	Proportion of ground taken up by the vertical projection of all individuals of a single plant species, the amalgamated species sum of which provides the total canopy cover	http://thesciencedictionary.org/canopy-cover
DMTR	Diameter	The length of a straight line through the center of an object.	http://www.merriam-webster.com/dictionary/diameter
DVRS	Diversity, Evenness	Species diversity is a measure of the diversity within an ecological community that incorporates both species richness (the number of species in a community) and the evenness of species' abundances	http://www.eoearth.org/view/article/156211/
DRFT	Drift	To move slowly, especially as a result of outside forces, with no control over direction or Benthic organisms temporarily suspended in the water and carried downstream by the current.	http://dictionary.cambridge.org/dictionary/british/drift and http://www.ecologydictionary.org/DRIFT_ORGANISMS
DBMS	Dry Biomass	Biomass measured on a dry weight basis	ECOTOX

ECOTOX Code Appendix

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	ECOTOX
FRIN	Finite Rate of Increase	The rate of increase per individual per unit time.	http://www.zo.utexas.edu/courses/thoc/PopGrowth.html
GENT	Generation Time	The average time between two consecutive generations in the lineages of a population	http://en.wikipedia.org/wiki/Generation_time
INDX	Index to Population Size; Count, Number, Abundance	No definition available.	
IRIN	Intrinsic Rate of Increase	Intrinsic Rate of Increase (r): A measure of the rate of growth of a population. This is the instantaneous rate of change (per individual per time interval), assuming the population is in stable age distribution. It is equal to the natural log (ln) of the Finite Rate of Increase.	http://darkwing.uoregon.edu/~bsl/demography/glossary.html#intrinsic
LAGT	Lagtime	No definition available.	
LCYC	Lifecycle	The series of stages through which a living thing passes from the beginning of its life until its death	http://www.merriam-webster.com/dictionary/life%20cycle
NGEN	Number of generations	Number of generations in a population.	
PPYT	Phaeophytin	A breakdown product of chlorophyll	www.dep.state.fl.us/abs/biology/microbiology.htm
PSYN	Photosynthesis	The synthesis of organic compounds from carbon dioxide and water (with the release of oxygen) using light energy absorbed by chlorophyll. Change in productivity indicated by change in ¹⁴ C or CO ₂ uptake or oxygen production.	http://www.collinsdictionary.com/dictionary/english/photosynthesis
PSII	Photosystem II (PSII) Electron Transport Activity	One of two reaction sequences of the light phase of photosynthesis in green plants which involves a pigment system excited by wavelengths shorter than 685 nanometers and which is directly involved in the splitting or photolysis of water. The Hill reaction is a property of photosystem II. Also: non-cyclic photophosphorylation	McGraw-Hill Dictionary of Scientific and Technical Terms, 2003
PCBL	Phycobilin	Phycobilins are open chain tetrapyrroles that function as light harvesting chromophores in phycobiliproteins.	http://www.ncbi.nlm.nih.gov
PHYC	Phycocyanin	Blue pigment in algae. A blue photosynthetic pigment found in some bacteria and algae which absorbs light in the 618nm range.	www.biology-online.org/dictionary/Phycocyanin

ECOTOX Code Appendix

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PBRA	Population Biomass Turnover Ratio (Population/Biomass)	A measure that depends directly on growth and reproduction and indirectly on fertility through the rate of increase.	
PCCP	Population Carrying Capacity	The carrying capacity of a biological species in an environment is the maximum population size of the species that the environment can sustain indefinitely, given the food, habitat, water and other necessities available in the environment	http://en.wikipedia.org/wiki/Carrying_capacity
NCHG	Population Change (Change in N/Change in Time)	No definition available.	
GPOP	Population Changes, General	Used when more than one measurement is coded.	
DBLT	Population doubling time	The time (usually reported in years) that it takes a population to double its present size.	
PGRT	Population Growth Rate	A measure of population change in the absence of migration, comprising addition of newborns and subtraction of deaths; the result is known as the natural rate of increase of the population; it is the difference between the crude birth rate and the crude death rate.	Farlex Partner Medical Dictionary, 2012
PRAS	Prasinoxanthin	An algal pigment. (Note: If the measurement is on a single organism it is coded under BCM. If the measurement is on a group of organisms it is coded under POP.)	ECOTOX
PRPE	Predator/Prey Dynamics	An interaction between two organisms of unlike species in which one of them acts as predator that captures and feeds on the other organism that serves as the prey.	http://www.biology-online.org/dictionary/Predator-prey_relationship
RCPR	Recapture Ratio	A method commonly used in ecology to estimate an animal population's size. A portion of the population is captured, marked, and released. Later, another portion is captured and the number of marked individuals within the sample is counted. Since the number of marked individuals within the second sample should be proportional to the number of marked individuals in the whole population, an estimate of the total population size can be obtained by dividing the number of marked individuals by the proportion of marked individuals in the second sample.	http://en.wikipedia.org/wiki/Mark_and_recapture
STTL	Settling	No definition available.	
SEXR	Sex Ratio	The proportion of males to females in a given population, usually expressed as the number of males per 100 females at a specific stage in life, especially at conception, birth, and a given stage between birth and death.	The American Heritage Medical Dictionary, 2007

POP	Population Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
SZDS	Size distribution	Number of organisms at certain lengths or weights measured within a population.	
SPGR	Specific Growth Rate	Is the increase in cell mass per unit time, e.g., grams cells (g) per gram cells (g) per hour: (g*g-1*h-1). The specific growth rate is commonly given by the symbol, μ (mu), and the most common units are in reciprocal hours (h-1); however, it can also be expressed in reciprocal seconds (s-1) or minutes (min-1) or any other units of time.	http://en.wikipedia.org/wiki/Specific_growth_rate
SFCA	Surface Area	The sum of all the areas of all the shapes that cover the surface of the object.	http://www.math.com/tables/geometry/surfareas.htm
THCH	Thatch accumulation	No definition available.	
TRAP	Trappability	No definition available.	
VIDX	Viability index	Number of survivors on day 4/numbers of survivors on day 1.	
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitational force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight

REP Reproduction Group

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
<ABNM>	Abnormal	Effects which occur to the organism that has been directly exposed (compare to teratogenic effects). Effects included under this measurement include nonspecific physical malformations, deformities, defects, discoloration, anomalies, vegetative vigor, etc.	DO not code REP ABNM. ABNM should be coded under MPH (when adult body structures are changing) or DVP (when embryo or juveniles are becoming abnormal throughout different lifestages)
ABRT	Abort	To bring forth stillborn, nonviable, or premature offspring	http://www.merriam-webster.com/dictionary/abort
ARFS	Accessory reproductive fluid	Accessory reproductive fluids are lymph-like fluid and/or foam produced during natural copulation. Examples are: Foam produced by the proctodeal glands in Japanese quail and milt, the seminal fluid of fish, mollusks, and other water dwelling animals which reproduce by spraying the fluid onto eggs.	Noboru Fujihara. "Accessory reproductive fluids and organs in male domestic birds". World's Poultry Science Journal (1992), 48:39-56 Cambridge University Press and Elizabeth Adkins-Regan. The Auk 116(1):184-193, 1999
ALEG	Albumen Eggshell Quality (Haugh Units)	Haugh Units Scale objectively combines the thickness of the egg albumen and the weight of the egg to a single score that can be compared across all types of eggs.	http://www.sunnyqueen.com.au/03_quality/quality.htm
AFST	Atretic follicle stage	The stage of development of the follicles in the ovary marked by degenerative follicles with shrunken, irregular borders.	ECOREF 52243
ATOC	Atretic oocyte	Characterized by broken or absent nuclei, fragmentation of the zone radiata, and irregular yolk distribution.	ECOTOX and http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-89132003000300015
BSCP	Basal cap	A roughly circular mass of crystalline material that tips mammillae.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BTCF	Beat/Cross frequency	A standard sperm motility measurement, the beats per second divided by the number of times the head crosses the mean head trajectory per second.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
<BMAS>	Biomass;	Includes Harvest Yield, Fruit or Seed Yield, Mass of Organism, Mass of Population.	DO not code REP BMAS. BMAS should be coded under GRO if measured for an individual organism or POP if measured for a group of organisms
BDEP	Bird day egg production	Number of eggs produced/number of birds alive * 100.	
BLSP	Blood spots	Also called meat spots. Occasionally found on an egg yolk. Contrary to popular opinion, these tiny spots do not indicate a fertilized egg. Rather, they are caused by the rupture of a blood vessel on the yolk surface during formation of the egg or by a similar accident in the wall of the oviduct. Less than 1% of all eggs produced have blood spots.	http://www.georgiae ggs.org/pages/bloo dspots.html
BRED	Bred	To produce or cause to produce by mating; propagate	http://www.collinsdi ctionary.com/diction ary/english/breed#breed_1
CYNG	Care of Young, Nest Attentiveness	No definition available.	
CRCE	Circular cells	A standard sperm motility measurement, the number of spermatozoa swimming in circles.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
CLNE	Cloning efficiency	The ability of an organism to produce clones.	
CLUB	Clubbing (Hydra Reproduction)	No definition available.	
CLLT	Clutch length	Number of days in a row on which a hen lays an egg is referred to as the clutch length.	
CLPD	Clutch production	The time it takes to produce a clutch or the number of eggs in a clutch.	
NCLU	Corpus Lutea, Number of	No definition available.	
CAOC	Cortical alveoli oocyte	Characterized by a large nucleus, slightly stained with numerous nucleoli and the cytoplasm contained cortical alveoli.	ECOTOX
COUR	Courtship Behavior, Sexual behavior	No definition available.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
CRAK	Cracking	To break or cause to break without complete separation of the parts	http://www.collinsdictionary.com/dictionary/english/crack
DSTR	Diestrus	A period of sexual inactivity between periods of oestrus in animals that have several oestrous cycles in one breeding season	http://www.collinsdictionary.com/dictionary/english/dioestrus_1
EREM	Early resorbed embryos	Embryos resorbed during the early part of the reproductive cycle.	
EVOC	Early vitellogenic oocyte	Characterized by a centrally positioned nucleus, an irregular shape, and a large number of cortical alveoli vesicles.	ECOTOX
EBCN	Effective Body Concentration	The body residue of a chemical that is associated with an effect.	
LSTE	Eggs lost	Eggs missing from the nest (could be due to parents eating eggs or removing eggs from the nest).	ECOTOX
EGPN	Eggs per Nest or clutch	A clutch of eggs is the total number of eggs laid in one nesting attempt	http://www.birds.cornell.edu/AllAboutBirds/studying/understanding/clutch/document_view
ESIN	Eggshell Index	No definition available.	
ETRS	Estrus	A regularly occurring period of sexual receptivity in most female mammals, except humans, during which ovulation occurs and copulation can take place; heat	http://www.collinsdictionary.com/dictionary/english/oestrus_1
FCND	Fecundity	A measure of fertility, such as sperm count or egg count or the number of live offspring produced by an organism. The state of being fertile; capable of producing offspring. The quality of something that causes or assists healthy growth. The number of offspring produced by an organism in its lifetime.	http://www.biology-online.org/dictionary/Fecundity
FTCC	Fertile cocoons	No definition available.	
FERT	Fertile, Fertility	The quality or state of being fertile. The capacity to conceive or induce conception.	http://www.merriam-webster.com
FIDX	Fertility index	(Number fertile/Number cohabitated)*100.	
FERZ	Fertilization	The union of male and female gametes, during sexual reproduction, to form a zygote	http://www.collinsdictionary.com/dictionary/english/fertilization

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
FVOC	Final vitellogenic oocyte	Characterized by a centrally positioned nucleus, the predominance of cortical alveoli vesicles no longer observed and oocytes at their maximum size and filled with protein yolk granules.	ECOTOX and at http://www.scielo.br/scielo.php?script=ci_arttext&pid=S1516-89132003000300015
FLOR	Floral Induction	The initiation of the production of flowers, possibly stimulated by florigen.	http://glossary.gardenweb.com/glossary/flower_induction.html
FRMS	Frames, Bees	Number of frames that bees are working	ECOTOX
FRUT	Fruit, fruiting	The usually edible reproductive body of a seed plant; especially one having a sweet pulp associated with the seed.	http://www.merriam-webster.com
OOCY	Fully Developed Oocytes	Oocytes that are fully developed	ECOTOX
GMET	Gamete production	The production of haploid germ cells, such as a spermatozoon or ovum, that fuses with another germ cell during fertilization. Includes spermatogenesis.	http://www.collinsdictionary.com/dictionary/english/gamete
GCCT	Germ cell count	Number of sperm or eggs in the gonad or sample.	ECOTOX
GERM	Germination	To cause (seeds or spores) to sprout or (of seeds or spores) to sprout or form new tissue following increased metabolism	http://www.collinsdictionary.com/dictionary/english/germinate
GMEN	Germination Energy	$GE = [(n_1-n_0)/t_1 + (n_2-n_1)/t_2 + (n_3-n_2)/t_3 + \dots + (n_i-n_{i-1})/t_i] * 100/R = 0/0$ n ₁ , n ₂ , n ₃ ...n _i = Cumulative germination counts on consecutive days t ₁ , t ₂ , t ₃ ...t _i = numbers of days after beginning of test R = constant obtained by dividing 100 (which is a perfect germination percentage value for any species) by number of days on which first germination evaluations were made under international rules	
GIDX	Gestation Index	No definition available.	
GEST	Gestation Rate	The percentage of mated females that delivered at least one viable fetus	ECOREF 58044
GSTT	Gestation Time	The period in mammals from fertilization to birth.	ECOTOX
GFST	Graafian follicle stage	The stage of development of the follicles in the ovary marked by large follicles bordered by an amphophilic egg membranes with a central core of eosinophilic yolk proteins.	ECOREF 52243

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GRRR	Gross Reproductive Rate	The average number of female an organism would have if it survived to the end of its offspring-bearing years and if, throughout that period, it were subject to a given set of age-specific fertility rates and a given sex ratio at birth; this rate provides a measure of the replacement fertility of a population in the absence of mortality.	http://medical-dictionary.thefreedictionary.com/gross+reproduction+rate
HTCH	Hatch	To cause (eggs) to break and release the fully developed young or (of eggs) to break and release the young animal within. If the initial life stage is not eggs or is a life-cycle study where hatch is measured on a future generation, code the hatch data as REP HTCH. If authors report hatch data where the intitial life stage is eggs, code the hatch data as mortality (MOR MORT) with a measurement comment AS HATCH.	http://www.collinsdictionary.com/dictionary/english/hatch
HDEP	Hen-day egg production	Number of eggs produced / number of live hens x 100.	
HHEP	Hen-housed egg production	The cumulative number of eggs produced by the flock divided by the number of birds originally placed in the flock.	http://www.aphis.usda.gov/vs/ceah/cahm/Poultry/lay99de2.htm
INFT	Infertile	Being unable to produce offspring.	Mosby's Medical Dictionary, 2009
IFCC	Infertile cocoons	No definition available.	
INFL	Inflorescence	The arrangement of flowers on the axis or stem; the flowering part of a plant; a flower cluster; or flowers collectively.	Random House Kernerman Webster's College Dictionary, 2010
LACG	Lactating	To secrete milk.	http://www.merriam-webster.com
LIDX	Lactation index	Percent of animals alive at the 4 days that survive the 21 day lactation period.	
LREM	Late resorbed embryos	Embryos resorbed during the late part of the reproductive cycle.	
LGTH	Length	A distance determined by the extent of something specified.	https://www.dictionary.com/browse/length (Use this measurement for the length of an egg)
LNRY	Linearity	A standard sperm motility measurement, the distance in straight line divided by actual distance traveled.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
LBIX	Live Birth Index	Number of live offspring/number of offspring delivered x 100	ECOREF#81595
MMMC	Mammillary core	Structures composed of organic knobs which serve as crystallization sites on the outer surface of eggshell membranes.	
MIDX	Mating index	Number of animals with seminal plugs or sperm/number of animals mated times 100.	www.ilo.org/public/english/protection/safework/ghs/ghsfinal/ghsc11.pdf
LHMX	Maximum amplitude of lateral head displacement	A standard sperm motility measurement, the maximal deviation of the head displacement from the mean head trajectory.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
LHMN	Mean amplitude of lateral head displacement	A standard sperm motility measurement, the average of all deviations of the head displacement from the mean head trajectory.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
MSPW	Mean spawns per female	The mean number of times a female has spawned.	
MSTR	Metestrus	The period in the oestrous cycle following oestrus, characterized by lack of sexual activity	http://www.collinsdictionary.com/dictionary/english/metoestrus#metoestrus_1
MCRA	Mictic ratio	Mictic females/(mictic females + amictic females). Mictic female rotifers produce eggs that without fertilization develop into males or with fertilization form resting eggs that later develop into amictic females.	ECOTOX and https://www.merriam-webster.com/dictionary/mictic
MOTL	Motility	Sperm motility.	ECOTOX
MONT	Mounting, Copulation, Intercourse, Mating	A reproductive behavior in which one animal climbs atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
NSTI	Nest Initiation	The behavior of starting a place or structure in which birds, fishes, insects, reptiles, mice, etc, lay eggs or give birth to young.	Collins English Dictionary- Complete and Unabridged, 12th Edition 2014
NTSZ	Nest Size	No definition available.	
NANT	Nests Abandoned	No definition available.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
NRPR	Net Reproductive Rate	(Ro) Average number of offspring or seeds produced by an individual in a population during its lifetime. Figured by the life table equation: Ro=Sum Ix mx , where Ix =the probability of survival from birth to age x and mx = the average number of births per individual of age x.	www.muw.edu/~mhavill/studch10.rtf and Population Biology: The Evolution and Ecology of Populations, Chapter 12, P.W. Hedrick
ORSM	No resorbed embryos	No resorbed embryos.	ECOTOX
NMNT	Non-mount	A reproductive behavior which does not occur. This includes one animal climbing atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
NREP	Non-reproducing organisms	Barren plants or organisms.	ECOTOX
NVIB	Non-viable	Not capable of living; especially: not capable of surviving outside the womb without artificial support.	http://www.merriam-webster.com
NPRG	Not pregnant	Not containing unborn young within the body.	ECOTOX
NSTS	Number of Active Nests, Number of Nests Produced	No definition available.	
NDAY	Number of Days Between Eggs Laid	No definition available.	
NEGI	Number of Eggs Incubated	No definition available.	
NOIM	Number of implantations	The number of embryos that attached to the maternal uterine wall.	http://www.merriam-webster.com
NINC	Number of Nests Incubated	No definition available.	
NOPN	Number of Organisms per Nest	No definition available.	
NFOL	Number of ovarian follicles	A cavity in the ovary containing a maturing ovum surrounded by its encasing cells.	American Heritage Dictionary of the English Language, 2011
NPOD	Number of Pods	No definition available.	
NSPN	Number Spawning	Number of organisms participating in spawning or attempting to spawn.	ECOTOX
OEGP	Onset of Egg Production	No definition available.	
OBRD	Open Brood	No definition available.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
OFS1	Ovarian follicle stage I	Stage I follicles (less than 140 microns) contain a stage 1 oocyte and are in the primary growth stage; includes previtellogenic ovarian follicle.	(http://zfin.org/ZFA:0001263 and https://en.wikipedia.org/wiki/Folliculogenesis)
OFS2	Ovarian follicle stage II	Stage II follicles (140-340 microns) contain a stage 2 oocyte and theca cells as well as multiple layers of granulosa cells.	http://zfin.org/action/ontology/term-detail/ZFA:0001264 and https://en.wikipedia.org/wiki/Folliculogenesis
OFS3	Ovarian follicle stage III	Stage III follicles (340-690 microns) contain a stage 3 oocyte; includes vitellogenic follicle.	(http://zfin.org/action/ontology/term-detail/ZFA:0001266 and https://en.wikipedia.org/wiki/Folliculogenesis)
OFS4	Ovarian follicle stage IV	Stage IV follicles (690-730 microns) contain a stage 4 oocyte and are considered mature; includes mature ovarian follicle, preovulatory follicle.	(http://zfin.org/action/ontology/term-detail/ZFA:0001264 and https://en.wikipedia.org/wiki/Folliculogenesis)
OVRT	Ovulation Rate	No definition available.	
BNDG	Pair Bonding Nesting Behavior	No definition available.	
PLBR	Pairs with Litter or Brood	No definition available.	
PRTH	Parthenocarpy	The development of fruit without fertilization or formation of seeds	http://www.collinsdictionary.com/dictionary/english/parthenocarpy
TMSC	Penile Tumescence	The state of the penis when the erectile tissue becomes filled or swollen (tumid) with blood and causes the penis to become rigid and elevated. Also: Erection,	http://www.ncbi.nlm.nih.gov
FRUH	Percent Fruit Harvested	No definition available.	
PIPD	Pipped	To break through the shell	http://www.inhs.uiuc.edu/chf/pub/virtualbird/glossary.html

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
PCNT	Placentation	(Botany) the way in which ovules are attached in the ovary; (Zoology) a.the way in which the placenta is attached in the uterus; the process of formation of the placenta	http://www.collinsdictionary.com/dictionary/english/placentation
PILS	Post-implantation loss	The loss of implanted embryos. This is calculated by determining the ratio of dead to total implants from the treated group compared to the ratio of dead to total implants from the control group.	
PRFM	Pregnant Females in a Population	No definition available.	
PREG	Pregnant, paris or gravid	Containing unborn young within the body, distended with or full of eggs.	
PRPL	Preimplantation loss	Loss of an embryo before uterine implantation.	http://www.merriam-webster.com
PLOC	Previtellogenetic oocyte	Characterized by a large nucleus, centrally positioned with numerous nucleoli and cytoplasm intensely basophilic.	ECOTOX and http://www.scielo.br/scielo.php?script=sci_arttext&pid=S1516-89132003000300015
PFST	Primary follicle stage	The stage of development of the follicles in the ovary marked by large nucleus, abundant basophilic cytoplasm and no yolk vesicles.	ECOREF 52243
PSTR	Proestrus	The period in the oestrous cycle that immediately precedes oestrus	http://www.collinsdictionary.com/dictionary/english/prooestrus#prooestrus_1
PROG	Progeny	The young of an animal or plant Includes Counts, Numbers, Clutch, Litter or Brood Size, Progeny Produced Within a Specified Time Period, Numbers of Progeny per Parent Organism.	http://www.merriam-webster.com/dictionary/progeny
PSPG	Pseudopregnancy	A condition resembling pregnancy that occurs in some mammals, marked by persistence of the corpus luteum and usually following infertile copulation.	American Heritage Dictionary of the English Language, 2011
QUAL	Quality	No definition available.	
REPO	Reproducing organisms	Organisms that have produced offspring.	
GREP	Reproduction, General	Change in male and/or female reproductive ability; fertilization and fertilization rate; vegetation reproductive processes. Used when more than one measurement is coded.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
RBEH	Reproductive Behavior Changes	No definition available.	
RPRD	Reproductive Capacity	The relative capacity of a species to reproduce itself under optimum conditions	http://www.merriam-webster.com/dictionary/reproductive%20potential
RSUC	Reproductive Success (General)	Includes author defined indexes which may use multiple reproductive measures.	ECOTOX
RSEM	Resorbed Embryos	No definition available.	
SBRD	Sealed Brood	Capped cells in a bee frame	ECOTOX
SFST	Secondary follicle stage	The stage of development of the follicles in the ovary marked by the presence of numerous eosinophilic yolk vesicles.	ECOREF 52243
SEED	Seed Number	No definition available.	
SDIX	Seed Index	Grams per 100 seeds.	definition from paper
SEPD	Seed or spore production	Production of seed or spore by vegetative process	ECOTOX
SSET	Seed Set (No. Seeds/No. Florets)	No definition available.	
SHLL	Shell, Percent	No definition available.	
SIZE	Size	The physical magnitude, extent, or bulk: relative or proportionate dimensions.	http://www.merriam-webster.com/dictionary/size
SOFT	Softness	No definition available.	
SPNF	Spawning frequency	The number of times an organism spawns.	
SGRV	Specific gravity	A dimensionless unit defined as the ratio of the density of a substance to the density of water at a specified temperature. It is common to use the density of water at 4 C (39 F) as a reference since water at this point has its highest density.	http://www.engineeringtoolbox.com/density-specific-weight-gravity-d_290.html
SPCL	Sperm Cell Counts	No definition available.	
SPMC	Spermatocytes	A cell giving rise to sperm cells; especially: a cell that is derived from a spermatogonium and ultimately gives rise to four haploid spermatids.	http://www.merriam-webster.com
SPMG	Spermatogonia	A spermatogonium (plural: spermatogonia) a male germ cell that gives rise to a spermatocyte early in spermatogenesis.	Mosby's Medical Dictionary, 2009
SPRD	Sporophyte Production	No definition available.	
PSTG	Stage of Pregnancy	No definition available.	

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
STRL	Sterility	Inability to produce offspring, i.e., either to conceive (female s.) or to induce conception (male s.)	Dorland's Medical Dictionary for Health Consumers, 2007
STGH	Strength	The quality or state of being strong, power to resist force.	http://www.merriam-webster.com/dictionary/strength
NSNT	Successful Nests	One in which at least one egg hatched. The presence of detached shell membranes is the best evidence that eggs hatched	http://www.npwrc.usgs.gov/resource/birds/nest/fate.htm
THIK	Thickness	The distance between the top and bottom or front and back surfaces of something: a measurement of how thick something is.	http://www.merriam-webster.com/dictionary/thickness
T50P	Time to 50% production	Number of days to achieve 50% egg production.	ECOTOX
TFPG	Time to first progeny	Number of days to produce first litter.	ECOTOX
TMNT	Time to mounting	Time it takes for a reproductive behavior to be exhibited. This includes one animal climbing atop a second animal. Also copulation, intercourse, and mating.	ECOTOX
TPPR	Time to peak reproduction	The time it take for adults to reach peak reproductive output.	ECOTOX
TPRG	Time to pregnancy/gravidity	Time from mating to first gravidity.	ECOTOX
TSPN	Time to Spawn	No definition available.	
<TPRD>	Total Production	No definition available.	
TUPR	Tuber production	Production of tubers	ECOTOX
USTS	Unknown estrus stage	Unknown/undetermined stage of the estrus cycle.	
NUNT	Unsuccessful Nests	No definition available.	
VAOP	Vaginal opening	A method used to determine puberty in a female organism. Also called vaginal patency.	http://www.epa.gov/scipoly/oscpendo/docs/edmvf/femalearrayprotocol0830ed02.pdf
VPLG	Vaginal/Copulatory plug	A gelatinous secretion used in the mating of some species. It is deposited by a male into a female genital tract, such as the vagina, and later hardens into a plug or glues the tract together.	http://en.wikipedia.org/wiki/Mating_plug

ECOTOX Code Appendix

REP	Reproductive Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
VEGR	Vegetative Reproduction	A form of asexual reproduction in plants, in which multicellular structures become detached from the parent plant and develop into new individuals that are genetically identical to the parent plant.	The American Heritage Science Dictionary, 2002
VCTY	Velocity	A standard measure of sperm motility, the total distance traveled divided by time.	Proc. Natl. Acad. Sci. (1997) Vol. 94, pp. 6842-6846
VIAB	Viable	Having reached a stage of development at which further development can occur independently of the mother Used for Offspring or Seed	http://www.collinsdictionary.com/dictionary/english/viable
VITG	Vitellogenesis	Producing or stimulating the formation of yolk	http://www.collinsdictionary.com/dictionary/english/vitellogenic
NVOC	Vocalizations	The use of uttered sounds for auditory communication. Including but not limited to: Song, barking, grunting, hissing, growling, and purring.	www.thefreedictionary.com/vocalization
VOLU	Volume	The amount of space occupied by a three-dimensional object as measured in cubic units (as quarts or liters): cubic capacity.	http://www.merriam-webster.com/dictionary/volume
WGHT	Weight	The quality of being heavy; that property of bodies by which they tend toward the center of the earth; the effect of gravitational force, especially when expressed in certain units or standards, as pounds, grams, etc. It is proportional to the quantity of matter in the body.	http://www.biology-online.org/dictionary/Weight
WDTH	Width	The distance from one side of something to the other side: a measurement of how wide something is.	http://www.merriam-webster.com/dictionary/width
YOLK	Yolk, Percent	No definition available.	

SYS Ecosystem Group

ECOTOX Code Appendix

PRS	System Processes Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
BGCM	Biogeochemical	Changes in whole system biogeochemical processes, e.g. sulfate reduction, denitrification, methanogenesis, nitrification, ammonification, net N or P removal.	ECOTOX
CMIN	Carbon Mineralization	Soil respiration	http://soilquality.org/indicators/respiration.html
CO2P	CO ₂ Evolution	Evolution of carbon dioxide	ECOTOX
CO2G	CO ₂ Generation	Carbon dioxide generation in a soil/litter microcosm system.	
DCMP	Decomposition	To break down (organic matter) or (of organic matter) to be broken down physically and chemically by bacterial or fungal action; rot (chemistry) to break down or cause to break down into simpler chemical compounds	http://www.collinsdictionary.com/dictionary/english/decomposition
TROP	Efficiency of Trophic Transfer Between Different Levels in the Food Chain; Assimilation Efficiency	Change in efficiency of trophic transfers between different levels in the food chain, e.g. between primary producers and grazers.	
GPPR	Gross Primary Productivity/Respiration	Gross primary production (GPP) is the total energy (or nutrients) assimilated by an ecological unit (such as an organism, a population, or an entire community)	http://animals.about.com/od/g/grossproduction.htm
NITR	Nitrification	The chemical process in which a nitro group is added to an organic compound (or substituted for another group in an organic compound). The oxidation of ammonium compounds in dead organic material into nitrates and nitrites by soil bacteria (making nitrogen available to plants). The conversion of [[nitrogen from inorganic to organic by [[nitrate bacteria, which effectively recycles the substance so that it can be used again by plants via [[root uptake.	http://www.biology-online.org/dictionary/Nitrification
OUPT	Oxygen uptake	Oxygen uptake in a soil/litter microcosm system.	ECOTOX
PPRO	Primary Productivity	A measure of the rate at which new organic matter is developed through photosynthesis and chemosynthesis in producer organisms based on the oxygen released and carbon taken in; the transformation of chemical or solar energy to biomass	Dictionary.com's 21st Century Lexicon
SPRO	Secondary Productivity	The rate at which these consumers convert the chemical energy of their food into their own biomass is called secondary productivity. The efficiency at which energy is transferred from one trophic level to another is called ecological efficiency.	http://www.britannica.com/EBchecked/topic/531787/secondary-productivity

PRS	System Processes Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
GPRS	System processes, General	Change in system process effects. Used when more than one measurement is coded for a record.	ECOTOX
SRES	System Respiration	Change in rate of oxygen uptake by entire ecosystem, as opposed to individual or groups of organisms.	ECOTOX

MLT Multiple Effect Group

MLT	Multiple Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement Code	Measurement Name	Measurement Definition	Notes
~XXX [This is an EFFECT code- NOT A MEASURENT CODE]	Delayed Effect	Currently an aquatic ONLY code. An effect (xxx) reported after the organisms are transferred to toxicant-free test chambers. A specific exception is clearance prior to tissue analysis; e.g., "after the exposure the organisms were placed in clean water for 10 hours to allow the organism to clear the stomach contents". This type of clearance is distinguished from depuration and is not coded as a delayed effect (see also page 4.C-10). Refer to Section 4.C-5. <u>Test Result Parameters</u> in the guidelines for additional information regarding coding of delayed effects.	
MULT	Multiple Effects Reported as One Result	Change in more than one effect when data were reported as one result; this code is used with reservation. The use must be verified through consultation with at least one other reviewer to ensure that the effects can not be reported individually.	

NER No Effect Group

NER	No Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Measurement	Measurement	Measurement Definition	Notes

ECOTOX Code Appendix

NER	No Effect	TABLE SORTED BY SECOND COLUMN - Measurement Name	
Code	Name		
NRNR	Endpoint reported without a specific effect	The author reported an endpoint, but not a specific effect. This code only exists on a data transferred reference – EcoRef 344.	

Appendix T. Endpoint Codes and Definitions

ECOTOX ENDPOINTS		
DATABASE USAGE	ENDPOINT	DEFINITION
Terrestrial Aquatic	ACXX	The concentration corresponding to xx% maximal activity. Used in in vitro testing.
Terrestrial	ATCN	Asymptotic threshold concentration: The concentration of a chemical at which some percentage of a population of test organisms is in a state of approximate homeostasis for some prolonged period of time.
Terrestrial	BAF	Bioaccumulation factor: A value that is the “ratio of the concentration of a chemical in the organism to that in the medium (usually water). Bioaccumulation refers to both uptake of dissolved chemicals from water (bioconcentration) and uptake from ingested food and sediment residues.” (Casarett et.al. 1986) For Terrestrial records, use BAF to reflect concentration/ accumulation in tissues regardless of whether the author addresses the ratio as BAF or BCF. The use of a BCF code in Terrestrial data will require prior approval.
Aquatic	BCF	Bioconcentration factor: A term describing the degree to which a chemical can be concentrated in the tissues of an organism in the <i>aquatic environment</i> as a result of exposure to waterborne chemical at steady state during uptake phase. The BCF is a value which is equal to the concentration of a chemical in one or more tissues of the exposed aquatic organism divided by the average exposure water concentration of a chemical in the test. (Rand 1995) Use BCF only when reported by author for water exposures ie., AQUIRE; if BCF reported for terrestrial organisms/plants code as BAF. BCFs of less than 1 (when converted to the standard unit of L/kg) and negative BCF values are suspect and should be looked at by the EPA data base coordinator. Reviewers will code the data and send the paper on to the EPA data base coordinator for review and approval. The BCFs less than 1 are coded as reported by the author and negative BCF values are coded as <1.
Aquatic	BCFD	Bioconcentration factor calculated using dry weight tissue concentration
Terrestrial Aquatic	BMCxx	BenchMark Concentration at xx% level of response above background. Benchmark Concentration is an exposure to a concentration of a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the concentration associated with a specified measure or change of a biological effect. Note the benchmark concentration lower bound (BMCL) should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 ug/l (benchmark concentration lower bound 10%-=0.075 ug/l) is coded as 1.22 (0.075-NA) ug/l.

ECOTOX ENDPOINTS		
DATABASE USAGE	ENDPOINT	DEFINITION
Aquatic Terrestrial	BMDxx	BenchMark Dose at xx% level of response above background. Benchmark Dose is an exposure due to a dose of a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the dose associated with a specified measure or change of a biological effect. Note the benchmark dose lower bound (BMDL) should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 mg/kg (benchmark concentration lower bound 10%=0.075 mg/kg diet) is coded as 1.22 (0.075-NA) mg/kg diet.
Aquatic Terrestrial	BMRSxx	BenchMark Residue at xx% level of response above background. Benchmark Residue is the residue value in a specific tissue due to the exposure to a substance associated with a specified low incidence of risk, generally in the range of 1% to 10% of a health effect; or the residue associated with a specified measure or change of a biological effect. Note the benchmark residue lower bound should be coded in the range/CI fields as the lowest value, since it is from the one-side 95% CI. For example 1.22 mg/kg TI (benchmark concentration lower bound 10%=0.075 mg/kg TI) is coded as 1.22 (0.075-NA) mg/kg TI. The tissue that the residue is measured in is reported as a comment.
Aquatic Terrestrial	ECxx	Effective Concentration for xx% of tested organisms.
Aquatic	EDxx	Effective dose for xx% of tested organisms
Aquatic Terrestrial	ERxx	Tissue concentration of toxicant needed to cause xx% effect in the test population. (ECOREF#51644) The ERxx concentration should be coded into the Concentration field and not the BCF field.
Aquatic	ETxx	Effective time response to xx% of organisms. The time associated with the response is coded in the DURATION field.
Aquatic Terrestrial	ICxx	Inhibition concentration to xx% of organisms.
Aquatic Terrestrial	IDxx	Inhibition dose to xx% of organisms.
Aquatic Terrestrial	LCxx	Lethal concentration to xx% of test animals.
Aquatic Terrestrial	LDxx	Lethal dose to xx% of test animals
Aquatic	LETC	Lethal Threshold Concentration: Toxicity curve asymptotic concentration indicating an incipient LC50 value. Acute lethal action has essentially ceased.
Aquatic	LOEC	Lowest observable effect concentration
Terrestrial	LOEL	Lowest-observable-effect-level: lowest dose (concentration) producing effects that were significantly different (as reported by authors) from responses of controls (LOEAL/LOEC)

ECOTOX ENDPOINTS		
DATABASE USAGE	ENDPOINT	DEFINITION
Aquatic Terrestrial	LOER	Lowest Observed Effects Residue: The lowest residue concentration producing effects that were significantly different from responses of controls according to author's reported statistical test
Aquatic	LR_{xx}	Lethal Residue Concentration. Tissue concentration of toxicant needed to cause xx% mortality in the test population. (ECOREF#20453) The LR _{xx} concentration should be coded into the Concentration field and not the BCF field.
Aquatic Terrestrial	LT_{xx}	Lethal time, median: time required for xx% of a population to die from a given dose; also reported as "ST _{xx} " - survival time for xx% of a population. The time associated with the response is coded in the DURATION field.
Aquatic Terrestrial	MATC	Maximum Acceptable Toxicant Concentration: Hypothetical threshold concentration that is the geometric mean between the NOEC and LOEC concentration. The term Chronic Value (ChV) is encoded as MATC.
Aquatic Terrestrial	MATR	Maximum Allowable Toxicant Residue: Hypothetical threshold residue concentration that is the geometric mean between the NOER and LOER values.
Aquatic Terrestrial	MCIG	Minimum concentration to inhibit growth. From FETAX (frog embryo teratogenesis assay-Xenopus).
Aquatic	NOEC	No observable effect concentration
Terrestrial	NOEL	No-observable-effect-level: highest dose (concentration) producing effects not significantly different from responses of controls according to author's reported statistical test (NOEAL/NOEC)
Aquatic Terrestrial	NOER	No Observed Effects Residue: The highest residue concentration producing effects not significantly different from responses of controls according to author's reported statistical test
Aquatic Terrestrial	NR	Not reported
Aquatic Terrestrial	NR-LETH	100% mortality
Aquatic Terrestrial	NR-ZERO	0% mortality

NOTE:

- When coding endpoints with number values (e.g. LC_{xx}) the format to be used for single digit numbers is: 0X (e.g. LC01, LC05).
- Minimum Inhibitory Concentration (MIC or Minimum Inhibition Concentration) and Lowest Complete Inhibitory Concentration (LCIC or Lowest Complete Inhibition Concentration) are not coded but entered into the Other Effects data field.

Appendix U. Response Site Codes

CODE	SITE NAME	SITE DEFINITION/NOTES
A		
AB	Aboveground Portion, Plant	The parts of a plant growing above ground. (ECOTOX)
ABD	Abdomen	The portion of the vertebrate body between the thorax and the pelvis or the cavity of this part of the body. The elongate region posterior to the thorax in arthropods. (McGraw-Hill Dictionary of Scientific & Technical Terms, 6E, 2003)
ABP	Abdominal process	Found in a parthenogenic female cladoceran. A long second abdominal process of the post abdomen that extends beyond the base of the anal setae (www.epa.gov/waterscience/wet/disk2/pdf/apxal-a3.pdf)
AD	Adipose Tissue	Connective tissue consisting mainly of fat (adipose) cells, specialized to synthesize and contain large globules of fat, within a structural network of fibres. Fatty tissue. (http://www.britannica.com/EBchecked/topic/5948/adipose-tissue)
ADC	Auditory center	The part of the brain (in a fold of the cerebral cortex of the temporal lobe on both sides of the brain) that receives impulses from the ear by way of the auditory nerve. (2003-2012 Princeton University, Farlex Inc)
AF	Amniotic Fluid	A substance that fills the amnion to protect the embryo from desiccation and shock. Also Chorioallantoic fluid
AG	Accessory Gland	A mass of glandular tissue separate from the main body of a gland. A gland associated with the male reproductive organs in insects.
AL	Albumen	Egg white
ALG	Albumen Gland	Organ opening into the hermaphroditic duct and secreting a viscous substance, which surrounds the fertilized ovum and contributes to the development of the egg. (http://visual.merriam-webster.com/animal-kingdom/mollusks/snail/anatomy-snail.php)
AM	Adductor Muscle	Any muscle that draws a part of the body toward the median axis.
AMG	Amygdala	Denoting the cerebellar tonsil, as well as the lymphatic tonsils (pharyngeal, palatine, lingual, laryngeal, and tubal).
ANG	Antennal Gland	(Green gland) An excretory organ in the cephalon of adult crustaceans

CODE	SITE NAME	SITE DEFINITION/NOTES
ANT	Antenna (Antennae)	A movable, articulated organ of sensation, attached to the heads of insects and Crustacea. There are two in the former, and usually four in the latter. They are used as organs of touch, and in some species of Crustacea the cavity of the ear is situated near the basal joint. In insects, they are popularly called horns, and also feelers. The term is also applied to similar organs on the heads of other arthropods and of annelids. (http://cancerweb.ncl.ac.uk/omd/)
AO	Anogenital	Pertaining to the anus and external genitals.
AP	Appendage	Any subordinate or nonessential structure associated with a major body part. Any jointed, peripheral extension, especially limbs, or arthropod and vertebrate bodies.
AR	Adrenal Gland	An endocrine organ located close to the kidneys of vertebrates and consisting of two morphologically distinct components, the cortex and medulla.
ARC	Aerenchyma	A spongy tissue with large air spaces found between the cells of the stems and leaves of aquatic plants. Aerenchyma provides buoyancy and allows the circulation of gases. (http://www.dictionary.com/browse/aerenchyma)
ART	Artery	A vascular tube that carries blood away from the heart.
ARX	Area X (Avian brain)	Region of avian brain responsible, in part, for bird song. (https://www.sciencedirect.com/topics/veterinary-science-and-veterinary-medicine/hvc-avian-brain-region)
AS	Air Sac	One of large, thin-walled structures associated with the tracheal system of some insects. In birds, any of the small vesicles that are connected with the respiratory system and located in bones and muscles to increase buoyancy.
AT	Alimentary Tract	Pertaining to the organs of digestion
ATA	Aorta	The largest artery in the body which has its origin at the heart. It gives off branches to the extremities, neck and major organs for the purpose of supplying oxygenated blood. (Gray's)
ATH	Abdomen and thorax	Sample consists of abdomen and thorax tissue.
ATM	Atrium	The chamber or either of the chambers of the heart that receives blood from the veins and forces it into the ventricle or ventricles (Webster's)
ATR	Anther	The part of a stamen that produces and contains pollen and is usually borne on a stalk. (http://www.merriam-webster.com/dictionary/anther)
AX	Axons	The process or nerve fiber of a neuron that carries the unidirectional nerve impulse away from the cell body.
B		
BA	Bark	
BB	Bulb	

CODE	SITE NAME	SITE DEFINITION/NOTES
BC	Buccal mass	
BCT	Bract	A leaf-like structure, different from the foliage leaves and without an auxiliary bud, associated with an inflorescence or flower (Gray's)
BD	Bud	An embryonic shoot containing the growing stem tip surrounded by young leaves or flowers or both and frequently enclosed by bud scales.
BDT	Bile duct	A duct that carries bile from the liver and gallbladder to the duodenum (first part of the small intestine). (http://cancerweb.ncl.ac.uk/omd/)
BDW	Body wall	Consists of the layers of tissue, including skin, connective tissue, and hypaxial muscle, which surround and contain the internal structures of the body
BF	bursa of Fabricius	a blind glandular sac that opens into the cloaca of birds and functions in B cell production (http://www2.merriam-webster.com/cgi-bin/mwmednlm)
BG	Breeding (Nuptial) Gland	A nuptial pad (or thumb pad, nuptial ball, nuptial excrescence) is a secondary sex characteristic present on some mature male frogs and salamanders. This breeding gland is used primarily by males to grasp females during amplexus. (http://en.wikipedia.org/wiki)
BI	Bile	An alkaline fluid secreted by the liver and delivered to the duodenum to aid in the emulsification, digestion, and absorption of fats.
BIL	Bill	
BIT	Biliary tract	The biliary tract is a system of ducts that transports bile out of the liver into the small intestine (http://arbl.cvmbs.colostate.edu/hbooks/pathphys/digestion/liver/anatomy.html)
BK	Beak	A prominent terminal projection.
BL	Blood	A fluid connective tissue consisting of the plasma and cells that circulate in the blood vessels.
BLC	Blood cells	An erythrocyte (red blood cell) or leukocyte (white blood cell)
BM	Bone Marrow	A vascular modified connective tissue occurring in the long bones and certain flat bones of vertebrates.
BMC	Bone marrow cells	Cells found in the bone marrow
BMP	Bone marrow plasma	Plasma from the bone marrow.
BO	Bone	One of the parts constituting a vertebrate skeleton.
BOL	Bolls	A pod or capsule, as of cotton and flax.
BR	Brain	The portion of the vertebrate central nervous system enclosed in the skull.
BRN	Branches	

CODE	SITE NAME	SITE DEFINITION/NOTES
BRS	Brain stem	
BSG	Basal Ganglia	A region of the base of the brain that consists of three clusters of neurons (caudate nucleus, putamen, and globus pallidus) that are responsible for involuntary movements such as tremors, athetosis, and chorea. (http://www.medterms.com)
BT	Breast	
BU	Bursa	A simple sac or cavity with smooth walls containing a clear, slightly sickly fluid and interposed between two moving surfaces of the body to reduce friction.
BV	Blood Vessel	A tubular channel for blood transport.
BW	Bee's Wax	Yellow to grayish-brown solid wax obtained from bee honeycombs by boiling and straining.
BY	Byssus	
C		
CA	Cartilage	A specialized connective tissue which is bluish, translucent, and hard but yielding.
CAE	Caecum	The blind end of a cavity, duct, or tube, especially the sac at the beginning of the large intestine.
CAN	Canopy	The uppermost spreading branchy layer of a forest. Also: Crown
CAP	Cap, Mushroom	The convex, concave, or flattened spore-bearing structure of some basidiomycetes that is attached superiorly to the stem and typically is expanded with gills or pores on the underside -- called also pileus.
CB	Cob	1 : the axis on which the kernels of Indian corn are arranged. 2 : an ear of Indian corn .
CBC	Cerebral cortex	The outer portion of the brain, consisting of layers of nerve cells and the pathways that connect them. The cerebral cortex is the part of the brain in which thought processes take place. (http://cancerweb.ncl.ac.uk/omd/)
CBH	Cerebral hemisphere	The two halves of the cerebrum, the largest part of the brain.
CBM	Cerebrum	An enlarged anterior or upper part of the brain; especially : the expanded anterior portion of the brain that in higher mammals overlies the rest of the brain, consists of cerebral hemispheres and connecting structures, and is considered to be the seat of conscious mental processes
CC	Cocoon	A protective case formed by the larvae of many insects, in which they pass the pupa stage.
CCM	Cecum	the blind pouch at the beginning of the large intestine into which the ileum opens from one side and which is continuous with the colon (www.m-w.com)
CDB	Caudal Bone	

CODE	SITE NAME	SITE DEFINITION/NOTES
CDP	Caudal peduncle	The caudal peduncle is the narrow part of the fish's body to which the caudal or tail fin is attached. (http://en.wikipedia.org/wiki)
CDV	Caudal vertebrae	The vertebrae that form the skeleton of the tail. (http://cancerweb.ncl.ac.uk/omd/)
CE	Coelomic fluid	
CEL	Cell	The microscopic functional and structural unit of all living organisms.
CG	Cloacal gland	A secretory gland in the cloaca of lower vertebrates, as birds, snakes or amphibians.
CGG	Coagulating gland	Also known as the dorsal prostate, responsible for formation of a copulatory vaginal plug - preventing backflow of deposited semen (http://www.uwyo.edu/wjm/repro/maleanat.htm)
CH	Spinal Cord,	The cordlike posterior portion of the central nervous system contained within the spinal canal of the vertebral column of all vertebrates.
CHC	Chloragogen tissue	Chloragogen tissue are brown or greenish cells, located in the intestinal wall or heart of at least some annelids that function similarly to the liver in vertebrates. They store glycogen and neutralize toxins. (http://en.wikipedia.org/wiki)
CHO	Chorion	Protective membrane around the eggs of insects and fishes. Extraembryonic membrane surrounding the embryo of amniote vertebrates. The outer epithelial layer of the chorion is derived from the tropoblast. (http://cancerweb.ncl.ac.uk/omd/)
CHP	Choroid plexus	Organ found within the ventricles of the brain and in the subarachnoid space around the brain and spinal cord that produces cerebrospinal fluid (http://www.ets.uidaho.edu/med532/choroid.htm)
CIL	Cilia	Relatively short, centriole-based, hairlike processes on certain anatomical cells and motile organisms.
CL	Claw	
CL	Vacuole	a small cavity or space in the tissue of an organism containing air or fluid (Webster's)
CLC	Cloaca	The common chamber into which the intestinal and urogenital tracts discharge especially in monotreme mammals, birds, reptiles, amphibians, and elasmobranch fishes; also: a comparable chamber of an invertebrate. (http://www.merriam-webster.com/dictionary/cloaca)
CLM	Coelomocytes	A corpuscle, including amebocytes and eleocytes, in the coelom of certain animals, especially annelids.
CLN	Colon	The part of the large intestine that extends from the cecum to the rectum

CODE	SITE NAME	SITE DEFINITION/NOTES
CLT	Clitoris, Clitoral gland	a small erectile organ at the anterior or ventral part of the vulva homologous to the penis. (Webster's)
CLV	Calvarium	the portion of the skull including the braincase and excluding the lower jaw and facial portion
CM	Crown to Rump	
CMB	Comb	a fleshy crest on the head of the domestic fowl and other gallinaceous birds. (Webster's)
CMG	Cement gland	A gland that secretes an adhesive substance (as those in the foot of many rotifers that produce secretions to anchor the animals to the substrate or as those associated with the female reproductive system of many insects). (https://www.merriam-webster.com/dictionary/cement%20gland)
CN	Cotyledon	The first leaf of the embryo of seed plants.
CNS	Central Nervous System	Pertaining to the brain, cranial nerves and spinal cord. It does NOT include muscles or peripheral nerves. In invertebrates, the central nervous system is composed of the segmental ganglia of the ventral nerve cord together with the fused ganglia or brain at the anterior end. Acronym: CNS (http://cancerweb.ncl.ac.uk)
COL	Coleoptile	The first leaf of a monocotyledon seedling.
COR	Corm	A short, erect, fleshy underground stem, usually broader than high and covered with membrane scales.
COS	Corpuscles of Stannius	These are islands of eosinophilic granular cells located in paired organs on the ventral surface of the kidney. This organ secretes a protein called hypocalcin (teleocalcin) which acts with calcitonin to regulate calcium metabolism. (http://www.afip.org/vetpath/POLA/POLA96/fish.txt)
CP	Capat	
CPA	Corpus allatum	One of a pair of separate or fused bodies in many insects that are sometimes closely associated with the corpora cardiaca and that secrete hormones; such as juvenile hormone. (https://www.merriam-webster.com/dictionary/corpus%20allatum and https://en.wikipedia.org/wiki/Corpus_allatum)
CPG	Cowper's Gland	Cowper's or Bulbourethral Glands are situated on each side of the prostate that secrete a fluid component of the seminal fluid into the urethra. (http://www.ncbi.nlm.nih.gov)
CPR	Clasper	A male copulatory structure found in some groups of animals. (https://en.wikipedia.org/wiki/Lepidoptera_genitalia and https://www.merriam-webster.com/dictionary/clasper)
CPS	Carpus	The joint, or the region of the joint, between the hand and the arm. The wrist.
CPT	Chloroplast	The photosynthetic organelle of higher plants.

CODE	SITE NAME	SITE DEFINITION/NOTES
CR	Crop	1) A plant or animal grown for its commercial value. 2) A distensible saccular diverticulum near the lower end of the esophagus of birds which serves to hold and soften food before passage into the stomach.
CRB	Cerebellum	Part of the vertebrate hindbrain, concerned primarily with somatic motor function, the control of muscle tone and the maintenance of balance.
CRG	Cerebral ganglion	
CRI	Cervical rib	A rib which arises from the seventh cervical vertebrae (above the normal first rib). Occurs in only about 0.5% of people. May cause nerve and artery problems. (Gray's)
CRN	Cornea	The transparent structure forming the anterior part of the fibrous tunic of the eye. (http://cancerweb.ncl.ac.uk/omd/)
CRP	Carapace	A dorsolateral, chitinous case covering the cephalothorax of many arthropods.
CRR	Cerebellar region	
CRX	Cortex	The outer region of an organ or structure, as the outer portion of the kidney. The portion of a plant between the epidermis and the vascular tissue, any outer layer, as rind. The surface tissue layer of a fungus or lichen, composed of massed hyphal cells. (http://www.dictionary.com/browse/cortex?s=t)
CS	Chromosome	Any of the complex, threadlike structures seen in animal and plant nuclei during karyokinesis which carry the linearly arranged genetic material.
CSF	Cerebrospinal fluid	a clear liquid which is very similar to the liquid portion of blood(plasma) and contains various salts and products such as sodium, calcium, bicarbonate, chloride, magnesium and glucose. The purpose of the CSF is as a medium for the transport of the chemicals to and from the brain, and also to provide buoyancy and protection for the brain.
CST	Cisternae	Membrane bounded saccules of the smooth and rough endoplasmic reticulum and Golgi apparatus.
CT	Cephalothorax	the body division comprising the united head and thorax of arachnids and higher crustaceans
CU	Culture Cells	
CUT	Cuticle	A layer of more or less solid substance which covers the free surface of an epithelial cell.
CV	Caudal Vertebra	Any of the small bones of the vertebral column that support the tail in vertebrates.
CVV	Cervical vertebrae	The seven segments of the vertebral column located in the neck. Synonym: vertebrae cervicales (http://cancerweb.ncl.ac.uk/omd/)
CVX	Cervix	The narrow outer end of the uterus

CODE	Site Name	Site Definition/Notes
CX	Caudex	The main axis of a plant, including stem and roots.
CY	Cytosol	The fluid portion of the cytoplasm, that is, the cytoplasm exclusive of organelles and membranes.
CYT	Cytoplasm	The organized complex of inorganic and organic substances external to the nuclear membrane of a cell and including the cytosol and membrane-bound organelles (as mitochondria or chloroplasts)
D		
DG	Digestive Gland	Any structure that secretes digestive enzymes.
DGT	Digit	One of the terminal divisions of a limb appendage; a finger or toe. (http://cancerweb.ncl.ac.uk/omd/)
DI	Diaphragm	The thin muscle below the lungs and heart that separates the chest from the abdomen. (http://cancerweb.ncl.ac.uk/omd/)
DN	Diencephalon	In vertebrate CNS the most rostral part of the brainstem, consisting of the thalamus, hypothalamus, subthalamus and epithalamus. It is a key relay zone for transmitting information about sensation and movement and also contains (in the hypothalamus) important control mechanisms for homeostatic integration.
DO	Duodenum	
DT	Digestive Tract	The alimentary canal.
E		
EAL	Ear leaf (Corn)	
EAR	Ear	In animals, the organ of hearing; the external ear. (http://cancerweb.ncl.ac.uk/omd/) In plants, the common term used to describe the female inflorescence, or spike, in corn and other cereals with compact spikelets. (ECOTOX)
EBP	External body parts	
EC	Excreta	Excretion products; waste materials excreted by the body.
ED	Endometrium	The tissue lining the uterus, it is sloughed off during the woman's menstrual period, and afterward grows back and slowly gets thicker and thicker until the next period. (http://cancerweb.ncl.ac.uk/omd/)
EF	Efferent ducts	Efferent ducts (or efferent ductules or ductuli efferentes) connect the rete testis with the initial section of the epididymis. (http://en.wikipedia.org/wiki)
EG	Egg	Ova
EL	Elytrom	

CODE	SITE NAME	SITE DEFINITION/NOTES
EM	Embryo	1) In animals, those derivatives of the fertilized ovum that eventually become the offspring during their period of most rapid development. 2) In plants, the element of the seed that develops into a new individual.
EMS	Embryonic shoot cells	
EO	Endothelium	A layer of epithelium that lines the heart, blood vessels (ENDOTHELIUM, VASCULAR), lymph vessels (ENDOTHELIUM, LYMPHATIC), and the serous cavities of the body.
EP	Endoplasmic Reticulum	A vacuolar system of the cytoplasm in differentiated cells that functions in protein synthesis and sequestration.
EPD	Epididymis	A system of ductules emerging posteriorly from the testis that holds sperm during maturation and that forms a tangled mass before uniting into a single coiled duct which is continuous with the vas deferens
EPF	Extrapallial fluid	The fluid enclosed between the inner surface of the shell and mantle of a mollusc. (http://www.biolbull.org/content/143/3/506.full.pdf)
ER	Erythrocyte	A type of blood cell that contains a nucleus in all in the cytoplasm also known as red blood cell (RBC) or corpuscle.
ES	Esophagus	The tubular portion of the alimentary canal interposed between the pharynx and the stomach.
ET	Edible Tissue	
EV	Exuviae	
EX	Exoskeleton	The external supportive covering of certain invertebrates, such as arthropods.
EY	Eye	
EYS	Eyestalk	One of the moveable peduncles bearing an eye at the tip in a decapod crustacean (Merriam-Webster)
EZ	Enzyme	Any of a group of catalytic proteins that are produced by living cells and that mediate and promote the chemical processes of life without themselves being altered or destroyed.
F		
F1	F1 Generation	The immediate offspring of a parent generation
FAC	Face	The part of the head in which the eyes, cheeks, nose, and mouth are situated. (Gray's)
FB	Frontal Bone	Of or pertaining to the forehead or the anterior part of the roof of the brain case; as, the frontal bones.

CODE	SITE NAME	SITE DEFINITION/NOTES
FBR	Forebrain	The anterior of the three primary divisions of the developing vertebrate brain or the corresponding part of the adult brain that includes especially the cerebral hemispheres, the thalamus, and the hypothalamus and that especially in higher vertebrates is the main control center for sensory and associative information processing, visceral functions, and voluntary motor functions -- called also prosencephalon. (Webster's)
FC	Feces	The waste material eliminated by the gastrointestinal tract.
FD	Frond	The leaf of a palm or fern.
FE	Feathers	
FET	Fetus	
FG	Foregut	The anterior part of the alimentary canal of a vertebrate embryo that develops into the pharynx, esophagus, stomach, and extreme anterior part of the intestine
FI	Fin	A paddle-shape appendage on fish and other aquatic animals that is used for propulsion, balance, and guidance.
FIB	Fibula	A long bone in the lower leg that is adjacent to the tibia. The fibula supports approximately 1/6th of the body weight and produces the lateral (outer) prominence of the ankle. (http://cancerweb.ncl.ac.uk/omd/)
FL	Fillet	A boneless slice of meat or fish.
FLB	Flower Bud	
FLW	Flower/ Inflorescence	
FM	Femur	The proximal bone of the hind or lower limb in vertebrates.
FMD	Femur diaphysis	The shaft of the femur. (Gray's)
FME	Femur ephiphysis	The part of a femur where bone growth occurs. (http://cancerweb.ncl.ac.uk/)
FML	Left femur	
FO	Foot	
FOD	Fodder	
FOL	Foliage	The aggregate of leaves of one or more plants.(MW online)
FOR	Forage	A vegetable food for domestic animals.
FP	Fatpad	
FR	Fruit	A fully matured plant ovary with or without other floral or shoot parts united with it at maturity.
FRL	Forelimb	The fore limb of an animal; anything resembling an arm. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
FX	Frontal cortex	Cortex of the frontal lobe of the cerebral hemisphere, originally, the entire cortical expanse anterior to the central sulcus, including the agranular motor and premotor cortex (Brodmann's areas 4 and 6), the dysgranular cortex (area 8), and the granular frontal (prefrontal) cortex anterior to the latter, now more often refers to the granular frontal (prefrontal) cortex.
G		
GA	Granum (plural grana)	Stack of thylakoids in the chloroplast, containing the light harvesting system and the enzymes responsible for the light dependent reactions of photosynthesis. (http://cancerweb.ncl.ac.uk/omd/)
GB	Gall Bladder	A hollow, muscular organ in vertebrates which receives dilute bile from the liver, concentrates it, and discharges it into the duodenum.
GC	Gland Complex	
GF	Green forage	
GG	Green Gland	(antennal gland) An excretory organ in the cephalon of adult crustaceans
GI	Gills	The respiratory organ of water-breathing animals. (Also branchia)
GL	Ganglion	A mass of nerve tissue containing nerve cells external to the brain or spinal cord.
GMT	Germ tube	
GNP	Genital papillae	Tactile or sensory organs located near genitalia as raised bumps or nipples on a tissue surface
GNT	Gnathopod	A gnathopodite or maxilliped which is any leglike appendage of a crustacean, when modified wholly, or in part, to serve as a jaw, especially. (http://cancerweb.ncl.ac.uk/omd/)
GO	Gonads	A primary sex gland; an ovary or a testis.
GOL	Golgi Apparatus	A cellular organelle that is part of the cytoplasmic membrane system; it is composed of regions of stacked cisternae and it functions in secretory processes.
GP	Gills+Palps	
GPD	Gonopodium	The pelvic fins of male fish that have been converted into genital organs. (http://www.exotictropicals.com/encyclo/information/aquarium_glossary.htm)
GR	Grain	
GT	Gastrointestinal Tract	The stomach and intestine.
GU	Gut	The intestine. The embryonic, digestive tube.

CODE	SITE NAME	SITE DEFINITION/NOTES
GY	Gametophyte	A plant, or phase of a plant's life cycle, that bears gametes. (http://cancerweb.ncl.ac.uk/omd/)
GZ	Gizzard	The muscular portion of the stomach of most birds where food is ground with the aid of ingested pebbles.
H		
HA	Hair	A threadlike outgrowth of the epidermis of animals. Also: fur, wool
HAP	Haptonema	Filament extending between the paired flagella of certain unicellular algae (haptophytes). Supported by 6 or 7 microtubules (not in an axoneme like array) and apparently used for capturing prey in a manner analogous to the axopodia of heliozoa.
HAY	Hay	Hay
HB	Hindbrain	The posterior of the three principal divisions of the brain, including the epencephalon and metencephalon. Sometimes restricted to the epencephalon only. (http://cancerweb.ncl.ac.uk/omd/)
HC	Hypocotyl callus cells	
HD	Head	
HDG	Hindgut	The posterior part of the alimentary canal. (Webster's)
HDK	Head Kidney (Pronephros)	The definitive excretory organ of primitive fishes. In the embryos of higher vertebrates, a vestigial structure consisting of a series of tortuous tubules emptying into the cloaca by way of the primary nephric duct; in the human embryo, the pronephros is a very rudimentary and temporary structure, followed by the mesonephros and still later by the metanephros. (http://cancerweb.ncl.ac.uk/omd/)
HE	Heart	
HIP	Hippocampus	A curved elongated ridge that extends over the floor of the descending horn of each lateral ventricle of the brain and consists of gray matter covered on the ventricular surface with white matter. (Webster's)
HK	Heart and kidneys	
HKG	Husk and grain	
HL	Hemolymph	The circulating fluid of the open circulatory systems of many invertebrates.
HLA	Hyalinocyte	A type of nongranular leukocyte (http://cancerweb.ncl.ac.uk/omd/).
HLB	Hindlimb	Either of two extremities of four-footed non-primate land animals. It usually consists of a femur, tibia and fibula, tarsals, metatarsals, and toes. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
HM	Humerus	The proximal bone of the forelimb in vertebrates.
HMC	Hemocyte	A cellular element of blood, especially in invertebrates.
HMG	Hemoglobin	Four subunit globular oxygen carrying protein of the erythrocytes of vertebrates and some invertebrates. (http://cancerweb.ncl.ac.uk/omd/). Also spelled Haemoglobin.
HO	Honey	The sweet, viscous secretion composed principally of levulose and dextrose that is deposited in the honeycomb by the honeybee.
HOD	Hyoid	Of or pertaining to the bony or cartilaginous arch which supports the tongue (Gray's).
HP	Hepatopancreas	A gland in crustaceans and certain other invertebrates that combines the digestive functions of the liver and pancreas of vertebrates.
HPG	Hypopharyngeal gland	Gland used in the production of brood food. (http://www.ncbka.org.uk/BeeAnatomy26204.htm)
HSC	Hypocotyl (or Stem) Cortex	The portion of a stem between the epidermis and the vascular tissue, any outer layer, as rind. (http://www.dictionary.com/browse/cortex?s=t)
HSK	Husk	The external covering or envelope of certain fruits or seeds; glume; hull; rind (http://cancerweb.ncl.ac.uk/omd/)
HSS	Hypocotyl (or Stem) Stele	The central cylinder or cylinders of vascular and related tissue in the stem, root, petiole, leaf, etc., of the higher plants. (http://www.dictionary.com/browse/stele)
HTC	Heterocyst	Clear, thick-walled cell occurring at intervals along the filament of certain blue-green algae.
HTG	Hatching gland	A transversely oriented set of cells located deep to the enveloping layer on the pericardial membrane, especially during the pharyngula period because of the brightly refractile cytoplasmic granules containing hatching enzymes in the cells. (http://www.purethrottle.com/briancoad/Dictionary/H.html)
HVC	HVC Region (Avian brain)	Region of avian brain responsible, in part, for bird song. Also: High-level vocal center nucleus. (https://www.sciencedirect.com/topics/veterinary-science-and-veterinary-medicine/hvc-avian-brain-region)
HY	Hypothalamus	The floor of the third brain ventricle; site of production of several substances that act on the adenohypophysis.
HYA	Hypha	Also known as Hyphae or Hyphal. One of the threads that make up the mycelium of a fungus, increase by apical growth, and are coenocytic or transversely septate. (Webster's)
HYP	Hypocotyl	The portion of the embryonic plant axis below the cotyledon.

CODE	Site Name	Site Definition/Notes
I		
IB	Interparietal Bone	Between the parietal bones or cartilages; as, the interparietal suture.
IBP	Internal body parts	
ICL	Inclusions	
IE	Ileum	The last portion of the small intestine that communicates with the large intestine.
IL	Ilium	The dorsal, upper, and largest one of the three bones composing either lateral half of the pelvis.
IN	Intestinal Tract	
IR	Interrenal gland	
IT	Internode	The interval between two nodes, as on a stem or along a nerve fiber.
J		
JA	Jaw	Either of two bones forming the skeleton of the mouth of vertebrates. Also known as mandible.
JE	Jejunum	The section of the small intestine that comprises the first two fifths beyond the duodenum and that is larger, thicker-walled, and more vascular and has more circular folds than the ileum. (Webster's)
JV	Juvenile	Physiologically immature or undeveloped lifestage.
K		
KI	Kidney	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KIL	Kidney, left	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KIR	Kidney, right	Either of a pair of organs involved with the elimination of water and waste products from the body of vertebrates.
KR	Kernal	A whole grain or seed of a cereal plant, such as corn or barley.
L		
LAL	Lateral line	A system of sensory organs in fishes and aquatic amphibians consisting of a series of cells on the head and along the sides of the body that detect pressure changes and vibrations, (Collins English Dictionary – Complete and Unabridged, HarperCollins Publishers, 2003, http://www.thefreedictionary.com/lateral+line+system)
LAM	Laminae	The expanded part of a foliage leaf

ECOTOX Code Appendix

CODE	Site Name	Site Definition/Notes
LC	Leaf chloroplast	A type of cell plastid occurring in the green parts of plants, containing chlorophyll pigments, and functioning in photosynthesis and protein synthesis.
LD	Lipid, Fat	One of a class of compounds which contain long-chain aliphatic hydrocarbons and their derivatives; includes waxes, fats, and derived compounds.
LE	Leaf /Needle	
LEI	Leaf Index	
LEN	Lens	
LEO	Leaf, Old	
LEU	Leukocytes	Also known as white blood cells. White corpuscles in the blood. They are spherical, colorless and nucleated masses involved with host defenses. (http://cancerweb.ncl.ac.uk/omd/)
LEY	Leaf, Young	
LG	Leg	
LGT	Ligament	Shiny, flexible bands of fibrous tissue connecting together articular extremities of bones or the hinge joint in bivalves. They are pliant, tough, and inextensible. (http://www.ncbi.nlm.nih.gov and ECOTOX)
LI	Liver	A large vascular gland in the body of vertebrates consisting of a continuous parenchymal mass covered by a capsule; secretes bile, manufactures certain blood proteins and enzymes, and removes toxins from the systemic circulation.
LIG	Leiblein's Gland	Leiblein's Gland is a long, thin, brownish organ in gastropods which produces hydrolytic enzymes. (http://webs.lander.edu/rsfox/invertebrates/busycon.html)
LIM	Liver microsomes	In the hepatocyte, any of the vesicular fragments of endoplasmic reticulum formed after disruption and centrifugation of cells. (Gray's)
LIN	Large intestine	The more terminal division of the vertebrate intestine that is wider and shorter than the small intestine, typically divided into cecum, colon, and rectum, and concerned especially with the resorption of water and the formation of feces
LIP	Lip	Either of the two fleshy folds which surround the orifice of the mouth. (Websters Dictionary)
LIT	Litters	Offspring
LM	Limb	1) An extremity or appendage used for locomotion or prehension. 2) A large primary tree branch
LMP	Lymphocyte	White cell of the blood that are derived from stem cells of the lymphoid series. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
LMV	Lumbar vertebrae	The vertebrae, usually five in number, located in the lumbar region of the back. Synonym: vertebrae lumbales. (http://cancerweb.ncl.ac.uk/omd/)
LMW	Low Molecular Weight Biomolecules (e.g., amino acids).	Specifically: Amino acids, Organic acids and monosaccharides (ECOREF#89645)
LN	Lymph node	Small, bean-shaped organs located throughout the lymphatic system. The lymph nodes store special cells that can trap cancer cells or bacteria that are traveling through the body in lymph. Also called lymph glands.
LNX	Larynx	The muscular and cartilaginous structure, lined with mucous membrane, situated at the top of the trachea and below the root of the tongue and the hyoid bone. (http://medical-dictionary.thefreedictionary.com/larynx)
LP	Labial Palps	1) Either of a pair of fleshy appendages on either side of the mouth of certain bivalve mollusks. 2) A jointed appendage attached to the labium of certain insects.
LTB	Left tibia	
LU	Lungs	Either of the paired air-filled sacs which function as organs of respiration.
LYM	Lymph	A clear yellowish, slightly alkaline, coagulable fluid, containing white blood cells in a liquid resembling blood plasma, that is derived from the tissues of the body and conveyed to the bloodstream by the lymphatic vessels (http://dictionary.reference.com/browse/lymph)
LYS	Lysosome	A specialized cell organelle surrounded by a single membrane and containing a mixture of hydrolytic (digestive) enzymes.
M		
MA	Mantle	An enveloping layer, as the external body wall lining the shell of many invertebrates, or the external meristematic layers in a stem apex.
MB	Muscle+Bone	
MBR	Midbrain	The part of the brain above the pons and below the thalamus, it is the uppermost part of the brainstem, and is involved in basic, unconscious body function. (Gray's)
MC	Microsome	A fragment of the endoplasmic reticulum. A minute granule of protoplasm.
ME	Meristem (apical or axillary)	Meristem - Formative plant tissue composed of undifferentiated cells capable of dividing and giving rise to other meristematic cells as well as specialized cell types.

CODE	SITE NAME	SITE DEFINITION/NOTES
MES	Mesentery	The membranes, or one of the membranes (consisting of a fold of the peritoneum and enclosed tissues), which connect the intestines and their appendages with the dorsal wall of the abdominal cavity. The mesentery proper is connected with the jejunum and ileum, the other mesenteries being called mesoccum, mesocolon, mesorectum, etc. (http://cancerweb.ncl.ac.uk/omd/)
MI	Midgut and Midgut Gland	The middle portion of the digestive tube in vertebrate embryos.
MIT	Mitochondria	Minute cytoplasmic organelles in the form of spherical granules, short rods, or long filaments found in almost all living cells.
MK	Milk, lactating female	
ML	Melanophore	A eumelanin (a type of melanin) containing cell especially of fishes, amphibians, and reptiles. (www.merriam-webster.com/dictionary and en.wikipedia.org/wiki)
MM	Mammary Tissue	
MNS	Manus (carpus + forefoot)	The distal segment of the forelimb, including the carpus and forefoot or hand. (http://cancerweb.ncl.ac.uk/omd/)
MO	Mucous	A viscid fluid secreted by mucus glands
MOB	Medulla oblongata	The lowest subdivision of the brainstem, immediately adjacent to the spinal cord. Houses important cardiac and respiratory regulatory centres.
MOM	Mother cells, pollen	
MP	Metanephridium	
MPG	Macrophage	The relatively long-lived phagocytic cell of mammalian tissues that are derived from blood monocytes. (http://www.ncbi.nlm.nih.gov)
MPT	Malpighian tubule	Malpighian tubules, part of the excretory and osmoregulatory system, are slender tubes normally found in the posterior regions of arthropod alimentary canals. Each tubule consists of a single layer of cells that is closed off at the distal end with the proximal end joining the alimentary canal at the junction between the midgut and hindgut. (http://en.wikipedia.org/wiki)
MR	Membrane	A thin layer of tissue surrounding a part of the body, separating adjacent cavities, lining cavities, or connecting adjacent structures.
MRC	Motor cortex	Area of the frontal lobe concerned with primary motor control. It lies anterior to the central sulcus. (http://cancerweb.ncl.ac.uk/omd/)
MS	Mesenteric Lymph Node	
MSC	Mesencephalon	The middle segment of the brain; the midbrain.

CODE	SITE NAME	SITE DEFINITION/NOTES
MSI	Mucosa of the Small Intestines	The mucous coat of the small intestine.
MSS	Microsomal supernatant	Soluble enzymes and fragmented ER, which contains cytochrome P450 (CYP), that remain in solution after centrifugation. (From Wikipedia via Voet D, Voet JG (2004). Biochemistry (3rd ed.). Wiley. p. 1309. ISBN 0-471-19350-X., https://en.wikipedia.org/wiki/Microsome)
MT	Multiple Tissue/ Organs	Aquatic code. Used when multiple sites are coded for one record. The individual sites are reported as a REMARK. This code will be changed to MUL at a later date.
MTC	Metacarpus	The part of the hand or forefoot that contains the metacarpals.
MTH	Mouth	
MTM	Mentum	The front median plate of the labium in insects (http://cancerweb.ncl.ac.uk/omd/)
MU	Muscle	A tissue composed of cells containing contractile fibers; three types are smooth, cardiac, and skeletal.
MUL	Multiple Sites	
MV	Microvilli	One of the filiform processes that form a brush border on the surfaces of certain specialized cells, such as intestinal epithelium.
MYC	Mycellium	Mass of interwoven filamentous hyphae that forms especially the vegetative portion of the thallus of a fungus.
MYM	Myometrium	Uterine smooth muscle. (http://cancerweb.ncl.ac.uk/omd/)
N		
NAC	Nucleus accumbens	The largest neuronal nucleus in the septal region of the diencephalon in the brain. (Gray's)
NAL	Nail	A horny sheath protecting the upper end of each finger and toe of humans and most other primates. (http://www.merriam-webster.com/dictionary/nail)
NB	Nasal Bone	Either of two small elongated rectangular bones that together form the bridge of the nose.
NC	Nerve Cord	a hollow tube that runs beneath the dorsal surface of the animal above the notochord (the principle nerve cord in the invertebrates, by contrast, is almost always located near the ventral surface)
ND	Nodule, root	A bulbous enlargement found on roots of legumes and certain other plants, whose formation is stimulated by symbiotic, nitrogen-fixing bacteria that colonize the roots.
NE	Nervous Tissue	The nerve cells and neuroglia of the nervous system.

CODE	SITE NAME	SITE DEFINITION/NOTES
NEM	Neuromasts	Neuromasts consist of hair cells, supporting cells and mantle cells with a gelatinous cupula overlying the apical surface of the sensory macula in fish. Neuromasts are classified as superficial, found across the body surface or canal, found along the lateral line. (David H. Evans; James B. Claiborne. 2005. The Physiology of Fishes. CRC Press)
NG	Nasal Gland	
NI	Nipple	The protuberance through which milk is drawn from the breast or mamma; the mammilla; a teat; a pap.
NK	Neck	A constricted portion, such as the part connecting the head and trunk of the body.
NL	Needle	A slender-pointed leaf, as of the firs and other evergreens.
NOC	Notochord	An axial mesodermal tissue found in embryonic stages of all chordates and protochordates, often regressing as maturity is approached. Typically a rod shaped mass of vacuolated cells. It lies immediately below the nerve cord and may provide mechanical strength to the embryo. (http://cancerweb.ncl.ac.uk/omd/)
NOD	Node	
NP	Nuptial pad	In Ranidae (frogs), one of the horny or thickened pads on each thumb of the male. They are especially prominent during the mating season, when they assist the male in grasping the female during the sexual embrace, in which the male extrudes sperm over the eggs as these are ejected by the female. (http://www.encyclopedia.com/doc/1O8-nuptialpad.html)
NR	Not Reported	
NRN	Neuron	A grayish or reddish granular cell that is the fundamental functional unit of nervous tissue transmitting and receiving nerve impulses and having cytoplasmic processes which are highly differentiated frequently as multiple dendrites or usually as solitary axons which conduct impulses to and away from the cell body. (https://www.merriam-webster.com/dictionary/neuron)
NSE	Nose	The part of the face that bears the nostrils and covers the anterior part of the nasal cavity. (http://www.merriam-webster.com/dictionary/nose)
NT	Neural Tube	A tube of ectodermal tissue in an embryo that will give rise to the Central Nervous system, including the Spinal Cord and the Brain. Lumen within the neural tube is called neural canal which gives rise to the central canal of the spinal cord and the ventricles of the brain. (http://www.ncbi.nlm.nih.gov)
NTR	Nectar	A sweet liquid that is secreted by the nectaries of a plant and is the chief raw material of honey, (http://www.merriam-webster.com/dictionary/nectar)

CODE	Site Name	Site Definition/Notes
NU	Nuclei	
NVC	Nerve cord	Nerve cord
NVL	Navel	A mark or depression in the middle of the abdomen; the umbilicus. (Gray's)
NY	Nymph	Any of various immature insects; especially: a larva of an insect with incomplete metamorphosis that differs from the adult especially in size and in its incompletely developed wings and genitalia.
O		
OC	Oocyte	An egg before the completion of maturation
OCL	Occipital lobe	The posterior lobe of each cerebral hemisphere, having the shape of a three-sided pyramid and containing the visual center of the brain. (The American Heritage Stedman's Medical Dictionary, 2004)
OD	Oviduct	A tube that serves to conduct ova from the ovary to the exterior or to an intermediate organ such as the uterus (Fallopian tube)
OF	Orifice	An opening, or aperture, (as a vent, mouth, or hole) through which something may pass (Webster's)
OG	Organ	A differentiated structure of an organism composed of various cells or tissues and adapted for a specific function.
OL	Olfactory	Pertaining to olfaction, or the sense of smell.
OPN	Optic Nerve	The 2nd cranial nerve. The optic nerve conveys visual information from the retina to the brain. The nerve carries the axons of the retinal ganglion cells which sort at the optic chiasm and continue via the optic tracts to the brain. The largest projection is to the lateral geniculate nuclei; other important targets include the superior colliculi and the suprachiasmatic nuclei. Though known as the second cranial nerve, it is considered part of the central nervous system. (http://www.ncbi.nlm.nih.gov/)
OPR	Operculum	
OR	Organelle	A specialized subcellular structure, such as mitochondrion, having a special function.
OT	Opisthaptor	The posterior and usually complex adhesive organ of a monogenetic trematode. (http://medical.merriam-webster.com/medical)
OTO	Otoliths	A calcareous concretion on the end of a sensory hair cell in the vertebrate ear and in some invertebrates.

CODE	SITE NAME	SITE DEFINITION/NOTES
OTV	Otic vesicle	One of the paired sacs of invaginated ectoderm that develop into the membranous labyrinth of the internal ear. Also: acoustic vesicle, auditory vesicle. (Medical Dictionary Copyright, 2006 Lippincott Williams and Wilkins. http://www.medilexicon.com/medicaldictionary.php?t=98435)
OV	Ovaries	A glandular organ that produces hormones and give rise to ova in female vertebrates.
OVF	Ovarian follicle	An oocyte-containing structure in the cortex of the ovary. (http://www.ncbi.nlm.nih.gov)
OVP	Ovipositor	A specialized organ for depositing eggs. An ovipositor is a tubular structure at the end of the abdomen, found in many female insects and some fishes (http://www.merriam-webster.com and http://wordnetweb.princeton.edu)
OVT	Ovotestis	A hermaphroditic reproductive organ that produces both sperm and eggs, found in certain gastropods. (The American Heritage Dictionary of the English Language, Fourth Edition, 2000)
P		
PAN	Panicle	A branched or compound raceme in which the secondary branches are often racemose as well.
PAT	Parathyroid gland	Two small paired endocrine glands in the region of the thyroid gland. They secrete parathyroid hormone and are concerned with the metabolism of calcium and phosphorus. (http://cancerweb.ncl.ac.uk/omd/)
PB	Pseudobranch	
PBD	Projectile body	A body projected through cell membranes.
PC	Pyloric ceca	1) One of the tubular pouches that open into the vertriculus of an insect. 2) One of the paired tubes having lateral glandular diverticula in each ray of a starfish. 3) One of the tubular pouches that open from the pyloric end of the stomach into the alimentary canal of most fishes.
PCL	Peduncle	A peduncle is a stalk bearing a flower or flower cluster or a fructification. (http://www.merriam-webster.com)
PD	Pod	A leguminous fruit of the pea family (Fabaceae), including beans, lentils and peanuts. (http://cancerweb.ncl.ac.uk/omd/)
PDG	Pedal ganglion	The pedal ganglia are in the base of the foot of bivalves (http://www.britannica.com/ebc/article-35747)
PE	Penis	The male organ of copulation in vertebrates. Also known as phallus.

CODE	SITE NAME	SITE DEFINITION/NOTES
PEH	Penis sheath	
PEP	Pecten epipharyngis	
PES	Petiole and Stem	Both the a slender stem that supports the blade of a foliage leaf and the main trunk of a plant or a primary plant axis that develops buds and shoots instead of roots
PG	Prostate Gland	A gland in the male which surrounds the neck of the bladder and the urethra. The prostate contributes to the seminal fluid.
PGL	Preening gland	A relatively large, compact bilobed secretory organ located at the base of the tail (uropygium) of most birds having a keeled sternum. Also known as oil gland or uropygial gland. (McGraw-Hill)
PHG	Pheromone gland	A gland that secretes a chemical stimulant/attractant that is released into the surrounding environment, either air or water.
PHL	Phalanges	The finger bones (http://cancerweb.ncl.ac.uk/omd/)
PHO	Phloem	A tissue in a vascular plant that functions primarily in transporting organic food materials (e.g. sucrose) from the photosynthetic organ (leaf) to all the parts of the plant. (http://www.biology-online.org/dictionary/Phloem)
PI	Pituitary Gland	(hypophysis) An epithelial body located at the base of the brain. Consists of two lobes. Secretes hormones.
PL	Plasma	The fluid portion of blood or lymph.
PLA	Platelet	A discoid cell (3m diameter) found in large numbers in blood, important for blood coagulation and for haemostasis by repairing breaches (small breaks) in the walls of blood vessels. (http://cancerweb.ncl.ac.uk/omd/)
PLC	Placenta	1) A vascular organ that unites the fetus to the wall of the uterus. 2) A plant surface bearing a sporangium.
PLG	Phellogen	Cork cambium, a layer of tissue or secondary meristem external to the true cambium, giving rise to cork tissue. (http://www.dictionary.com/browse/phellogen?s=t)
PLN	Popliteal nodes	Two groups of nodes located in the popliteal fossa: the superficial popliteal lymph nodes, located around the termination of the small saphenous vein, that drain the skin of the back of the leg and lateral side of the foot; and the deep popliteal lymph nodes, located around the popliteal vessels, that drain the superficial group, the deep structures of the leg, and the knee joint. Also, Popliteal lymph node, nodi lymphatici popliteales
PLP	Pulp	The soft, succulent part of a fruit usually composed of mesocarp (MW)
PLT	Palate	The roof of the mouth. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
PLV	Pelvis	The pelvis is a basin shaped cavity bordered by the pelvic girdle and sacrum, containing and protecting the bladder, rectum and reproductive organs. (http://cancerweb.ncl.ac.uk/omd/)
PLY	Polysaccharide	Polymers of (arbitrarily) more than about ten monosaccharide residues linked glycosidically in branched or unbranched chains. (http://cancerweb.ncl.ac.uk/omd/)
PM	Pons + Medulla	A rounded eminence off the ventral surface of the brainstem (pons) and the lowest subdivision of the brainstem, immediately adjacent to the spinal cord (medulla). (Gray's)
PNG	Pineal gland	A small, flat gland found within the brain which produces the hormones melatonin and serotonin. (http://cancerweb.ncl.ac.uk/omd/)
PO	Pollen, pollen grain	
POS	Pod + Seed	
PPD	Parapodium	Plural - Parapodia. 1) Either of a pair of fleshy lateral processes borne by most segments of a polychaete worm. 2) a lateral expansion on each side of the foot usually forming a broad swimming organ in some gastropods (www.m-w.com)
PPG	Preputial gland	A small scent gland in the human male which secretes the smegma. Also known as Tyson's gland. (McGraw-Hill)
PR	Proventriculus	1) A sac anterior to the gizzard in earthworms. 2) The true stomach of a bird, usually separated from the gizzard by a constriction.
PRC	Pericardium	A double membranous sac which envelops and protects the heart. The layer in contact with the heart is referred to as the visceral layer, the outer layer in contact with surrounding organs is the parietal pericardium. In between the two layers is the pericardial space. (http://cancerweb.ncl.ac.uk/omd/)
PRF	Particulate fraction	
PRG	Progeny	Offspring, descendants
PRO	Protein	Any of a group of complex organic compounds which contain carbon, hydrogen, oxygen, nitrogen and usually sulphur, the characteristic element being nitrogen and which are widely distributed in plants and animals. Proteins, the principal constituents of the protoplasm of all cells, are of high molecular weight and consist essentially of combinations of amino acids in peptide linkages. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
PRT	Peritoneum	also peritoneum. The smooth serous membrane which lines the cavity of the abdomen, or the whole body cavity when there is no diaphragm, and, turning back, surrounds the viscera, forming a closed, or nearly closed sac (Grey on-line medical Dictionary)
PS	Pancreas	A composite gland in most vertebrates that produces and secretes digestive enzymes, as well as at least two hormones, insulin and glucagon.
PSG	Plastoglobuli	Globules found in plastids, containing principally lipid, including plastoquinone. (http://cancerweb.ncl.ac.uk/omd/)
PT	Petioles	The stem which supports the blade of a leaf.
PTB	Parietal Bone	The side bone of the skull.
PTG	Parotid gland	A salivary gland situated in front of and below the ear. (Gray's)
PTL	Petal	One of the often brightly colored leaflike outer parts of a flower. (http://www.merriam-webster.com/dictionary/petal)
PTU	Plant, Unspecified	
PU	Pollen tube	The tube produced by the wall of a pollen grain which enters the embryo sac and provides a passage through which the male nuclei reach the female nuclei.
PV	Perivitelline space	The space between the vitelline membrane and the zona pellucida, appearing in an ovum immediately following fertilization. (http://cancerweb.ncl.ac.uk/omd/)
PX	Pharynx	A chamber at the oral end of the vertebrate alimentary canal, leading to the esophagus.
PXS	Peroxisome	A cytoplasmic cell organelle containing enzymes (such as catalase) which act in oxidative reactions and especially in the production and decomposition of hydrogen peroxide. (https://www.merriam-webster.com/dictionary/peroxisome)
PYR	Pyrenoid	A small body found within some chloroplasts, that may contain protein. In green algae may be involved in starch synthesis.
R		
RA	Radius	One of two bones which constitute the forearm. The largest portion of the radius is at the wrist joint where it articulates with the carpal bones of the hand. (http://cancerweb.ncl.ac.uk/omd/)
RAC	Rachis	Elongated axis of an inflorescence.
RAD	Radius, distal	One of two bones which constitute the forearm situated away from the point of attachment or origin. The largest portion of the radius is at the wrist joint where it articulates with the carpal bones of the hand. (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
RAN	RA (Avian brain)	Region of avian brain responsible, in part, for bird song. Also: Robust nucleus of the archipallium. (https://www.sciencedirect.com/topics/veterinary-science-and-veterinary-medicine/hvc-avian-brain-region)
RB	Rib	One of the curved bones attached to the vertebral column and supporting the lateral walls of the thorax. (http://cancerweb.ncl.ac.uk/omd/)
RC	Rectum	The portion of the large intestine between the sigmoid flexure and the anus.
RD	Radicle	
RDL	Radiole	A radiole is a heavily ciliated feather-like tentacle found in highly organized clusters on the crowns of Canalipalpata. In a sea urchin: each of the large spines which articulate with the primary tubercles. In a fan worm or other tentaculate marine worm: each of the main branches or filaments in the branchial crown. (http://www.oxforddictionaries.com/definition/english/radiole)
RE	Retina	Light sensitive layer of the eye. (http://cancerweb.ncl.ac.uk/omd/)
RFM	Right femur	
RG	Rectal gland	In Sharks: rectal gland is a highly specialized organ whose only function is to pump salt
RH	Rhizome	An underground horizontal stem, often thickened and tuber-shaped, and processing buds, nodes, and scale-like leaves.
RL	Root, Lateral	
RLP	Root, Primary lateral	
RLS	Root, Secondary lateral	
RNC	renal cortex	The part of the kidney consisting of renal lobules in the outer zone beneath the capsule and also the lobules of the renal columns that are extensions inward between the pyramids; contains the renal corpuscles and the proximal and distal convoluted tubules. Synonym: cortex renis. (http://cancerweb.ncl.ac.uk/omd/)
RO	Root	The absorbing and anchoring organ of a vascular plant; it bears neither leaves nor flowers and is usually subterranean.
ROC	Root Cortex	
ROE	Root, epidermis	
ROI	Root, Inner cortex	
ROO	Root, Outer cortex	
ROS	Root, Stele	The arrangement of vascular bundles in roots

CODE	SITE NAME	SITE DEFINITION/NOTES
RP	Root, Primary	
RPP	Renal papilla	The apex of a renal pyramid that projects into a minor calyx; some 10 to 25 openings of papillary ducts occur on its tip, forming the area cribrosa. (Gray's)
RR	Residual, Remnant, Carcass	
RS	Root + Stem	
RT	Reproductive Tissue	
RTC	Root tip cells	
RTE	rete testis	The network of channels formed at the termination of the straight seminiferous tubules in the mediastinum testis. Rete testis channels drain into the efferent ductules that pass into the caput epididymis. (http://www.ncbi.nlm.nih.gov)
RTP	Root tips	Terminal end of a root.
RU	Radius-Ulna	
RV	Right Ventricle	The muscular chamber of the heart which accepts blood from the right atrium and pumps it through the pulmonary artery into the lungs.
RZ	Root + Rhizome	
S		
SA	Salt Gland	A compound tubular gland, located around the eyes and nasal passages in certain marine turtles, snakes, and birds, which copiously secretes a watery fluid containing a high percentage of salt.
SAC	Striatum-accumbens	
SAP	Sap	The fluid part of a plant; specifically: a watery solution that circulates through
SB	Shell, Membrane	
SB2	Stem/Stalk, Lower Half	
SC	Scale	1) A flat calcified or cornified platelike structure on the skin of most fishes and of some tetrapods. 2) The bract of a catkin.
SCH	Starch	Storage carbohydrate of plants.
SCM	Scrotum	The external pouch that in most mammals contains the testes. (Webster's)
SCP	Scapula	A large, flat, triangular bone that forms the posterior portion of the shoulder. It articulates with the clavicle (at the acromion process) and the humerus (at the glenoid). (http://cancerweb.ncl.ac.uk/omd/)

CODE	SITE NAME	SITE DEFINITION/NOTES
SCV	Sacral vertebrae	The segments of the vertebral column, usually five in number, that fuse to form the sacrum. Synonym: vertebrae sacrales. (http://cancerweb.ncl.ac.uk/omd/)
SCY	Spermatocyte	Cells of the male reproductive system that undergo two meiotic divisions to give haploid spermatids. (http://cancerweb.ncl.ac.uk/omd/)
SD	Seed	A fertilized ovule containing an embryo which forms a new plant upon germination.
SDL	Seedling	A plant grown from a seed.
SGM	Segment	One of the constituent parts into which a body, entity, or quantity is divided or marked off by or as if by natural boundaries. (https://www.merriam-webster.com/dictionary/segment)
SDM	Subdermis	area below the skin
SE	Sensory Organs	
SEM	Semen	a viscid whitish fluid of the male reproductive tract consisting of spermatozoa suspended in secretions of accessory glands
SG	Shell Gland	1) An organ that secretes the embryonic shell in many mollusks. 2) A specialized structure attached to the oviduct in certain animals that secretes the egg-shell material.
SH	Stomach	The tubular or saccular organ of the vertebrate digestive system located between the esophagus and the intestine and adapted for temporary food storage and for the preliminary stages of food breakdown.
SHF	Stomach or rumen fluid	Fluid found in the stomach or rumen
SI	Siphon	1) A tubular element in various algae. 2) A tubular structure for intake or output of water in bivalves and other mollusks. 3) The sucking-type of proboscis in many arthropods.
SIN	Small intestine	the part of the intestine that lies between the stomach and colon, consists of duodenum, jejunum, and ileum, secretes digestive enzymes, and is the chief site of the absorption of digested nutrients
SINM	Small intestine mucosa	A mucous membrane or tunica mucosa of the small intestine (Gray's)
SK	Skin, Epidermis	The external covering of the vertebrate body, consisting of two layers, the outer epidermis and the inner dermis.
SKL	Skull	The bones and cartilages of the vertebrate head which forms the cranium and the face.
SKM	Skeletal Muscle	the striated muscle of vertebrates that is under voluntary control (http://cancerweb.ncl.ac.uk/omd/)
SLK	Silk	The silky styles on an ear of corn.

CODE	SITE NAME	SITE DEFINITION/NOTES
SLL	Shell	The hard covering of an egg. A hard calcareous, outer covering on an animal body, as of bivalves and turtles. In plants see Husk and Pod. (http://cancerweb.ncl.ac.uk/omd/)
SLV	Stem to Leaves	
SM	Sperm	A mature male germ cell. (Spermatozoa)
SMT	Spermatheca	A sac in the female for receiving and storing sperm in fertilization; found in many invertebrates and certain vertebrates. (Seminal receptacle)
SN	Skeleton	The hard framework of the animal body, especially the boney framework of the body of higher vertebrate animals.
SO	Shoot	The aerial portion of a plant, including stem, branches, and leaves. A new, immature growth on a plant.
SOT	Shoot tip	The tip of shoot
SP	Spleen	A blood-forming lymphoid organ of the circulatory system, present in most vertebrates. (McGraw-Hill)
SPB	Sphenoid bone	An irregularly shaped bone in front of the occipital in the base of the skull of the higher vertebrates. It is composed of several foetal bones which become united the adult. (Gray's)
SPC	Superior colliculus	Either member of the anterior and higher pair of corpora quadrigemina that together constitute a primitive center for vision—called also optic lobe, optic tectum (http://www.merriam-webster.com/medical/superior+colliculus)
SPI	Spine, Backbone	An articulated series of vertebrae forming the axial skeleton of the trunk and the tail. Spinal column, vertebral column
SPK	Spikelet	The compound inflorescence of a grass consisting of one or several bracteate spikes.
SPR	Sporophyte	A multicellular sporophyte generation or phase is present in the life cycle of all land plants and in some green algae. Plants alternate between the haploid gametophyte and diploid sporophyte production. (www.wikipedia.org/wiki/ECOTOX)
SPS	Spines, protuberant structures	Various protuberant structures commonly termed spines. Examples: Cladoceran tail and head spines, neckteeth and helmets. (ECOTOX and www.wikipedia.org/wiki)
SPT	Spermatid	The haploid product of the second meiotic division in spermatogenesis. Differentiate into mature spermatozoa. (Gray's)
SR	Serum	The liquid portion that remains when blood clots spontaneously and the formed and clotting elements are removed by centrifugation; it differs from plasma by the absence of fibrinogen.

CODE	SITE NAME	SITE DEFINITION/NOTES
SRB	Strobilus (mega-, micro-, etc.)	1) Conelike structure made up of sporophyllus or spore-bearing leaves. 2) The cone membranes of the Pinophyta
SRC	Secretory Cell	A cell that secretes a fluid.
SS	Stem/Stalk	The organ of vascular plant that usually develops branches and bears leaves and flowers.
SSC	Somatosensory center	Area of the brain that detects sensation relating to the body's superficial and deep parts
SSI	Serosa of the Small Intestines	Serous coat of the small intestine; the peritoneal covering of the external surface of the small intestine
SSP	Stem plus Petioles	The stem and stock of the leaf that is attached to the stem.
ST	Soft Tissue	
STA	Setae	A slender, usually rigid bristle or hair. Also known as chaeta.
STB	Seminiferous tubules	Any of the tubercles of the testes which produce spermatozoa. (McGraw-Hill)
STE	Sternum or sternebrae	a compound ventral bone or cartilage of most vertebrates other than fishes that connects the ribs or the shoulder girdle or both and in humans consists of the manubrium, gladiolus, and xiphoid process -- called also breastbone (Webster's)
STG	Straw and grain	
STH	Straw and husk	
STL	Stolon	Horizontal branch from the base of a plant that produces new plants from buds at its tip or nodes.
STM	Striatum	The corpus striatum, a part of the brain (Webster's Dictionary)
STO	Stoma	One of the minute openings in the epidermis of a plant organ (as a leaf) through which gaseous interchange takes place; also : the opening with its associated cellular structures. (http://www.merriam-webster.com/dictionary/stoma)
STR	Straw	
STV	Stover	Mature cured stalks of grain with the ears removed that are used as feed for livestock (MW online)]
SU	Stalk/Stem, Upper Half	
SV	Seminal Vesicle	A saclike, glandular diverticulum on each ductus deferens in male vertebrates; it is united with the excretory duct and serves for temporary storage of semen. Also: Sperm duct gland.

CODE	SITE NAME	SITE DEFINITION/NOTES
SVA	Saliva	A slightly alkaline secretion of water, mucin, protein, salts, and often a starch-splitting enzyme (as ptyalin) that is secreted into the mouth by salivary glands, lubricates ingested food, and often begins the breakdown of starches (http://www.m-w.com/dictionary/saliva)
SVG	Salivary gland	Any of the saliva-secreting exocrine glands of the oral cavity. (Gray's)
SWB	Swim Bladder	A gas-filled cavity found in the body cavities of most bony fishes; has various functions in different fishes, acting as a float, a lung, a hearing aid, and a sound producing organ.
SX	Submaxillary Gland	(Submandibular gland) A large seromucous or mixed salivary gland located below the mandible on each side of the jaw.
T		
TA	Tail	1) The caudal fin of a fish or aquatic mammal. 2) The usually slender appendage that arises immediately above the anus in many vertebrates and contains the caudal vertebrae.
TAK	Thylakoid	Membranous cisternae of the chloroplast, found as part of the grana and also as single cisternae interconnecting the grana. Contain the photosynthetic pigments, reaction centres and electron transport chain. Each thylakoid consists of a flattened sac of membrane enclosing a narrow intra thylakoid space. (http://cancerweb.ncl.ac.uk/omd/)
TB	Tibia	The larger of the two leg bones, articulating with the femur, fibula, and talus
TBC	Tubercles	A small knoblike prominence.
TCH	Trachea	The windpipe. A fibrocartilaginous tube lined with mucous membrane passing from the larynx to the bronchi. (http://cancerweb.ncl.ac.uk/omd/)
TCV	Thoracic vertebrae	The segments of the vertebral column, usually twelve, which articulate with ribs to form part of the thoracic cage. Synonym: vertebrae thoracicae. (http://cancerweb.ncl.ac.uk/omd/)
TD	Transudate	A fluid that passes through the pores or interstices of a membrane.
TE	Testes	The male reproductive glands in vertebrates; after sexual maturity, the source of sperm and hormones
TEL	Testicle, left	The testicle located on the left side of the body
TER	Testicle, right	The testicle located on the right side of the body
TF	Tuber Flesh	Tuber = The enlarged end of a rhizome in which food accumulates, as is the potato.
TG	Thigh muscle	Thigh - The upper part of the leg, from the pelvis to the knee.

CODE	SITE NAME	SITE DEFINITION/NOTES
TH	Thorax	1) The chest; the cavity of the mammalian body between the neck and the diaphragm, containing the heart, lungs, and mediastinal structures. 2) The middle of three principal divisions of the body of certain classes of arthropods.
THA	Thorax and abdomen	
TI	Tissue	An aggregation of cells more or less similar morphologically and functionally.
TIL	Tillers	A shoot that develops from an axillary or adventitious bud at the base of a stem.
TK	Trunk	the main stem of a tree apart from limbs and roots or the human or animal body apart from the head and appendages
TKK	Trunk Kidney	The posterior trunk kidney is composed of numerous nephrons surrounded by interstitial lymphoid tissue. Right and left sides of the trunk kidney are fused and form a deep saddle which occupies the space between the two chambers of the gas bladder. (http://aquaticpath.umd.edu/fhm/renal.html)
TLE	Trifoliolate Leaf/Leaves	A leaf consisting of three leaflets.
TLI	Thallus	Thallus = A plant body that is not differentiated into special tissue systems or organs and may vary from a single cell to a complex, branching multicellular structure.
TLM	Thalamus	Either of two large ovoid masses, consisting chiefly of gray substance, situated one on each side of and forming part of the lateral wall of the third ventricle. (Grey's on-line dictionary)
TLN	Telencephalon	The anterior subdivision of the embryonic forebrain or the corresponding part of the adult forebrain that includes the cerebral hemispheres and associated structures. (Webster's)
TLS	Talus	the human tarsal bone that bears the weight of the body and that together with the tibia and fibula forms the ankle joint (Webster's)
TM	Tarsus-Metatarsus	
TMR	Tumor	An abnormal mass of tissue that results from excessive cell division that is uncontrolled and progressive, also called a neoplasm. Tumours perform no useful body function. They may be either benign (not cancerous) or malignant.
TN	Tentacles	Any of various elongate, flexible processes with tactile, prehensile, and sometimes other functions, and which are borne on the head or about the mouth of many animals.
TO	Tongue	A muscular organ located on the floor of the mouth of most vertebrates which may serve various functions, such as taking and swallowing food or tasting or as a tactile organ or sometimes as a prehensile organ.

CODE	SITE NAME	SITE DEFINITION/NOTES
TOP	Tops (Plant)	
TOR	Torso	Portion of the body excluding the head and limbs; trunk
TP	Tuber Peeling	
TR	Tarsus	The instep of the foot consisting of the calcaneus, talus, cuboid, navicular, medial, intermediate, and lateral cuneiform bones.
TRB	Right tibia	
TRD	Tear duct	also known as harderian, glandula lacrimalis, Lacrimal or lachrymal gland, a gland on the inner side of the orbit of many animals which have a third eyelid, or nictitating membrane. (http://cancerweb.ncl.ac.uk/omd/)
TS	Thymus	A lymphoid organ in the neck or upper thorax of all vertebrates; it is prominent in early life and is essential for normal development of the circulating pool of lymphocytes.
TSC	Thymus cortex	The outer layer of an organ or other body structure, as distinguished from the internal substance, in this case of the Thymus. (Grays)
TSL	Tassel	The terminal male inflorescence of some plants and especially corn.
TSM	Thymus medulla	The inner portion of an organ, in this case of the thymus. (Grays)
TT	Tibiotarsus	Pertaining to the tibia and the tarsus. Tibia - shin bone Tarsus - The seven bones constituting the articulation between the foot and the leg.
TTH	Tooth, teeth	One of the bony structures supported by the jaws in mammals and by other bones in the mouth and pharynx in lower vertebrates serving principally for prehension and mastication.
TU	Tuber	Tuber = The enlarged end of a rhizome in which food accumulates, as is the potato.
TY	Thyroid	An endocrine gland found in all vertebrates that produces, stores, and secretes the thyroid hormones.
U		
UB	Urinary Bladder	A hollow organ which serves as a reservoir for urine.
UBG	Ultimobranchial gland	In biology, any of the small bodies in the pharynx that develop behind the fifth pair of gill pouches in the vertebrate embryo. In mammals the ultimobranchial tissue has become incorporated into the parafollicular cells of the thyroid gland. Ultimobranchial glands produce the hormone calcitonin, which reduces the amount of calcium in the blood. (http://www.britannica.com/eb/article-9001367/ultimobranchial-gland)

CODE	SITE NAME	SITE DEFINITION/NOTES
UG	Uropygial Gland	A relatively large, compact, bilobed, secretory organ located at the base of the tail of most birds having a keeled sternum. Also known as oil gland.
UL	Ulna	One of the bones that comprise the forearm. The largest aspect articulates with the humerus at the elbow joint and the smallest portion of the ulna articulates with the carpal bones in the wrist. (http://cancerweb.ncl.ac.uk/omd/)
ULE	Unifoliate (Primary) Leaf/Leaves	A single leaf.
UNT	Urinary tract	The organs of the body that produce and discharge urine. These include the kidneys, ureters, bladder, and urethra. (http://cancerweb.ncl.ac.uk/omd/)
UP	Urogenital papillae	Urogenital = pertaining to the urinary and genital apparatus. Papillae = A small nipple-like projection, elevation, or structure.
UR	Urine	The fluid excreted by the kidneys
URT	Ureter	The tube passing from each kidney to the bladder for the conveyance of urine. Its average length is 25 to 30 centimeters. (Gray's)
UT	Uterus	The organ of gestation in mammals which receives and retains the fertilized ovum, holds the fetus during development, and becomes the principal agent of its expulsion at term.
UTH	Urethra	A tube that transports urine from the urinary bladder to the outside of the body in both the sexes. It also has a reproductive function in the male by providing a passage for sperm. (http://www.ncbi.nlm.nih.gov)
V		
VA	Vagina	The canal from the vulvar opening to the cervix uteri. (McGraw-Hill)
VAS	Vasculation	Arterial, capillary, and venous systems of an organ or region. The cardiovascular and lymphatic system's collectively. Also: vascular system or circulatory system (http://cancerweb.ncl.ac.uk and http://www.ncbi.nlm.nih.gov)
VC	Visual center	Area of the brain that detects visual stimulus
VCL	Vacuole	
VD	Vas Deferens	The portion of the excretory duct system of the testis which runs from the epididymal duct to the ejaculatory duct.
VE	Vertebra	One of the bones that make up the spine in vertebrates.

CODE	SITE NAME	SITE DEFINITION/NOTES
VEN	Vein	Blood vessel that returns blood from the microvasculature to the heart, walls thinner and less elastic than those of artery. (http://cancerweb.ncl.ac.uk/omd)
VG	Vegetative portion	WO - SD or FR
VGL	Visceral Ganglion	Any of the various ganglia that are part of the autonomic nervous system and are located along the sympathetic trunks, on the peripheral plexuses, and within the walls of organs. Also called visceral ganglion. (/medical-dictionary.thefreedictionary.com/)
VI	Viscera	The organs within the cavities of the body of an organism
VL	Villi	villus = A fingerlike projection from the surface of a membrane.
VN	Vines	A plant whose stem requires support and which climbs by tendrils or twining or creeps along the ground; also : the stem of such a plant
VNT	Ventricle	A chamber of the heart which receives blood from a corresponding atrium and from which blood is forced into the arteries. (Webster's)
VNTL	Ventricle, left	
VSC	Vesicle	A closed membrane shell, derived from membranes by a physiological process.
VV	Valve	One shell of a double shelled mollusc such as a clam or oyster. (http://cancerweb.ncl.ac.uk/omd/)
W		
WD	Wolffian Duct	The Wolffian duct (also known as archinephric duct, Leydig's duct, mesonephric duct, or nephric duct) is a paired organ found in mammals including humans during embryogenesis. (http://en.wikipedia.org/wiki/Wolffian_duct)
WI	Wings	Any of the paired appendages serving organs of flight on many animals
WL	Wall, Body	
WM	White matter	Brain tissue composed of myelin-coated nerve cell fibers.
WO	Whole Organism	
WR	Wrist	
X		
XY	Xylem	A complex tissue in the vascular system of higher plants that consists of vessels, tracheids, or both usually together with wood fibers and parenchyma cells, functions chiefly in conduction of water and dissolved minerals but also in support and food storage, and typically constitutes the woody element (as of a plant stem). (http://www.merriam-webster.com/dictionary/xylem)

CODE	Site Name	Site Definition/Notes
Y		
YO	Yolk	The yellow spherical mass of food material that makes up the central portion of the egg of a bird or reptile.
YS	Yolk sac	A membranous sac that is attached to an embryo and encloses food yolk, that is continuous in most forms through the yolk stalk with the intestinal cavity of the embryo, that being abundantly supplied with blood vessels is throughout embryonic life and in some forms later the chief organ of nutrition, and that in placental mammals is nearly vestigial and functions chiefly prior to the elaboration of the placenta. (Webster's)

Appendix V. Common Keywords for Other Effects Text Field

age efcts	Sediment
Alkalinity efcts	Sex efcts
Bacteria	Size efcts
Biological Toxicant	Statistical analysis comparison
BLM [endpoint] also reported	Strain efcts
Conductivity efcts	Surgically altered
Critical Level	Temperature efcts
Diet Study	Toxicity Symptoms
Depuration	Transport
D.O. efcts	Uptake
Effluent	Vehicle efcts
Elimination	
fate	
Feeding efcts	
Field Study	
Food Chain Study	
Genotoxicity threshold	
Hardness efcts	
Humic Acid	
Hypoxia efcts	
Ind Taxon Result	
in vitro	
Kinetics	
Lethal Body Burden	
log LC50	
Market	
Metabolism	
metabolites	
Microtox	
Minimum Inhibitory Concentration (MIC or Minimum Inhibition Concentration)	
Mixture	
nutrient study	
Oil	
Org_C efcts	
pH efcts	
Pre-Exposure Study	
QSAR	
Radiolabel	
Recovery	
Residual Toxicity	
Safe Conc (Safe Concentration)	
Salinity efcts	

Appendix W. Media Characteristic Units

Code	Definition
%	percent
% Sat	Percent saturation
0/00	parts per thousand
C	Celsius
cm3/L or cc/L	cubic centimeters per liter
cmol P+/kg	centimoles P+ per kilogram soil
cmol/g	centimoles per gram soil
cmol/kg	centimoles per kilogram soil
cmol+/100 g	centimoles + ions per 100 grams soil
cmol+/kg	centimoles + ions per kilograms
dH	degrees hardness, may be used for various obsolete units: degrees general hardness, degrees German hardness, degrees American hardness, degrees Clark hardness, degrees French hardness, etc (http://en.wikipedia.org/wiki/ECOTOX) specific hardness to be noted in Remarks
dS/m	deciSiemens per meter
F	Fahrenheit
FS	French Hardness
g	grams
g CaCO ₃	grams Calcium carbonate
g/100g	grams per 100 grams
g/dm ³	grams per cubic decimeter
g/kg	grams per kilograms
g/kg soil	grams per kilogram soil
g/L	grams per liter
g/L CaCO ₃	grams per liter Calcium Carbonate
g/m ²	grams per square meter
g/m ³	grams per cubic meter
g/m ³ CaCO ₃	grams per cubic meter Calcium carbonate
HARD	Hard water
HCO ₃	Hydrogen carbonate
K	Kelvin
kDa	kilo Daltons
LOW	low
m	meters

Code	Definition
M	Molar
M NaCl	Molar Sodium Chloride
meq	milli equivalents
meq A/100g	milliequivalents NH4per 100g
meq mg/g	milliequivalent milligrams per gram
meq/100g	milli equivalents per 100 grams
meq/100ml	milliequivalents per 100 milliliters
meq/g	milliequivalents per gram
meq/kg	milliequivalents per kilogram
meq/L	milli equivalents per liter
mg/15 ml	milligrams per 15 milliliters
mg/dm3	milligram per cubic decimeter
mg/dm3 CaCO3	milligrams per cubic decimeter Calcium carbonate
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
mg/L C	milligrams per liter Carbon
mg/L CaCO3	milligrams per liter Calcium carbonate
mg/L CaO	milligrams per liter Calcium Oxide
mg/L CO3	milligrams per liter carbonate
mg/L EDTA	milligrams per liter EDTA
mg/L FA	milligrams per liter fulvic acid
mg/L HA	milligrams per liter Humic acid
mg/L HCO3	milligrams per liter Hydrogen Carbonate
mg/L Mg	milligrams per liter Magnesium
mg/L MO	milligrams per liter Methyl Orange
mg/L, Ca	milligrams per liter, Calcium Hardness
mg/ml	milligrams per milliliter
mg/ml CaCO3	milligrams per milliliter CaCO3
mgL	mgL
mho	A unit of conductance equal to the reciprocal of an ohm
mho/cm	mho per centimeter
ml N/100 HCl	milliliters nitrogen per 100 HCl
ml/L	milliliter per liter
mM	millimolar
mm	millimeters
mM CaCO3	millimolar Calcium carbonate

Code	Definition
mm Hg	millimeters Mercury
mmhos *	milli ohms
mmhos/cm *	millihms per centimeter
mmol	millimoles
mmol K+/kg	millimoles K+ per kilogram soil
mmol/100g	millimoles per 100 grams soil
mmol/dm3	millimoles per cubic decimeter
mmol/kg	millimoles per kilogram
mmol/l	millimoles per liter
mmol/L CaCO3	millimoles per Liter Calcium Carbonate
mmol/L OH	millimoles per liter Hydroxide
mN	millinormal
MOD	Moderate
Mod Hard	Moderately hard water
mOhm	milliohms
mol/kg	moles per kilogram
mol/l	moles per liter
mOsm	milliosmoles
mS	milli Siemens
mS/cm	milli Siemens per centimeter
mS/cm2	milli Siemens per square centimeter
mS/cm3	milli Siemens per cubic centimeter
mS/m	milli Siemens per meter
mV	millivolts
mval/100g	millivalue per 100 grams
N	Normal
NR	Not reported
ohm/cm	ohm per centimeter
Ohm/cm2/mol	ohms per square centimeters per mole
ohms	ohms
ppb phenolphth	parts per billion phenolphthalein
ppm	parts per million
ppm CaCO3	parts per million CaCO3
ppm MO	parts per million Methyl Orange
ppt	parts per trillion
PSU	practical salinity units

Code	Definition
RA	Ratio
S	Siemens
S/cm	Siemens per centimeter
S/m	Siemens per meter
SAT	Saturated
SAT*	Saturated
SOFT	Soft water
ueq/L	micro equivalents per liter
ug	micrograms
ug/L	micrograms per liter
ug/L CaCO ₃	micrograms per liter Calcium carbonate
ug/ml	micrograms per milliliter
uM	micromolar
uM/cm	micromolar per centimeter
umho/sec ² x1E-3	microohms per second 2 x 1E-3
Umhos *	micro ohms
umhos/cm *	micro ohms per centimeter
umhos/cm ² *	micro ohms per square centimeter
umhos/cm ³	micro ohms per cubic centimeter
umhos/L	micromhos per liter
umhos/s	micromhos per second
umhos/um	micromhos per micrometer
umol/cm	micromoles per centimeter
umol/g LIT	micromoles per gram litter
umol/kg	micromoles per kilogram
umol/L	micromoles per liter
umol/L CaCO ₃	micromoles per liter Calcium Carbonate
umol/ml	micromoles per milliliter
uS	micro Siemens
uS/cm	microSiemens per centimeter
uS/cm ²	microSiemens per square centimeter
uS/cm ³	microSiemens per cubic centimeter
uS/L	microSiemens per liter
uS/m	microSiemens per meter
uS/s	microSiemens per second
usec	microsecond

ECOTOX Code Appendix

Code	Definition
uV	microvolts
V HARD	Very hard
V SOFT	Very soft

* See TK prior to assigning this code

Appendix X. Sub-Habitat Codes and Common Descriptors

Code	Habitat	Definition	Descriptors
D	Desert	Occur where rainfall is less than 50 cm/year.	Hot and Dry Semiarid Coastal Cold
E	Estuarine	"deepwater tidal habitats... with sporadic access to open ocean...ocean water... is diluted by freshwater..."; Salinity range between 0.5-30ppt	BayMarsh, brackish, salt, tidal Estuary Swamp
F	Forest	Biological communities that are dominated by trees and other woody vegetation, Distinct forest types also occur within each of these broad groups.	Tropical (rainforest) Temperate Boreal forests (taiga)
G	Grasslands	Characterized as lands dominated by grasses rather than large shrubs or trees	Tropical (savannas) Temperate (prairie) Agriculture (monoculture)
L	Lacustrine	"permanently flooded lakes and reservoirs, intermittent lakes and tidal lakes with salinity <= 0.5ppt"; total area exceeds 8 ha (8 acres) and 2 m water depth.	Bay Cove Impoundment Lake
M	Marine	"open ocean overlying the continental shelf and its associated.... coastline; includes shallow coastal indentations or bays; salinity [typically] exceed 30 ppt"	Bay Gulf Open Ocean Reef Seaweed bed
NR	Not Reported		
P	Palustrine	"small, shallow, permanent or intermittent fresh water bodies"; total area <= 8 ha (20 acres) and <=2m water depth	Bog Fen Marsh Rice fields Swamp Wetland
R	Riverine	"a channel, an open conduit either naturally or artificially created which periodically or continuously contains moving water or which forms a connecting link between two bodies of standing water" salinity <= 0.5ppt	Creek River Stream Tidal River Tributary

Note: Aquatic habitats are based on the Cowardin Wetland Classification System developed for the U.S. Fish and Wildlife Service (Cowardin et al. 1979). The terrestrial habitats are based on "The World's Biomes" at <http://www.ucmp.berkeley.edu/glossary/gloss5/biome/index.html>.

Appendix Y. Substrate Codes

Code	Definition
CL	Clay
GR	Gravel
M	Mineral
MU	Mud
MX	Mixed substrate
NR	Not Reported
O	Organic
SA	Sand
SI	Silt

Appendix Z. Depth Units

Code	Definition
cm	Centimeters
ft	Feet
in	Inches
m	Meters
mm	Millimeters
NR	Not reported

Appendix AA. Field Location Abbreviations

Code	Description
Agric	Agricultural
Aqu	Aquatic
Co	County
Cr	Creek
Dev	Development
Dis	District
E*	East
Env	Environmental
Exp	Experimental
Fish	Fisheries
Inst	Institute
Isl	Island
L	Lake
Lab	Laboratory
MT	Mountain
N*	North
Natl	National
NE*	Northeast
NW*	Northwest
R	River
Res	Research
Resvr	Reservoir
S*	South
SE*	Southeast
St	Saint
Sta	Station
SW*	Southwest
Univ	University
USFWS	United States Fish and Wildlife
W*	West

*Do not abbreviate directional information that is part of the proper name of a location (e.g. South L or Northwest Territory)

Appendix AB. Geographic Codes

Code	Description	Code	Description	Code	Description
AF AFGHANISTAN		AL08	Kolonje	AG45	Ghardaia
AF01 Badakhshan		AL09	Korce	AG23	Guelma
AF02 Badghis		AL10	Kruje	AG46	Illizi
AF03 Baghlan		AL11	Kukes	AG24	Jijel
AF30 Balkh		AL12	Lezhe	AG47	Khenchela
AF05 Bamian		AL13	Librazhd	AG25	Laghouat
AF06 Farah		AL14	Lushnje	AG26	Mascara
AF07 Faryab		AL15	Mat	AG06	Medea
AF08 Ghazni		AL16	Mirdite	AG48	Mila
AF09 Ghowr		AL17	Permet	AG07	Mostaganem
AF10 Helmand		AL18	Pogradec	AG27	M'sila
AF11 Herat		AL19	Puke	AG49	Naama
AF31 Jowzjan		AL20	Sarande	AG09	Oran
AF13 Kabol		AL21	Shkoder	AG50	Ouargla
AF23 Kandahar		AL22	Skrapar	AG29	Oum el Bouaghi
AF13 Kapisa		AL23	Tepelene	AG51	Relizane
AF15 Konar		AL28	Tirane	AG10	Saida
AF24 Kondoz		AL26	Tropoje	AG12	Setif
AF16 Laghman		AL27	Vlore	AG30	Sidi Bel Abbes
AF17 Lowgar				AG31	Skikda
AF18 Nangarhar		AG ALGERIA		AG52	Souk Ahras
AF19 Nimruz		AG34	Adrar	AG53	Tamanghasset
AF20 Oruzgan		AG35	Ain Defla	AG33	Tebessa
AF21 Paktia		AG36	Ain Temouchent	AG13	Tiaret
AF22 Paktika		AG01	Alger	AG54	Tindouf
AF22 Parvan		AG37	Annaba	AG55	Tipaza
AF32 Samangan		AG03	Batna	AG56	Tissemsilt
AF33 Sar-e Pol		AQ38	Bechar	AG14	Tizi Ouzou
AF26 Takhar		AG18	Bejaia	AG15	Tlemcen
AF27 Vardak		AG19	Biskra		
AF28 Zabol		AG20	Blida	AG AQ AMERICAN SAMOA	
		AG39	Bordj Bou Arreridj		
AL ALBANIA		AG21	Bouira	AN ANDORRA	
AL01 Berat		AG40	Boumerdes	AN01	Andorra
AL02 Dibre		AG41	Chlef	AN02	Canillo
AL03 Durres		AG04	Constantine	AN03	Encamp
AL04 Elbasan		AG22	Djelfa	AN04	La Massana
AL05 Fier		AG42	Ei Bayadh	AN05	Ordino
AL06 Gjirokaster		AG43	Ei Oued	An06	Sant Julia de Loria
AL07 Gramsh		AG44	Ei Tarf		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
AO ANGOLA		AR12	La Rioja	AJ AZERBAIJAN	
AO19 Bengo		AR13	Mendoza	BF BAHAMAS, THE	
AO01 Benguela		AR14	Misiones	BF24 Acklins and Crooked Islands	
AO02 Bie		AR15	Neuquen	BF05 Bimini	
AO03 Cabinda		AR16	Rio Negro	BF06 Cat Island	
AO04 Cuando Cubango		AR17	Salta	BF10 Exuma	
AO05 Cuanza Norte		AR18	San Juan	BF25 Freeport	
AO06 Cuanza Sul		AR19	San Luis	BF26 Fresh Creek	
AO07 Cunene		AR20	Santa Cruz	BF27 Governor's Harbour	
AO08 Huambo		AR21	Santa Fe	BF28 Green Turtle Cay	
AO09 Huila		AR22	Santiago del Estero	BF22 Harbour Island	
AO20 Luanda		AR23	Tierra del Fuego, Antartidae Islas del Atlantico Sur	BF29 High Rock	
AO17 Lunda Norte		AR24	Tucuman	BG13 Inagua	
AO18 Lunda Sul				BF30 Kemps Bay	
AO12 Malanje				BF15 Long Island	
AO14 Moxico		AM ARMENIA		BF31 Marsh Harbour	
AO15 Uige		AA ARUBA		BF16 Mayaguana	
AO16 Zaire				BF23 New Providence	
AV ANGUILLA		AT ASHMORE AND CARTIER ISLANDS		BF32 Nichollstown and Berry Islands	
AY ANTARCTICA		* AS AUSTRALIA		BF18 Ragged Island	
AC ANTIGUA AND BARBUDA		AS01 Australian Capital Territory		BF33 Rock Sound	
AC01 Barbuda		*AS02 New South Wales		BF34 Sandy Point	
AC03 Saint George		AS03 Northern Territory		BF35 San Salvador and Rum Cay	
AC04 Saint John		*AS04 Queensland			
AC05 Saint Mary		*AS05 South Australia		*BA BAHRAIN	
AC06 Saint Paul		*AS06 Tasmania		BA01 Al Hadd	
AC07 Saint Peter		*AS07 Victoria		BA02 Al Manamah	
AC08 Saint Philip		AS08 Western Australia		BA08 Al Mintaqah al Gharbiyah	
*AR ARGENTINA		*AU AUSTRIA		BA11 Al Mintaqah al Wusta	
AC01 Buenos Aires		AU01 Burgenland		BA10 Al Mintaqah ash Shamaliyah	
AC02 Catamarca		AU02 Karnten		BA03 Al Muharraq	
AR03 Chaco		AU03 Niederosterreich		BA13 Ar Rifa` wa al Mintaqah al Janubiyah	
AR04 Chubut		AU04 Oberosterreich		BA05 Jidd Hafs	
AR05 Cordoba		AU05 Salzburg		BA14 Madinat Hamad	
AR06 Corrientes		AU06 Steiermark		BA12 Madinat `Isa	
AR07 Distrito Federal		AU07 Tirol		BA09 Hawar Mintaqat Juzur	
AR08 Entre Rios		AU08 Vorarlberg		BA06 Sitrah	
AR09 Formosa		AU09 Wien			
AR10 Jujuy					
AR11 La Pampa					

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
FQ	BAKER ISLAND	BG58	Naogaon	BE01	Antwerpen
		BG59	Narail	BE02	Brabant
*BG	BANGLADESH	BG60	Narayanganj	BE03	Hainaut
BG22	Bagerhat	BG61	Narsingdi	BE04	Liege
BG04	Bandarban	BG62	Nator	BE05	Limburg
BG25	Barguna	BG63	Netrakona	BE06	Luxembourg
BG01	Barisal	BG64	Nilphamari	BE07	Namur
BG23	Bhola	BG13	Noakhali	BE08	Oost-Vlaanderen
BG24	Bogra	BG65	Pabna	BE09	West-Vlaanderen
BG26	Brahmanbaria	BG66	Panchagar		
BG27	Chandpur	BG67	Parbatty Chattagram	*BH	BELIZE
BG28	Chapai Nawabganj	BG15	Patuakhali	*BH01	Belize (District)
BG29	Chattogram	BG68	Pirojpur	BH02	Cayo
BG30	Chuadanga	BG69	Rajbari	BH03	Corozal
BG05	Comilla	BG70	Rajshahi	BH04	Orange Walk
BG31	Cox's Bazar	BG71	Rangpur	BH05	Stann Creek
BG32	Dhaka	BG72	Satkhira	BH06	Toledo
BG33	Dinajpur	BG73	Shariyatpur		
BG34	Faridpur	BG74	Sherpur	*BN	BENIN
BG35	Feni	BG75	Sirajganj	BN01	Atakora
BG36	Gaibandha	BG76	Sunamganj	BN02	Atlantique
BG37	Gazipur	BG77	Sylhet	BN03	Borgou
BG38	Gopalganj	BG78	Tangail	BN04	Mono
BG39	Habiganj	BG79	Thakurgaon	BN05	Oueme
BG40	Jaipurhat			BN06	Zou
BG41	Jamalpur	BB	BARBADOS*		
BG42	Jessore	BB01	Christ Church	BD	BERMUDA
BG43	Jhalakati	BB02	Saint Andrew	BD01	Devonshire
BG44	Jhenaidah	BB03	Saint George	BD03	Hamilton
BG45	Khagrachari	BB04	Saint James	BD03	Hamilton
BG46	Khulna	BB05	Saint John	BD04	Paget
BG47	Kishorganj	BB06	Saint Joseph	BD05	Pembroke
BG48	Kurigram	BB07	Saint Lucy	BD06	Saint George
BG49	Kushtia	BB08	Saint Michael	*BD07	Saint George's
BG50	Laksmipur	BB09	Saint Peter	BD08	Sandys
BG51	Lalmonirhat	BB10	Saint Philip	BD09	Smiths
BG52	Madaripur	BB11	Saint Thomas	BD10	Southampton
BG53	Magura			BD11	Warwick
BG54	Manikganj	BS	BASSAS DA INDIA		
BG55	Meherpur			*BT	BHUTAN
BG56	Moulavibazar	BO	BELARUS	BT05	Bumthang
BG57	Munshiganj			BT06	Chhukha
BG12	Mymensingh	*BE	BELGIUM	BT07	Chirang

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
BT08	Daga			BU30	Grad Sofiya
BT09	Geylegphug	* BR	BRAZIL	BU31	Khaskovo
BT10	Ha	BR01	Acre	BU32	Lovech
BT11	Lhuntshi	BR02	Alagoas	BU33	Mikhaylovgrad
BT12	Mongar	BR03	Amapa	BU34	Plovdiv
BT13	Paro	BR04	Amazonas	BU35	Razgrad
BT14	Pemagatsel	BR05	Bahia	BU36	Sofiya
BT15	Punakha	BR06	Ceara	BU37	Varna
BT16	Samchi	BR07	Distrito Federal		
BT17	Samdrup	BR08	Espirito Santo	* UV	BURKINA
BT18	Shemgang	BR29	Goias	UV15	Bam
BT19	Tashigang	BR13	Maranhao	UV16	Bazega
BT20	Thimphu	BR14	Mato Grosso	UV17	Bougouriba
BT21	Tongsa	BR11	Mato Grosso do Sul	UV18	Boulgou
BT22	Wangdi Phodrang	*BR15	Minas Gerais	UV19	Boulkiemde
		BR16	Para	UV20	Ganzourgou
BL	BOLIVIA	BR17	Paraiba	UV21	Gnagna
BL01	Chuquisaca	BR18	Parana	UV22	Gourma
BL02	Cochabamba	BR30	Pernambuco	UV23	Houet
BL03	EI Beni	BR20	Piaui	UV24	Kadiogo
BL04	La Paz	BR21	Rio de Janeiro	UV25	Kenedougou
BL05	Oruro	BR22	Rio Grande do Norte	UV26	Komoe
BL06	Pando	BR23	Rio Grande do Sul	UV27	Kossi
BL07	Potosi	BR24	Rondonia	UV28	Kouritenga
BL08	Santa Cruz	BR25	Roraima	UV29	Mouhoun
BL09	Tarija	BR26	Santa Catarina	UV30	Namentenga
		*BR27	Sao Paulo	UV31	Naouri
*BK	BOSNIA AND HERZEGOVINA	BR28	Sergipe	UV32	Oubritenga
		BR31	Tocantins	UV33	Oudalan
				UV34	Passore
* BC	BOTSWANA	IO	BRITISH INDIAN OCEAN TERRITORY	UV35	Poni
BC01	Central			UV36	Sanguie
BC02	Chobe	VI	BRITISH VIRGIN ISLANDS	UV37	Sanmatenga
BC03	Ghanzi			UV38	Seno
BC04	Kgalagadi	*BX	BRUNEI	UV39	Sissili
BC05	Kgatleng	BX01	Belait	UV40	Soum
BC06	Kweneng	BX02	Brunei and Muara	UV41	Sourou
BC07	Ngamiland	BX03	Temburong	UV42	Tapoa
BC08	North-East	BX04	Tutong	UV43	Yatenga
BC09	South-East			UV44	Zoundweogo
BC10	Southern	*BU	BULGARIA		
		BU29	Burgas	BM	BURMA
BV	BOUVENT ISLAND			BM02	Chin State

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
BM03	Irrawaddy	CB12	Pouthisat	CV07	Ribeira Grande
BM04	Kachin State	CB13	Preah Vihear	CV08	Sal
BM05	Karan State	CB14	Prey Veng	CV09	Santa Catarina
BM06	Kayah State	CB15	Rotanokiri	CV10	Sao Nicolau
BM07	Magwe	CB16	Siemreab-Otdar Meanchey	CV11	Sao Vicente
BM08	Mandalay	CB17	Stoeng Treng	CV12	Tarrafal
BM13	Mon State	CB18	Svay Rieng	CJ	CAYMAN ISLANDS
BM09	Pegu	CB19	Takev	CJ01	Creek
BM01	Rakhine State	* CM CAMEROON			
BM14	Rangoon	CM10	Adamaoua	CJ02	Eastern
BM10	Sagaing	CM11	Centre	CJ03	Midland
BM11	Shan State	CM04	Est	CJ04	South Town
BM12	Tenasserim	CM12	Extreme-Nord	CJ05	Spot Bay
BY BURUNDI		CM05	Littoral	CJ06	Stake Bay
BY09	Bubanza	CM13	Nord	CJ07	West End
BY02	Bujumbura	CM07	Nord-Ouest	CJ08	Western
BY10	Bururi	CM08	Ouest	CT CENTRAL AFRICAN REPUBLIC	
BY11	Cankuzo	CM14	Sud	CT01	Bamingui-Bangoran
BY12	Cibitoke	CM09	Sud-Ouest	CT18	Bangui
BY13	Gitega	* CA CANADA			
BY14	Karuzi	* CA01	Alberta	CT02	Basse-Kotto
BY15	Kayanza	* CA02	British Columbia	CT15	Gribingui
BY16	Kirundo	* CA03	Manitoba	CT03	Haute-Kotto
BY17	Makamba	* CA04	New Brunswick	CT04	Haute-Sangha
BY05	Muramvya	* CA05	Newfoundland	CT05	Haut-Mbomou
BY18	Muyinga	CA06	Northwest Territories	CT06	Kemo-Gribingui
BY19	Ngozi	* CA07	Nova Scotia	CT07	Lobaye
BY20	Rutana	* CA08	Ontario	CT08	Mbomou
BY21	Ruyigi	* CA09	Prince Edward Island	CT09	Nana-Mambere
CB CAMBODIA		* CA10	Quebec	CT17	Ombella-Mpoko
CB01	Batdambang	* CA11	Saskatchewan	CT11	Ouaka
CB02	Kampong Cham	CA12	Yukon Territory	CT12	Ouham
CB03	Kampong Chhnang	CV CAPE VERDE			
CB04	Kampong Spoe	CV01	Boa Vista	CT13	Ouham-Pende
CB05	Kampong Thum	CV02	Brava	CT16	Sangha
CB06	Kampot	CV03	Fogo	CT14	Vakaga
CB07	Kandal	CV04	Maio	CD CHAD	
CB08	Kaoh Kong	CV05	Paul	CD01	Batha
CB09	Kracheh	CV06	Praia	CD02	Biltine
CB10	Mondol Kiri			CD03	Borkou-Ennedi-Tibesti
*CB11	Phnum Penh			CD04	Chari-Baguirmi
				CD05	Guera

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
CD06	Kanem	CH05	Jilin	CO19	Meta
CD07	Lac	CH19	Liaoning	CO20	Narino
CD08	Logone Occidental	CH20	Nei Mongol	CO21	Norte de Santander
CD09	Logone Oriental	CH21	Ningxia	CO22	Putumayo
CD10	Mayo-Kebbi	CH06	Qinghai	CO23	Quindio
CD11	Moyen-Chari	CH26	Shaanxi	CO24	Risaralda
CD12	Ouaddai	*CH25	Shandong	CO25	San Andres y Providencia
CD13	Salamat	CH23	Shanghai	CO26	Santander
CD14	Tandjile	*CH24	Shanxi	CO27	Sucre
		CH27	Sichuan	CO28	Tolima
*CI	CHILE	CH28	Tianjin	CO29	Valle del Cauca
CI02	Aisen del General Carlos Ibanez del Campo	CH13	Xinjiang	CO30	Vaupes
CI03	Antofagasta	CH14	Xizang	CO31	CVichada
CI04	Araucania	CH29	Yunnan		
CI05	Atacama	CH02	Zhejiang	CN	COMOROS
CI06	Bio-Bio	KT*	CHRISTMAS ISLAND	CN01	Anjouan
CI07	Coquimbo	IP	CLIPPERTON ISLAND	CN02	Grande Comore
CI08	Libertador General Bernardo O'Higgins	CK	COCOS (KEELING) ISLANDS	CN03	Moheli
CI09	Los Lagos			CF	CONGO
CI10	Magallanes y de la Antarctica Chilena	* CO	COLOMBIA	CF01	Bouenza
CI11	Maule	CO01	Amazonas	CF12	Brazzaville
CI12	Region Metropolitana	CO02	Antioquia	CF03	Cuvette
CI13	Tarapaca Valparaiso	CO03	Arauca	CF04	Kouilou
		CO04	Atlantico	CF05	Lekoumou
* CH	CHINA	CO35	Bolivar	CF06	Likouala
CH01	Anhui	CO36	Boyaca	CF07	Niari
CH22	Beijing	CO37	Caldas	CF08	Plateaux
CH07	Fujian	CO08	Caqueta	CF11	Pool
CH15	Gansu	CO32	Casanare	CF10	Sangha
CH30	Guangdong	CO09	Cauca	CW	COOK ISLANDS
CH16	Guangxi	CO10	Cesar	CR	CORAL SEA ISLANDS
CH18	Guizhou	CO11	Choco		
*CH31	Hainan	CO12	Cordoba	*CS	COSTA RICA
CH10	Hebei	CO33	Cundinamarca	CS01	Alajuela
*CH08	Heilongjiang	CO34	Distrito Especial	CS02	Cartago
CH09	Henan	CO15	Guainia	CS03	Guanacaste
CH12	Hubei	CO14	Guaviare	CS04	Heredia
CH11	Hunan	CO16	Huila	CS06	Limon
*CH04	Jiangsu	CO17	La Guajira	CS07	Puntarenas
CH03	Jiangxi	CO38	Magdalena		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
CS08	San Jose	IV53	Tabou	DA04	Fyn
*IV	COTE D'IVOIRE	IV54	Tanda	DA05	Kobenhavn
IV01	Abengourou	IV55	Tiassale	DA07	Nordjylland
IV35	Abidjan	IV33	Tingrela	DA08	Ribe
IV04	Aboisso	IV26	Touba	DA09	Ringkobing
IV05	Adzope	IV56	Toumodi	DA10	Roskilde
IV06	Agboville	IV57	Vavoua	DA11	Sonderjylland
IV36	Bangolo	IV58	Yamoussoukro	DA06	Staden Kobenhavn
IV37	Beoumi	IV34	Zuenoula	DA12	Storstrom
IV07	Biankouma	*HR CROATIA		DA13	Vejle
IV38	Bondoukou			DA14	Vestsjælland
IV27	Bongouanou			DA15	Viborg
*IV39	Bouafle	CU	CUBA		
IV40	Bouake	CU05	Camaguey	DJ	DJIBOUTI
IV11	Bouna	CU07	Ciego de Avila	DJ01	`Ali Sabih
IV12	Boundiali	CU08	Cienfuegos	DJ02	Dikhil
IV03	Dabakala	CU02	Ciudad de la Habana	DJ03	Djibouti
IV41	Daloa	CU09	Granma	DJ04	Obock
IV14	Danane	CU10	Guantanamo	DJ05	Tadjoura
IV42	Daoukro	CU12	Holguin	DO DOMINICA	
IV43	Dimbokro	CU04	Isla de la Juventud	DO02	Saint Andrew
IV16	Divo	CU11	La Habana	DO03	Saint David
IV44	Duekoue	CU13	Las Tunas	DO04	Saint George
IV17	Ferkessedougou	CU03	Matanzas	DO05	Saint John
IV18	Gagnoa	CU01	Pinar del Rio	DO06	Saint Joseph
IV45	Grand-Lahou	CU14	Sancti Spiritus	DO07	Saint Luke
IV46	Guiglo	CU15	Santiago de Cuba	DO08	Saint Mark
IV28	Issia	CU16	Villa Clara	DO09	Saint Patrick
IV20	Katiola	* CY CYPRUS		DO10	Saint Paul
IV21	Korhogo	CY01	Famagusta	DO11	Saint Peter
IV29	Lakota	CY02	Kyrenia	DR DOMINICAN REPUBLIC	
IV47	Man	CY03	Larnaca	DR01	Azua
IV30	Mankono	CY05	Limassol	DR02	Baoruco
IV48	Mbahiakro	CY04	Nicosia	DR03	Barahona
IV23	Odienne	CY06	Paphos	DR04	Dajabon
IV31	Oume	* EZ CZECH REPUBLIC		DR05	Distrito Nacional
IV49	Sakassou			DR06	Duarte
IV50	San Pedro			DR11	Elias Pina
IV51	Sassandra	* DA DENMARK		DR28	El Seibo
IV25	Seguela	DA01	Arhus	DR08	Espaillat
IV52	Sinfra	DA02	Bornholm	DR29	Hato Mayor
IV32	Soubre	DA03	Frederiksborg		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
DR09	Independencia				
DR10	La Altagracia	* EG	EGYPT		
DR12	La Romana	EG01	Ad Daqahliyah	EK	EQUATORIAL GUINEA
DR30	La Vega	EG02	Al Bahr al Ahmar	EK03	Annobon
DR14	Maria Trinidad Sanchez	EG03	Al Buhayrah	EK04	Bioko Norte
DR31	Monsenor Nouel	EG04	Al Fayyum	EK05	Bioko Sur
DR15	Monte Cristi	EG05	Al Gharbiyah	EK06	Centro Sur
DR32	Monte Plata	EG06	Al Iskandariyah	EK07	Kie-Ntem
DR16	Pedernales	EG07	Al Isma'iliyah	EK08	Litoral
DR17	Peravia	EG08	Al Jizah	EK09	Wele-Nzas
DR18	Puerto Plata	EG09	Al Minufiyah		
DR19	Salcedo	EG10	Al Minya	ER	ERITREA
DR20	Samana	EG11	Al Qahirah	EN	ESTONIA
DR21	Sanchez Ramirez	EG12	Al Qalyubiyah	EN01	Harjumaa
DR33	San Cristobal	EG13	Al Wadi al Jadid	EN02	Hiiumaa
DR23	San Juan	EG14	Ash Sharqiyah	EN03	Ida-Virumaa
DR24	San Pedro De Macoris	EG15	As Suways	EN04	Jarvamaa
DR25	Santiago	EG16	Aswan	EN05	Jogevamaa
DR26	Santiago Rodriguez	EG17	Asyut	EN06	Kohtla-Jarve
DR27	Valverde	EG18	Bani Suwayf	EN07	Laanemaa
		EG19	Bur Sa'id	EN08	Laane-Virumaa
EC	ECUADOR	EG20	Dumyat	EN09	Narva
EC02	Azuay	EG26	Janub Sina'	EN10	Parnu
EC03	Bolivar	EG21	Kafr ash Shaykh	EN11	Pärnumaa
EC04	Canar	EG22	Matruh	EN12	Polvamaa
EC05	Carchi	EG23	Qina	EN13	Raplamaa
EC06	Chimborazo	EG27	Shamal Sina'	EN14	Saaremaa
EC07	Cotopaxi	EG24	Suhaj	EN15	Sillamae
EC08	El Oro			EN16	Tallinn
EC09	Esmeraldas	ES	EL SALVADOR	EN17	Tartu
EC01	Galapagos	ES01	Ahuachapan	EN18	Tartumaa
EC10	Guayas	ES02	Cabanas	EN19	Valgamaa
EC11	Imbabura	ES03	Chalatenango	EN20	Viljandimaa
EC12	Loja	ES04	Cuscatlan	EN21	Vorumaa
EC13	Los Rios	ES05	La Libertad		
EC14	Manabi	ES06	La Paz	*ET	ETHIOPIA
EC15	Morona-Santiago	ES07	La Union	ET15	Adis Abeba
EC21	Napo	ES08	Morazan	ET01	Arsi
EC17	Pastaza	ES09	San Miguel	ET17	Asosa
EC18	Pichincha	ES10	San Salvador	ET38	Bale
EC22	Sucumbios	ES11	Santa Ana	ET18	Borena
EC19	Tungurahua	ES12	San Vicente	ET19	Debub Gonder
EC20	Zamora-Chinchipe	ES13	Sonsonate		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
ET20	Deub Shewa	*	FI FINLAND		
ET21	Deub Welo	FI01	Ahvenanmaa	FS	FRENCH SOUTHERN AND ANTARCTIC LANDS
ET22	Dire Dawa	FI02	Hame		
ET23	Gambela	FI03	Keski-Suomi	GB	GABON
ET39	Gamo Gofa	FI04	Kuopio	GB01	Estuaire
ET40	Ilubabor	FI05	Kymi	GB02	Haut-Ogooue
ET41	Kefa	FI06	Lappi	GB03	Moyen-Ogooue
ET24	Metekel	FI07	Mikkeli	GB04	Ngounie
ET25	Mirab Gojam	FI08	Oulu	GB05	Nyanga
ET26	Mirab Harerge	FI09	Pohjois-Karjala	GB06	Ogooue-Ivindo
ET27	Mirab Shewa	FI10	Turku ja Pori	GB07	Ogooue-Lolo
ET28	Misrak Gojam	FI11	Uusimaa	GB08	Ogooue-Maritime
ET29	Misrak Harerge	FI12	Vaasa	GB09	Woleu-Ntem
ET30	Nazret				
ET31	Ogaden	* FR FRANCE		GA	GAMBIA, THE
ET32	Omo	FRC1	Alsace	GA01	Banjul
ET33	Semen Gonder	FR97	Aquitaine	GA02	Lower River
ET34	Semen Shewa	FR98	Auvergne	GA03	MacCarthy Island
ET35	Semen Welo	FR99	Basse-Normandie	GA07	North Bank
ET42	Sidamo	FRA1	Bourgogne	GA04	Upper River
ET37	Tigray	FRA2	Bretagne	GA05	Western
ET43	Welega	FRA3	Centre		
		FRA4	Champagne-Ardenne	GZ	GAZA STRIP
EU	EUROPA ISLAND	FRA5	Corse		
		FRA6	Franche-Comte	GG	GEORGIA
FK	FALKLAND ISLANDS (ISLAS MALVINAS)	FRA7	Haute-Normandie		
		FRA8	Ile-de-France	* GM GERMANY	
FO	FAROE ISLANDS	*FRA9	Languedoc-Roussillon	GM01	Baden-Wurttemberg
		FRB1	Limousin	GM02	Bayern
FM	FEDERATED STATES OF MICRONESIA	FRB2	Lorraine	GM16	Berlin
FM03	Chuuk	FRB3	Midi-Pyrenees	GM11	Brandenburg
FM01	Kosrae	FRB4	Nord-Pas-de-Calais	*GM03	Bremen
FM02	Pohnpei	FRB5	Pays de la Loire	GM04	Hamburg
FM04	Yap	FRB6	Picardie	GM05	Hessen
		FRB7	Poitou-Charentes	GM12	Mecklenburg-Vorpommern
FJ	FIJI	FRB8	Provence-Alpes-Cote d'Azur	*GM06	Niedersachsen
FJ01	Central	FRB9	Rhone-Alpes	GM07	Nordrhein-Westfalen
FJ02	Eastern			GM08	Rheinland-Pfalz
FJ03	Northern	FG	FRENCH GUIANA	GM09	Saarland
FJ04	Rotuma			GM13	Sachsen
FJ05	Western	FP	FRENCH POLYNESIA	GM14	Sachsen-Anhalt
				GM10	Schleswig-Holstein

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
GM15	Thuringen	GR15	Khalkidiki	*GQ	GUAM
		GR43	Khania		
* GH	GHANA	GR50	Khios	*GT	GUATEMALA
GH02	Ashanti	GR49	Kikladhes	GT01	Alta Verapaz
GH03	Brong-Ahafo	GR06	Kilkis	GT02	Baja Verapaz
GH04	Central	GR37	Korinthia	GT03	Chimaltenango
GH05	Eastern	GR11	Kozani	GT04	Chiquimula
GH01	Greater Accra	GR42	Lakonia	GT05	EI Progreso
GH06	Northern	GR21	Larisa	GT06	Escuintla
GH10	Upper East	GR46	Lasithi	GT07	Guatemala
GH11	Upper West	GR51	Lesvos	GT08	Huehuetenango
GH08	Volta	GR26	Levkas	GT09	Izabal
GH09	Western	GR24	Magnisia	GT10	Jalapa
		GR40	Messinia	GT11	Jutiapa
GI	GIBRALTAR	GR07	Pella	GT12	Peten
		GR16	Pieria	GT14	Quiche
GO	GLORIOSO ISLANDS	GR19	Preveza	GT13	Quetzaltenango
		GR44	Rethimni	GT15	Retalhuleu
*GR	GREECE	GR02	Rodhopi	GT16	Sacatepequez
GR31	Aitolia kai Akarnania	GR48	Samos	GT17	San Marcos
GR38	Akhaia	GR05	Serrai	GT18	Santa Rosa
GR36	Argolis	GR18	Thesprotia	GT19	Solola
GR41	Arkadia	GR13	Thessaloniki	GT20	Suchitepequez
GR20	Arta	GR22	Trikala	GT21	Totonicapan
GR35	Attiki	GR33	Voiotia	GT22	Zacapa
GR47	Dhodhekhanisos	GR03	Xanthi		
GR04	Drama	GR28	Zakinthos	GK	GUERNSEY
GR30	Evritania				
GR01	Evros	GL	GREENLAND	GV	GUINEA
GR34	Evvoia	GL01	Nordgronland	GV01	Beyla
GR08	Florina	GL02	Ostgronland	GV02	Boffa
GR32	Fokis	GL03	Vestgronland	GV03	Boke
GR29	Fthiotis			GV04	Conakry
GR10	Grevena	GJ	GRENADA	GV05	Dabola
GR39	Ilia	GJ01	Saint Andrew	GV06	Dalaba
GR12	Imathia	GJ02	Saint David	GV07	Dinguiraye
GR17	Ioannina	GJ03	Saint George	GV08	Dubreka
GR45	Iraklion	GJ04	Saint John	GV09	Farannah
GR23	Karditsa	GJ05	Saint Mark	GV10	Forecariah
GR09	Kastoria	GJ06	Saint Patrick	GV11	Fria
GR14	Kavala			GV12	Gaoual
GR27	Kefallinia	GP	GUADELOUPE	GV13	Gueckedou
GR25	Kerkira			GV14	Kankan

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description	
GV15	Kerouane	HA08	Grand' Anse	HU27	Dunaujvaros	
GV16	Kindia	HA09	Nord	HU28	Eger	
GV17	Kissidougou	HA10	Nord-Est	HU08	Fejer	
GV18	Koundara	HA03	Nord-Ouest	HU25	Gyor	
GV19	Kouroussa	HA11	Ouest	HU09	Gyor-Moson-Sopron	
GV20	Labe	HA12	Sud	HU10	Hajdu-Bihar	
GV21	Macenta	HA13	Sud-Est	HU11	Heves	
GV22	Mali	HM HEARD ISLAND AND MCDONALD ISLANDS			HU29 Hodmezovasarhely	
GV23	Mamou				HU20 Jasz-Nagykun-Szolnok	
GV24	Nzerekore				HU30 Kaposvar	
GV25	Pita	*HO HONDURAS			HU31 Kecskemet	
GV26	Sigiri	HO01	Atlantida	HU12 Komarom-Esztergom		
GV27	Telimele	HO02	Choluteca	HU13 Miskolc		
GV28	Tougue	HO03	Colon	HU32 Nagykanizsa		
GV29	Yomou	HO04	Comayagua	HU14 Nograd		
PU GUINEA-BISSAU		HO05	Copan	HU33 Nyiregyhaza		
PU01	Bafata	HO06	Cortes	HU15 Pecs		
PU12	Biombo	HO07	El Paraiso	HU16 Pest		
PU11	Bissau	HO08	Francisco Morazan	HU17 Somogy		
PU05	Bolama	HO09	Gracias a Dios	HU34 Sopron		
PU06	Cacheu	HO10	Intibuca	HU18 Szabolcs-Szatmar-Bereg		
PU10	Gabu	HO11	Islas de la Bahia	HU19 Szeged		
PU04	Oio	HO12	La Paz	HU35 Szekesfehervar		
PU02	Quinara	HO13	Lempira	HU36 Szolnok		
PU07	Tombali	HO14	Ocotepeque	HU37 Szombathely		
GY GUYANA		HO15	Olancho	HU38 Tatabanya		
GY10	Barima-Waini	HO16	Santa Barbara	HU21 Tolna		
GY11	Cuyuni-Mazaruni	HO17	Valle	HU22 Vas		
GY12	Demerara-Mahaica	HO18	Yoro	HU23 Veszprem		
GY13	East Berbice-Corentyne	* HK HONG KONG			HU39 Veszprem	
GY14	Essequibo Islands-West Demerara	HQ HOWLAND ISLAND			HU24 Zala	
GY15	Mahaica-Berbice				HU40 Zalaegerszeg	
GY16	Pomeroon-Supenaam				IC ICELAND	
GY17	Potaro-Siparuni	* HU HUNGARY			IC01 Akranes	
GY18	Upper Demerara-Berbice	HU01	Bacs-Kiskun	IC02 Akureyri		
GY19	Upper Takutu-Upper Essequibo	HU02	Baranya	IC03 Arnessysla		
HA HAITI		HU03	Bekes	IC04 Austur-Bardastrandarsysla		
HA06	Artibonite	HU26	Bekescsaba	IC05 Austur-Hunavatnssysla		
HA07	Centre	HU04	Borsod-Abauj-Zemplen	IC06 Austur-Skaftafellssysla		
		HU05	Budapest	IC07 Borgarfjardarsysla		
		HU06	Csongrad	IC08 Dalasysla		
		HU07	Debrecen			

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
IC09	Eyjafjardarsysla	* IN09	Gujarat	ID21	Sulawesi Tengah
IC10	Gullbringusysla	*IN10	Haryana	ID22	Sulawesi Tenggara
IC11	Hafnarfjordur	IN11	Himachal Pradesh	ID23	Sulawesi Utara
IC12	Husavik	IN12	Jammu and Kashmir	ID24	Sumatera Barat
IC13	Isafjordur	*IN19	Karnataka	ID25	Sumatera Selatan
IC14	Keflavik	IN13	Kerala	ID26	Sumatera Utara
IC15	Kjosarsysla	IN14	Lakshadweep	ID27	Timor Timur
IC16	Kopavogur	*IN15	Madhya Pradesh	ID10	Yogyakarta
IC17	Myrasysla	*IN16	Maharashtra	* IR	IRAN
IC18	Neskaupstadur	IN17	Manipur	IR01	Azarbayan-e Bakhtari
IC19	Nordur-Isafjardarsysla	IN18	Meghalaya	IR02	Azarbayan-e Khavari
IC20	Nordur-Mulasysla	IN31	Mizoram	IR13	Bakhtaran
IC21	Nordur-Tingeyjarsysla	IN20	Nagaland	IR22	Bushehr
IC22	Olafsfjordur	IN21	Orissa	IR03	Chahar Mahall va Bakhtiari
IC23	Rangarvallasysla	IN22	Pondicherry	IR28	Esfahan
IC24	Reykjavik	*IN23	Punjab	IR07	Fars
IC25	Saudarkrokur	*IN24	Rajasthan	IR08	Gilan
IC26	Seydisfjordur	IN29	Sikkim	IR09	Hamadan
IC27	Siglufjordur	IN25	Tamil Nadu	IR11	Hormozgan
IC28	Skagafjardarsysla	IN26	Tripura	IR10	Ilam
IC29	Snafellnes- og Hnappadalssysla	*IN27	Uttar Pradesh	IR29	Kerman
IC30	Strandasysla	*IN28	West Bengal	IR30	Khorasan
IC31	Sudur-Mulasysla	* ID	INDONESIA	IR15	Khuzestan
IC32	Sudur-Tingeyjarsysla	ID01	Aceh	IR05	Kohkiluyeh va Buyer Ahmadi
IC33	Vestmannaeyjar	ID02	Bali	IR16	Kordestan
IC34	Vestur-Bardastrandarsysla	ID03	Bengkulu	IR23	Lorestan
IC35	Vestur-Hunavatnssysla	ID09	Irian Jaya	IR24	Markazi
IC36	Vestur-Isafjardarsysla	ID04	Jakarta Raya	IR17	Mazandaran
IC37	Vestur-Skaftafelssysla	ID05	Jambi	IR25	Semnan
* IN INDIA		*ID06	Jawa Barat	IR04	Sistan va Baluchestan
IN01 Andaman and Nicobar Islands		ID07	Jawa Tengah	IR26	Tehran
*IN02 Andhra Pradesh		ID08	Jawa Timur	IR31	Yazd
IN30 Arunachal Pradesh		ID11	Kalimantan Barat	IR27	Zanjan
*IN03 Assam		ID12	Kalimantan Selatan	*IZ	IRAQ
IN04 Bihar		ID13	Kalimantan Tengah	IZ01	Al Anbar
IN05 Chandigarh		ID14	Kalimantan Timur	IZ02	Al Basrah
IN06 Dadra and Nagar Haveli		ID15	Lampung	IZ03	Al Muthanna
IN32 Daman and Diu		ID16	Maluku	IZ04	Al Qadisiyah
*IN07 Delhi		ID17	Nusa Tenggara Barat	IZ17	An Najaf
IN33 Goa		ID18	Nusa Tenggara Timur	IZ11	Arbil
ID19		ID19	Riau		
ID20		ID20	Sulawesi Selatan		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
IZ05	As Sulaymaniyah	IS02	HaMerkaz	JN	JAN MAYEN
IZ13	At Ta'mim	IS03	HaZafon	* JA	JAPAN
IZ06	Babil	IS04	Hefa	JA01	Aichi
IZ07	Baghdad	IS05	Tel Aviv	JA02	Akita
IZ08	Dahuk	IS06	Yerushalayim	JA03	Aomori
IZ09	Dhi Qar	* IT ITALY		JA04	Chiba
IZ10	Diyala	IT01	Abruzzi	JA05	Ehime
IZ12	Karbala'	IT02	Basilicata	JA06	Fukui
IZ14	Maysan	IT03	Calabria	JA07	Fukuoka
IZ15	Ninawa	IT04	Campania	JA08	Fukushima
IZ18	Salah ad Din	IT05	Emilia-Romagna	JA09	Gifu
IZ16	Wasit	IT06	Friuli-Venezia Giulia	JA10	Gumma
*EI IRELAND		IT07	Lazio	JA11	Hiroshima
EI01	Carlow	IT08	Liguria	JA12	Hokkaido
EI02	Cavan	IT09	Lombardia	JA13	Hyogo
EI03	Clare	IT10	Marche	*JA14	Ibaraki
EI04	Cork	IT11	Molise	JA15	Ishikawa
EI06	Donegal	IT12	Piemonte	JA16	Iwate
EI07	Dublin	IT13	Puglia	JA17	Kagawa
EI10	Galway	IT14	Sardegna	JA18	Kagoshima
EI11	Kerry	*IT15	Sicilia	JA19	Kanagawa
EI12	Kildare	IT16	Toscana	JA20	Kochi
EI13	Kilkenny	IT17	Trentino-Alto Adige	JA21	Kumamoto
EI15	Laois	IT18	Umbria	JA22	Kyoto
EI14	Leitrim	IT19	Valle d'Aosta	JA23	Mie
EI16	Limerick	IT20	Veneto	JA24	Miyagi
EI18	Longford	* JM JAMAICA		JA25	Miyazaki
EI19	Louth	JM01	Clarendon	JA26	Nagano
EI20	Mayo	JM02	Hanover	JA27	Nagasaki
EI21	Meath	JM17	Kingston	JA28	Nara
EI22	Monaghan	JM04	Manchester	JA29	Niigata
EI23	Offaly	JM07	Portland	JA30	Oita
EI24	Roscommon	JM08	Saint Andrew	JA31	Okayama
EI25	Sligo	JM09	Saint Ann	JA47	Okinawa
EI26	Tipperary	JM10	Saint Catherine	JA32	Osaka
EI27	Waterford	JM11	Saint Elizabeth	JA33	Saga
EI29	Westmeath	JM12	Saint James	JA34	Saitama
EI30	Wexford	JM13	Saint Mary	JA35	Shiga
EI31	Wicklow	JM14	Saint Thomas	JA36	Shimane
* IS ISRAEL		JM15	Trelawny	JA37	Shizuoka
IS01	HaDarom	JM16	Westmoreland	JA38	Tochigi
				JA39	Tokushima

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
JA40	Tokyo	KR03	Phoenix Islands	*LA02	Champasak
JA41	Tottori			LA03	Houaphan
JA42	Toyama	KN	KOREA, DEMOCRATIC PEOPLE'S REPUBLIC OF	*LA04	Khammouan
JA43	Wakayama	KN01	Chagang-do	LA05	Louang Namtha
JA44	Yamagata	KN16	Hamgyong-bukto	LA06	Louangphrabang
JA45	Yamaguchi	KN03	Hamgyong-namdo	LA07	Oudomxai
JA46	Yamanashi	KN07	Hwanghae-bukto	LA08	Phongsali
DQ	JARVIS ISLAND	KN06	Hwanghae-namdo	LA09	Saravan
JE	JERSEY	KN08	Kaesong-si	LA10	Savannakhet
JQ	JOHNSTON ATOLL	KN09	Kangwon-do	LA11	Vientiane
		KN14	Namp'o-si	LA13	Xaignabouri
		KN11	P'yongan-bukto	LA14	Xiangkhoang
*JO	JORDAN	KN15	P'yongan-namdo	LG	LATVIA
JO02	Al Balqa'	KN12	P'yongyang-si	LE	LEBANON
JO09	Al Karak	KN13	Yanggang-do		
JO10	Al Mafraq				
JO11	'Amman	* KS	KOREA, REPUBLIC OF		
JO12	At Tafileh	KS01	Cheju-do		
JO13	Az Zarqa	KS03	Cholla-bukto		
JO14	Irbid	KS16	Cholla-namdo		
JO07	Ma'an	KS05	Ch'ungch'ong-bukto	*LE04	Beirut
		KS17	Ch'ungch'ong-namdo	LE05	Mount Lebanon
JU	JUAN DE NOVA ISLAND	KS12	Inch'on-jikhalsi	LE06	South
		KS06	Kangwon-do	LE07	Nabatieh
KZ	KAZAKHSTAN	KS18	Kwangju-jikhalsi	LE08	Beqaa
		KS13	Kyonggi-do	LE09	North
		KS14	Kyongsang-bukto	LE10	Aakkar
*KE	KENYA	KS08	Kyongsang-namdo	LE11	Baalbek-Hermel
KE01	Central	KS10	Pusan-jikhalsi	LT	LESOTHO
KE02	Coast	KS11	Soul-t'ukpyolsi	LT10	Berea
KE03	Eastern	KS15	Taegu-jikhalsi	LT11	Butha-Buthe
KE05	Nairobi Area	KS19	Taejon-jikhalsi	LT12	Leribe
KE06	North-Eastern			LT13	Mafeteng
KE07	Nyanza	KU	KUWAIT	LT14	Maseru
KE08	Rift Valley	KU01	Al Ahmadi	LT15	Mohales Hoek
KE09	Western	KU02	Al Kuwayt	LT16	Mokhotlong
KQ	KINGMAN REEF	KU03	Hawalli	LT17	Qachas Nek
				LT18	Quthing
				LT19	Thaba-Tseka
KR	KIRIBATI	KG	KYRGYZSTAN		
KR01	Gilbert Islands	LA	LAOS	LI	LIBERIA
KR02	Line Islands	LA01	Attapu	LI01	Bong

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
LI03	Grand Bassa	LS06	Ruggell	MI15	Mzimba
LI04	Grand Cape Mount	LS07	Schaan	MI17	Nkhata Bay
LI02	Grand Jide	LS08	Schellenberg	MI18	Nkhotakota
LI05	Lofa	LS09	Triesen	MI19	Nsanje
LI06	Maryland	LS10	Triesenberg	MI16	Ntcheu
LI07	Monrovia	LS11	Vaduz	MI20	Ntchisi
LI08	Montserrat	LH	LITHUANIA	MI21	Rumphi
LI09	Nimba	LU	LUXEMBOURG	MI22	Salima
LI10	Sino	LY	LIBYA	MI05	Thyolo
		LY01	Ajdabiya	MI23	Zomba
		LY02	Al `Aziziyah	* MY	MALAYSIA
		LY03	Al Fatih	MY01	Johor
		LY47	Al Jabal al Akhdar	MY02	Kedah
		LY48	Al Jufrah	MY03	Kelantan
		LY49	Al Khums	MY15	Labuan
		LY50	Al Kufrah	MY04	Melaka
		LY51	An Nuqat al Khams	MY05	Negeri Sembilan
		LY13	Ash Shati'	MY06	Pahang
		LY52	Awbari	MY07	Perak
		LY53	Az Zawiyah	MY08	Perlis
		LY54	Banghazi	MY09	Pulau Pinang
		LY55	Darnah	MY16	Sabah
		LY56	Ghadamis	MY11	Sarawak
		LY57	Gharyan	MY12	Selangor
		LY58	Misratah	MY13	Terengganu
		LY30	Murzuq	MY14	Wilayah Persekutuan
		LY34	Sabha	MI	MALAWI
		LY59	Sawfajjin	MI24	Blantyre
		LY60	Surt	MI02	Chikwawa
		LY61	Tarabulus	MI03	Chiradzulu
		LY41	Tarhunah	MI04	Chitipa
		LY42	Tubruq	MI06	Dedza
		LY62	Yafran	MI07	Dowa
		LY45	Zlitan	MI08	Karonga
		LS	LIECHTENSTEIN	MI09	Kasungu
		LS01	Balzers	MI11	Lilongwe
		LS02	Eschen	MI10	Machinga
		LS03	Gamprin	MI12	Mangochi
		LS04	Mauren	MI13	Mchinji
		LS05	Planken	MI14	Mulanje
				MI25	Mwanza
				MV	MALDIVES
				MV02	Aliff
				MV20	Baa
				MV17	Daalu
				MV14	Faafu
				MV27	Gaafu Aliff
				MV28	Gaafu Daalu
				MV07	Haa Aliff
				MV23	Haa Daalu
				MV26	Kaafu
				MV05	Laamu
				MV03	Laviyani
				MV12	Meemu
				MV29	Naviyani

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
MV25	Noonu	MP13	Flacq	MX31	Yucatan
MV13	Raa	MP14	Grand Port	MX32	Zacatecas
MV01	Seenu	MP15	Moka	MQ	MIDWAY ISLANDS
MV24	Shaviyani	MP16	Pamplemousses		
MV08	Thaa	MP17	Plaines Wilhems		
MV04	Waavu	MP18	Port Louis	MD	MOLDOVA
		MP19	Riviere du Rempart		
ML	MALI	MP23	Rodrigues	MN	MONACO
ML01	Bamako	MP20	Savanne	MN01	La Condamine
ML02	Gao			MN02	Monaco
ML03	Kayes	MF	MAYOTTE	MN03	Monte-Carlo
ML07	Koulakoro				
ML04	Mopti	* MX	MEXICO	*MG	MONGOLIA
ML05	Segou	MX01	Aguascalientes	MG01	Arhangay
ML06	Sikasso	MX02	Baja California	MG02	Bayanhongor
ML08	Tombouctou	MX03	Baja California Sur	MG03	Bayan-Olgii
		MX04	Campeche	MG21	Bulgan
MT	MALTA	*MX05	Chiapas	MG05	Darhan
		MX06	Chihuahua	MG06	Dornod
*IM	MAN, ISLE OF	MX07	Coahuila de Zaragoza	MG07	Dornogovi
RM	MARSHALL ISLANDS	MX08	Colima	MG08	Dundgovi
		MX09	Distrito Federal	MG09	Dzavhan
		MX10	Durango	MG22	Erdenet
* MB	MARTINIQUE	MX11	Guanajuato	MG10	Govi-Altay
		MX12	Guerrero	MG11	Hentiy
MR	MAURITANIA	MX13	Hidalgo	MG12	Hovd
MR07	Adrar	MX14	Jalisco	MG13	Hovsgol
MR03	Assaba	MX15	Mexico	MG14	Omnogovi
MR05	Brakna	MX16	Michoacan de Ocampo	MG15	Ovorhangay
MR08	Dakhlet Nouadhibou	MX17	Morelos	MG16	Selenge
MR04	Gorgol	MX18	Nayarit	MG17	Suhbaatar
MR10	Guidimaka	MX19	Nuevo Leon	MG18	Tov
MR01	Hodh Ech Chargui	MX20	Oaxaca	MG20	Ulaanbaatar
MR02	Hodh El Gharbi	MX21	Puebla	MG19	Uvs
MR12	Inchiri	MX22	Queretaro de Arteaga		
MR09	Tagant	MX23	Quintana Roo	MW	MONTENEGRO
MR11	Tiris Zemmour	*MX24	San Luis Potosi		
MR06	Trarza	MX25	Sinaloa	MH	MONTSERRAT
		MX26	Sonora	MH01	Saint Anthony
MP	MAURITIUS	MX27	Tabasco	MH02	Saint Georges
MP21	Agalega Islands	*MX28	Tamaulipas	MH03	Saint Peter
MP12	Black River	MX29	Tlaxcala		
MP22	Cargados Carajos	MX30	Veracruz-Llave	*MO	MOROCCO

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
MO01	Agadir	MZ03	Inhambane	NR06	Boe
MO02	Al Hoceima	*MZ10	Manica	NR07	Buada
MO03	Azilal	MZ04	Maputo	NR08	Denigomodu
MO05	Beni Mellal	MZ06	Nampula	NR09	Ewa
MO04	Ben Slimane	MZ07	Niassa	NR10	Ijuw
MO06	Boulemane	MZ05	Sofala	NR11	Meneng
MO07	Casablanca	MZ08	Tete	NR12	Nibok
MO08	Chaouen	MZ09	Zambezia	NR13	Uaboe
MO09	El Jadida			NR14	Yaren
MO10	El Kelaa des Srarhna	WA	NAMIBIA		
MO11	Er Rachidia	WA01	Bethanien	BQ	NAVASSA ISLAND
MO12	Essaouira	WA03	Boesmanland		
MO13	Fes	WA02	Caprivi Oos	NP	NEPAL
MO14	Figuig	WA22	Damaraland	NP01	Bagmati
MO33	Guelmim	WA04	Gobabis	NP02	Bheri
MO34	Ifraane	WA05	Grootfontein	NP03	Dhawalagiri
MO15	Kenitra	WA23	Hereroland Oos	NP04	Gandaki
MO16	Khemisset	WA24	Hereroland Wes	NP05	Janakpur
MO17	Khenifra	WA06	Kaokoland	NP06	Karnali
MO18	Khouribga	WA20	Karasburg	NP07	Kosi
MO35	Laayoune	WA07	Karibib	NP08	Lumbini
MO41	Larache	WA25	Kavango	NP09	Mahakali
MO19	Marrakech	WA08	Keetmanshoop	NP10	Mechi
MO20	Meknes	WA09	Luderitz	NP11	Narayani
MO21	Nador	WA10	Maltahohe	NP12	Rapti
MO22	Ouarzazate	WA26	Mariental	NP13	Sagarmatha
MO23	Oujda	WA27	Namaland	NP14	Seti
MO24	Rabat-Sale	WA11	Okahandja		* NL NETHERLANDS
MO25	Safi	WA12	Omaruru	NL01	Drenthe
MO26	Settat	WA13	Otjiwarongo	NL12	Dronten
MO38	Sidi Kacem	WA14	Outjo	NL02	Friesland
MO27	Tanger	WA15	Owambo	NL03	Gelderland
MO36	Tan-Tan	WA16	Rehoboth	NL04	Groningen
MO37	Taounate	WA17	Swakopmund	NL14	Lelystad
MO39	Taroudannt	WA18	Tsumeb	NL05	Limburg
MO29	Tata	WA21	Windhoek	NL06	Noord-Brabant
MO30	Taza			NL07	Noord-Holland
MO40	Tetouan	NR00	NAURU	NL08	Overijssel
MO32	Tiznit	NR01	Aiwo	NL09	Utrecht
MZ	MOZAMBIQUE	NR02	Anabar	NL10	Zeeland
MZ01	Cabo Delgado	NR03	Anetan	NL13	Zuidelijke IJsselmeerpolders
MZ02	Gaza	NR04	Anibare		
		NR05	Baiti		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
NL11	Zuid-Holland	NZ40	Kairanga	NZ83	Waiapu
NT	NETHERLANDS ANTILLES	NZ41	Kiwitea	NZD8	Waiheke
NC	NEW CALEDONIA	NZ43	Lake	NZ84	Waihemeo
* NZ	NEW ZEALAND	NZ45	Mackenzie	NZ85	Waikato
NZ01	Akaroa	NZ46	Malvern	NZ86	Waikohu
NZ03	Amuri	NZE1	Manaia	NZ88	Waimairi
NZ04	Ashburton	NZ47	Manawatu	NZ89	Waimarino
NZ07	Bay of Islands	NZ48	Mangonui	NZ90	Waimate
NZ08	Bruce	NZ49	Maniototo	NZ91	Waimate West
NZ09	Buller	NZ50	Marlborough	NZ92	Waimea
NZ10	Chatham Islands	NZ51	Masterton	NZ93	Waipa
NZ11	Cheviot	NZ52	Matamata	NZ95	Waipawa
NZ12	Clifton	NZ53	Mount Herbert	NZ96	Waipukurau
NZ13	Clutha	NZ54	Ohinemuri	NZ97	Wairarapa South
NZ14	Cook	NZ55	Opotiki	NZ98	Wairewa
NZ16	Dannevirke	NZ56	Oroua	NZ99	Wairoa
NZ17	Egmont	NZ57	Otamatea	NZA4	Waitaki
NZ18	Eketahuna	NZ58	Otorohanga	NZA6	Waitomo
NZ19	Ellesmere	NZ59	Oxford	NZA8	Waitotara
NZ20	Eltham	NZ60	Pahiatua	NZE6	Wallace
NZ21	Eyre	NZ61	Paparua	NZB2	Wanganui
NZ22	Featherston	NZ63	Patea	NZE5	Waverley
NZ24	Franklin	NZ65	Piako	NZB3	Westland
NZ26	Golden Bay	NZ66	Pohangina	NZB4	Whakatane
NZ27	Great Barrier Island	NZ67	Raglan	NZA1	Whangarei
NZ28	Grey	NZ68	Rangiora	NZA2	Whangaroa
NZ29	Hauraki Plains	NZ69	Rangitikei	NZA3	Woodville
NZ30	Hawera	NZ70	Rodney	*NU	NICARAGUA
NZ31	Hawke's Bay	NZ71	Rotorua	NU01	Boaco
NZ32	Heathcote	NZE2	Runanga	NU02	Carazo
NZD9	Hikurangi	NZE3	Saint Kilda	NU03	Chinandega
NZ33	Hobson	NZD5	Silverpeaks	NU04	Chontales
NZ34	Hokianga	NZ72	Southland	NU05	Esteli
NZ35	Horowhenua	NZ73	Stewart Island	NU06	Granada
NZD4	Hurunui	NZ74	Stratford	NU07	Jinotega
NZ36	Hutt	NZD6	Strathallan	NU08	Leon
NZ37	Inangahua	NZ76	Taranaki	NU09	Madriz
NZ38	Inglewood	NZ77	Taumarunui	NU10	Managua
NZ39	Kaikoura	NZ78	Taupo	NU11	Masaya
		NZE4	Thames-Coromandel	NU12	Matagalpa
		NZ81	Tuapeka	NU13	Nueva Segovia
		NZ82	Vincent	NU14	Rio San Juan

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
NU15	Rivas	NI44	Yobe	* PM	PANAMA
NU16	Zelaya	NE	NIUE	PM01	Bocas del Toro
*NG	NIGER	NF	NORFOLK ISLAND	PM02	Chiriqui
NG01	Agadez	CQ	NORTHERN MARIANA ISLANDS	PM03	Cocle
NG02	Diffa	* NO	NORWAY	PM04	Colon
NG03	Dosso	NO01	Akershus	PM05	Darien
NG04	Maradi	NO02	Aust-Agder	PM06	Herrera
NG05	Niamey	NO04	Buskerud	PM07	Los Santos
NG06	Tahoua	NO05	Finnmark	PM08	Panama
NG07	Zinder	NO06	Hedmark	PM09	San Blas
*NI	NIGERIA	NO07	Hordaland	PM10	Veraguas
NI34	Abia	NO08	More og Romsdal	*PP	PAPUA NEW GUINEA
NI11	Abuja Capital Territory	NO09	Nordland	PP01	Central
NI35	Adamawa	NO10	Nord-Trondelag	PP08	Chimbu
NI21	Akwa Ibom	NO11	Oppland	PP09	Eastern Highlands
NI25	Anambra	NO12	Oslo	PP10	East New Britain
NI06	Bauchi	NO13	Ostfold	PP11	East Sepik
NI26	Benue	NO14	Rogaland	PP19	Enga
NI27	Borno	NO15	Sogn og Fjordane	PP02	Gulf
NI22	Cross River	NO16	Sor-Trondelag	PP12	Madang
NI36	Delta	NO17	Telemark	PP13	Manus
NI37	Edo	NO18	Troms	PP03	Milne Bay
NI38	Enugu	NO19	Vest-Agder	PP14	Morobe
NI28	Imo	NO20	Vestfold	PP20	National Capital
NI39	Jigawa	MU	OMAN	PP15	New Ireland
NI23	Kaduna	*PK	PAKISTAN	PP04	Northern
NI29	Kano	PK06	Azad Kashmir	PP07	North Solomons
NI24	Katsina	PK02	Balochistan	PP18	Sandaun
NI40	Kebbi	PK01	Federally Administered Tribal Areas	PP05	Southern Highlands
NI41	Kogi	PK08	Islamabad	PP06	Western
NI30	Kwara	PK07	Northern Areas	PP16	Western Highlands
NI05	Lagos	PK03	North-West Frontier	PP17	West New Britain
NI31	Niger	PK04	Punjab	PF	PARACEL ISLANDS
NI16	Ogun	PK05	Sindh	PA	PARAGUAY
NI17	Ondo	LQ	PALMYRA ATOLL	PA18	Alto Paraguay
NI42	Osun			PA01	Alto Parana
NI32	Oyo			PA02	Amambay
NI19	Plateau			PA03	Boqueron
NI10	Rivers			PA04	Caaguazu
NI33	Sokoto				
NI43	Taraba				

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
PA05	Caazapá	RP01	Abra	RP24	Davao
PA19	Canindeyu	RP02	Agusan del Norte	RPC3	Davao City
PA06	Central	RP03	Agusan del Sur	RP25	Davao del Sur
PA20	Chaco	RP04	Aklan	RP26	Davao Oriental
PA07	Concepcion	RP05	Albay	RPC4	Dipolog
PA08	Cordillera	RPA1	Angeles	RPC5	Dumaguete
PA10	Guaira	RP06	Antique	RP23	Eastern Samar
PA11	Itapua	RPG8	Aurora	RPC6	General Santos
PA12	Misiones	RPA2	Bacolod	RPC7	Gingoog
PA13	Neembucu	RPA3	Bago	RP27	Ifugao
PA21	Nueva Asuncion	RPA4	Baguio	RPC8	Iligan
PA15	Paraguari	RPA5	Bais	RP28	Ilocos Norte
PA16	Presidente Hayes	RP22	Basilan	RP29	Ilocos Sur
PA17	San Pedro	RPA6	Basilan City	RP30	Iloilo
		RP07	Bataan	RPC9	Iloilo City
* PE	PERU	RP08	Batanes	RPD1	Iriga
PE01	Amazonas	RP09	Batangas	RP31	Isabela
PE02	Ancash	RPA7	Batangas City	RP32	Kalinga-Apayao
PE03	Apurimac	RP10	Benguet	RPD2	La Carlota
PE04	Arequipa	RP11	Bohol	*RP33	Laguna
PE05	Ayacucho	RP12	Bukidnon	RP34	Lanao del Norte
PE06	Cajamarca	RP13	Bulacan	RP35	Lanao del Sur
PE07	Callao	RPA8	Butuan	RPD3	Laoag
PE08	Cusco	RPA9	Cabanatuan	RPD4	Lapu-Lapu
PE09	Huancavelica	RPB1	Cadiz	RP36	La Union
PE10	Huanuco	RP14	Cagayan	RPD5	Legaspi
PE11	Ica	RPB2	Cagayan de Oro	*RP37	Leyte
PE12	Junin	RPB3	Calbayog	RPD6	Lipa
PE13	La Libertad	RPB4	Caloocan	RPD7	Lucena
PE14	Lambayeque	RP15	Camarines Norte	RP56	Maguindanao
PE15	Lima	RP16	Camarines Sur	RPD8	Mandaue
PE16	Loreto	RP17	Camiguin	RPD9	Manila
PE17	Madre de Dios	RPB5	Canlaon	RPE1	Marawi
PE18	Moquegua	RP18	Capiz	RP38	Marinduque
PE19	Pasco	RP19	Catanduanes	RP39	Masbate
PE20	Piura	RP20	Cavite	RP40	Mindoro Occidental
PE21	Puno	RPB6	Cavite City	RP41	Mindoro Oriental
PE22	San Martin	RP21	Cebu	RP42	Misamis Occidental
PE23	Tacna	RPB7	Cebu City	RP43	Misamis Oriental
PE24	Tumbes	RPB8	Cotabato	RP44	Mountain
PE25	Ucayali	RPB9	Dagupan	RPE2	Naga
		RPC1	Danao	RPH3	Negros Occidental
*RP	PHILIPPINES	RPC2	Dapitan	RP46	Negros Oriental

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
RP57	North Cotabato	RPG5	Toledo	PL56	Rzeszow
RP67	Northern Samar	RPG6	Trece Martires	PL57	Siedlce
RP47	Nueva Ecija	RP64	Zambales	PL58	Sieradz
RP48	Nueva Vizcaya	RPG7	Zamboanga	PL59	Skierniewice
RPE3	Olongapo	RP65	Zamboanga del Norte	PL60	Slupsk
RPE4	Ormoc	RP66	Zamboanga del Su	PL61	Suwalki
RPE5	Oroquieta	r		PL62	Szczecin
RPE6	Ozamis	PC	PITCAIRN ISLANDS	PL63	Tarnobrzeg
RPE7	Pagadian	* PL	POLAND	PL64	Tarnow
RP49	Palawan	PL23	Biala Podlaska	PL65	Torun
RPE8	Palayan	PL24	Bialystok	PL66	Walbrzych
RP50	Pampanga	*PL25	Bielsko	PL67	Warszawa
RP51	Pangasinan	PL26	Bydgoscz	PL68	Wloclawek
RPE9	Pasay	PL27	Chelm	PL69	Wroclaw
RPF1	Puerto Princesa	PL28	Ciechanow	PL70	Zamosc
RPH2	Quezon	PL29	Czestochowa	PL71	Zielona Gora
RPF2	Quezon City	PL30	Elblag	*PO	PORTUGAL
RP68	Quirino	PL31	Gdansk	PO02	Aveiro
RP53	Rizal	PL32	Gorzow	PO23	Azores
RP54	Romblon	PL33	Jelenia Gora	PO03	Beja
RPF3	Roxas	PL34	Kalisz	PO04	Braga
RP55	Samar	*PL35	Katowice	PO05	Braganca
RPF4	San Carlos, Negros Occidental	PL36	Kielce	PO06	Castelo Branco
RPF5	San Carlos, Pangasinan	PL37	Konin	PO07	Coimbra
RPF6	San Jose	PL38	Koszalin	PO08	Evora
RPF7	San Pablo	PL39	Krakow	PO09	Faro
RPF8	Silay	PL40	Krosno	PO11	Guarda
RP69	Siquijor	PL41	Legnica	PO13	Leiria
RP58	Sorsogon	PL42	Leszno	PO14	Lisboa
RP70	South Cotabato	PL43	Lodz	PO10	Madeira
RP59	Southern Leyte	PL44	Lomza	PO16	Portalegre
RP71	Sultan Kudarat	PL45	Lublin	PO17	Porto
RP60	Sulu	PL46	Nowy Sacz	PO18	Santarem
RPF9	Surigao	PL47	Olsztyn	PO19	Setubal
RP61	Surigao del Norte	PL48	Opole	PO20	Viana do Castelo
RP62	Surigao del Sur	PL49	Ostroleka	PO21	Vila Real
RPG1	Tacloban	PL50	Pila	PO22	Viseu
RPG2	Tagaytay	PL51	Piotrkow	*RQ	PUERTO RICO
RPG3	Tagbilaran	PL52	Plock	QA	QATAR
RPG4	Tangub	PL53	Poznan		
RP63	Tarlac	PL54	Przemysl		
RP72	Tawitawi	PL55	Radom		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
RE	REUNION	RO40	Vrancea	ST05	Dennery
*RO	ROMANIA	* RS	RUSSIA	ST06	Gros-Islet
RO01	Alba	*RW	RWANDA	ST07	Laborie
RO02	Arad	RW01	Butare	ST08	Micoud
RO03	Arges	RW02	Byumba	ST11	Praslin
RO04	Bacau	RW03	Cyangugu	ST09	Soufriere
RO05	Bihor	RW04	Gikongoro	ST10	Vieux-Fort
RO06	Bistrita-Nasaud	RW05	Gisenyi	SB	ST. PIERRE AND MIQUELON
RO07	Botosani	RW06	Gitarama	VC	ST. VINCENT AND THE GRENADINES
RO08	Braila	RW07	Kibungo	VC01	Charlotte
*RO09	Brasov	RW08	Kibuye	VC06	Grenadines
RO10	Bucuresti	RW09	Kigali	VC02	Saint Andrew
RO11	Buzau	RW10	Ruhengeri	VC03	Saint David
RO41	Calarasi	SC	ST. KITTS AND NEVIS	VC04	Saint George
RO12	Caras-Severin	SC01	Christ Church Nichola Town	VC05	Saint Patrick
RO13	Cluj	SC02	Saint Anne Sandy Point	SM	SAN MARINO
RO14	Constanta	SC03	Saint George Basseterre	SM01	Acquaviva
RO15	Covasna	SC04	Saint George Gingerland	SM06	Borgo Maggiore
RO16	Dimbovita	SC05	Saint James Windward	SM02	Chiesanuova
RO17	Dolj	SC06	Saint John Capisterre	SM03	Domagnano
RO18	Galati	SC07	Saint John Figtree	SM04	Faetano
RO19	Gorj	SC08	Saint Mary Cayon	SM05	Fiorentino
RO42	Giurgiu	SC09	Saint Paul Capisterre	SM08	Monte Giardino
RO20	Harghita	SC10	Saint Paul Charlestown	SM07	San Marino
RO21	Hunedoara	SC11	Saint Peter Basseterre	SM09	Serravalle
RO22	Ialomita	SC12	Saint Thomas Lowland	TP	SAO TOME AND PRINCIPE
RO23	Iasi	SC13	Saint Thomas Middle Island	TP01	Principe
RO25	Maramures	SC15	Trinity Palmetto Point	TP02	Sao Tome
RO26	Mehedinti	SH	ST. HELENA	SA	SAUDI ARABIA
RO27	Mures	SH01	Ascension	SA02	Al Bahah
RO28	Neamt	SH02	Saint Helena	SA15	Al Hudud ash Shamaliyah
RO29	Olt	SH03	Tristan da Cunha	SA03	Al Jawf
RO30	Prahova	*ST	ST. LUCIA	SA05	Al Madinah
RO31	Salaj	ST01	Anse-la-Raye	SA08	Al Qasim
RO32	Satu Mare	ST03	Castries	SA09	Al Qurayyat
RO33	Sibiu	ST04	Choiseul		
RO34	Suceava	ST02	Dauphin		
RO35	Teleorman				
RO36	Timis				
RO37	Tulcea				
RO38	Vaslui				
RO39	Vilcea				

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
SA10	Ar Riyad	SE20	Pointe La Rue	*SF	SOUTH AFRICA
SA06	Ash Sharqiyah	SE21	Port Glaud	SF01	Cape Province
SA11	`Asir	SE22	Saint Louis	SF02	Natal
SA13	Ha'il	SE23	Takamaka	SF03	Orange Free State
SA17	Jizan	SL	SIERRA LEONE	SF04	Transvaal
SA14	Makkah	SL01	Eastern	SX	SOUTH GEORGIA AND THE SOUTH SANDWICH ISLANDS
SA16	Najran	SL02	Northern		
SA19	Tabuk	SL03	Southern		
		SL04	Western Area		
*SG	SENEGAL				
SG01	Dakar			* SP	SPAIN
SG03	Diourbel			SP51	Andalucia
SG09	Fatick	* SN	SINGAPORE	SP52	Aragon
SG10	Kaolack			SP34	Asturias
SG11	Kolda	* LO	SLOVAKIA	SP53	Canarias
SG08	Louga			SP39	Cantabria
SG04	Saint-Louis	* SI	SLOVENIA	SP54	Castilla-La Mancha
SG05	Tambacounda	BP	SOLOMON ISLANDS	SP55	Castilla y Leon
SG07	Thies	BP05	Central	SP56	Cataluna
SG12	Ziguinchor	BP06	Guadalcanal	SP57	Extremadura
		BP07	Isabel	*SP58	Galicia
*SR	SERBIA	BP08	Makira	SP07	Islas Baleares
		BP03	Malaita	SP27	La Rioja
SE	SEYCHELLES	BP09	Temotu	SP29	Madrid
SE01	Anse aux Pins	BP04	Western	SP31	Murcia
SE02	Anse Boileau			SP32	Navarra
SE03	Anse Etoile	*SO	SOMALIA	SP59	Pais Vasco
SE04	Anse Louis	SO01	Bakool	SP60	Valenciana
SE05	Anse Royale	SO02	Banaadir		
SE06	Baie Lazare	SO03	Bari	PG	SPRATLY ISLANDS
SE07	Baie Sainte Anne	SO04	Bay		
SE08	Beau Vallon	SO05	Galguduud	*CE	SRI LANKA
SE09	Bel Air	SO06	Gedo	CE01	Amparai
SE10	Bel Ombre	SO07	Hiiraan	CE02	Anuradhapura
SE11	Cascade	SO08	Jubbada Dhexe	CE03	Badulla
SE12	Glacis	SO09	Jubbada Hoose	CE04	Batticaloa
SE13	Grand' Anse (Mahe)	SO10	Mudug	CE23	Colombo
SE14	Grand' Anse (Praslin)	SO11	Nugaal	CE06	Galle
SE15	La Digue	SO12	Sanaag	CE24	Gampaha
SE16	La Riviere Anglaise	SO13	Shabeellaha Dhexe	CE07	Hambantota
SE17	Mont Buxton	SO14	Shabeellaha Hoose	CE25	Jaffna
SE18	Mont Fleuri	SO15	Togdheer	CE09	Kalutara
SE19	Plaisance	SO16	Woqooyi Galbeed	CE10	Kandy

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
CE11	Kegalla	WZ05	Praslin	SZ12	Neuchatel
CE12	Kurunegala	WZ04	Shiselweni	SZ13	Nidwalden
CE26	Mannar			SZ14	Obwalden
CE14	Matale	* SW	SWEDEN	SZ15	Sankt Gallen
CE15	Matara	SW01	Alvsborgs Lan	SZ16	Schaffhausen
CE16	Moneragala	SW02	Blekinge Lan	SZ17	Schwyz
CE27	Mullaittivu	SW03	Gavleborgs Lan	SZ18	Solothurn
CE17	Nuwara Eliya	SW04	Goteborgs och Bohus Lan	SZ19	Thurgau
CE18	Polonnaruwa	SW05	Gotlands Lan	SZ20	Ticino
CE19	Puttalam	SW06	Hallands Lan	SZ21	Uri
CE20	Ratnapura	SW07	Jamtlands Lan	SZ22	Valais
CE21	Trincomalee	SW08	Jonkopings Lan	SZ23	Vaud
CE28	Vavuniya	SW09	Kalmar Lan	SZ24	Zug
		SW10	Kopparbergs Lan	*SZ25	Zurich
*SU	SUDAN	SW11	Kristianstads Lan		
SU26	A`ali an Nil	SW12	Kronobergs Lan	*SY	SYRIA
SU28	Al Istiwa'iyah	SW13	Malmohus Lan	SY01	Al Hasakah
SU29	Al Khartum	SW14	Norrbottens Lan	SY02	Al Ladhiqiyah
SU27	Al Wusta	SW15	Orebro Lan	SY03	Al Qunaytirah
SU30	Ash Shamaliyah	SW16	Ostergotlands Lan	SY04	Ar Raqqah
SU31	Ash Sharqiyah	SW17	Skaraborgs Lan	SY05	As Suwayda'
SU32	Bahr al Ghazal	SW18	Sodermanlands Lan	SY06	Dar'a
SU33	Darfur	SW26	Stockholms Lan	SY07	Dayr az Zawr
SU34	Kurdufan	SW21	Uppsala Lan	SY13	Dimashq
		SW22	Varmlands Lan	SY09	Halab
NS	SURINAME	SW23	Vasterbottens Lan	SY10	Hamah
NS10	Brokopondo	SW24	Vasternorrlands Lan	SY11	Hims
NS11	Commewijne	SW25	Vastmanlands Lan	SY12	Idlib
NS12	Coronie			SY08	Rif Dimashq
NS13	Marowijne	* SZ	SWITZERLAND	SY14	Tartus
NS14	Nickerie	SZ01	Aargau		
NS15	Para	SZ02	Ausser-Rhoden	TI	TAJIKISTAN
NS16	Paramaribo	SZ03	Basel-Landschaft		
NS17	Saramacca	SZ04	Basel-Stadt	*TZ	TANZANIA
NS18	Sipaliwini	SZ05	Bern	TZ01	Arusha
NS19	Wanica	SZ06	Fribourg	TZ23	Dar es Salaam
		SZ07	Geneve	TZ03	Dodoma
SV	SVALBARD	SZ08	Glarus	TZ04	Iringa
		SZ09	Graubunden	TZ05	Kigoma
WZ	SWAZILAND	SZ10	Inner-Rhoden	TZ06	Kilimanjaro
WZ01	Hhohho	SZ26	Jura	TZ07	Lindi
WZ02	Lubombo	SZ11	Luzern	TZ08	Mara
WZ03	Manzini			TZ09	Mbeya

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
TZ10	Morogoro	TH27	Nakhon Ratchasima	TH19	Udon Thani
TZ11	Mtwara	TH16	Nakhon Sawan	TH15	Uthai Thani
TZ12	Mwanza	TH64	Nakhon Si Thammarat	TH10	Uttaradit
TZ13	Pemba North	TH04	Nan	TH70	Yala
TZ20	Pemba South	TH31	Narathiwat	TH72	Yasothon
TZ02	Pwani	TH17	Nong Khai	*TO	TOGO
TZ24	Rukwa	TH38	Nonthaburi	TO01	Amlame
TZ14	Ruvuma	TH39	Pathum Thani	TO02	Aneho
TZ15	Shinyanga	TH69	Pattani	TO03	Atakpame
TZ16	Singida	TH61	Phangnga	TO15	Badou
TZ17	Tabora	TH66	Phatthalung	TO04	Bafilo
*TZ18	Tanga	TH41	Phaya	TO05	Bassar
TZ21	Zanzibar Central/South	TH14	Phetchabun	TO06	Dapaong
TZ22	Zanzibar North	TH56	Phetchaburi	TO07	Kante
TZ25	Zanzibar Urban/West	TH13	Phichit	TO08	Klouto
TZ19	Ziwa Magharibi	TH12	Phitsanulok	TO14	Kpagouda
*TH THAILAND		TH36	Phra Nakhon Si Ayutthaya	TO09	Lama-Kara
TH35	Ang Thong	TH07	Phrae	TO10	Lome
TH28	Buriram	TH62	Phuket	TO11	Mango
TH44	Chachoengsao	TH45	Prachin Buri	TO12	Niamtougou
TH32	Chai Nat	TH57	Prachuap Khiri Khan	TO13	Notse
TH26	Chaiyaphum	TH59	Ranong	TO16	Sotouboua
TH48	Chanthaburi	TH52	Ratchaburi	TO17	Tabligbo
TH02	Chiang Mai	TH47	Rayong	TO19	Tchamba
TH03	Chiang Rai	TH25	Roi Et	TO20	Tchaoudjo
TH46	Chon Buri	*TH20	Sakon Nakhon	TO18	Tsevie
*TH58	Chumphon	TH42	Samut Prakan	TO21	Vogan
TH23	Kalasin	TH55	Samut Sakhon	TL TOKELAU	
TH11	Kamphaeng Phet	TH54	Samut Songkhram	TN TONGA	
TH50	Kanchanaburi	TH37	Saraburi	TN01	Ha`apai
TH22	Khon Kaen	TH67	Satun	TN02	Tongatapu
TH63	Krabi	TH33	Sing Buri	TN03	Vava`u
TH40	Krung Thep	TH30	Sisaket	*TD TRINIDAD AND TOBAGO	
TH06	Lampang	TH68	Songkhla	TD01	Arima
TH05	Lamphun	TH09	Sukhothai	TD02	Caroni
TH18	Loei	TH51	Suphan Buri	TD03	Mayaro
TH34	Lop Buri	TH60	Surat Thani	TD04	Nariva
TH01	Mae Hong Son	TH29	Surin	TD05	Port-of-Spain
TH24	Maha Sarakham	TH08	Tak	TD06	Saint Andrew
TH43	Nakhon Nayok	TH65	Trang		
TH53	Nakhon Pathom	TH49	Trat		
TH21	Nakhon Phanom	TH71	Ubon Ratchathani		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
TD07	Saint David	TU68	Ankara	TU44	Malatya
TD08	Saint George	TU07	Antalya	TU45	Manisa
TD09	Saint Patrick	TU08	Artvin	TU72	Mardin
TD10	San Fernando	TU09	Aydin	TU48	Mugla
TD11	Tobago	TU10	Balikesir	TU49	Mus
TD12	Victoria	TU76	Batman	TU50	Nevsehir
TE	TROMELIN ISLAND	TU77	Bayburt	TU73	Nigde
		TU11	Bilecik	TU52	Ordu
PS	TRUST TERRITORY OF THE PACIFIC ISLANDS (PALAU)	TU12	Bingol	TU53	Rize
		TU13	Bitlis	TU54	Sakarya
		TU14	Bolu	TU55	Samsun
*TS	TUNISIA	TU15	Burdur	TU74	Siirt
TS14	Al Kaf	TU16	Bursa	TU57	Sinop
TS15	Al Mahdiyah	TU17	Canakkale	TU80	Sirnak
TS16	Al Munastir	TU18	Cankiri	TU58	Sivas
TS02	Al Qasrayn	TU19	Corum	TU59	Tekirdag
TS03	Al Qayrawan	TU20	Denizli	TU60	Tokat
TS26	Aryanah	TU21	Diyarbakir	TU61	Trabzon
TS17	Bajah	TU22	Edirne	TU62	Tunceli
TS18	Banzart	TU23	Elazig	TU63	Urfa
TS27	Bin `Arus	TU24	Erzincan	TU64	Usak
TS06	Jundubah	TU25	Erzurum	TU65	Van
TS28	Madanin	TU26	Eskisehir	TU66	Yozgat
TS19	Nabul	TU27	Gaziantep	TU67	Zonguldak
TS29	Qabis	TU28	Giresun	TX	TURKMENISTAN
TS10	Qafsa	TU69	Gumushane	TK	TURKS AND CAICOS ISLANDS
TS31	Qibili	TU70	Hakkari	TV	TUVALU
TS32	Safaqis	TU31	Hatay		
TS33	Sidi Bu Zayd	TU32	Icel	*UG	UGANDA
TS22	Silyanah	TU33	Isparta	UG05	Busoga
TS23	Susah	TU34	Istanbul	UG18	Central
TS34	Tatawin	TU35	Izmir	UG20	Eastern
TS35	Tawzar	TU46	Kahraman Maras	UG08	Karamoja
TS36	Tunis	TU78	Karaman	UG21	Nile
TS37	Zaghwan	TU36	Kars	UG22	North Buganda
		TU37	Kastamonu	UG23	Northern
*TU	TURKEY	TU38	Kayseri	UG12	South Buganda
TU01	Adana	TU79	Kirikkale	UG24	Southern
TU02	Adiyaman	TU39	Kirkclareli	UG25	Western
TU03	Afyon	TU40	Kirsehir		
TU04	Agri	TU41	Kocaeli		
TU75	Aksaray	TU71	Konya		
TU05	Amasya	TU43	Kutahya		

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
* UP	UKRAINE	UK04	Buckingham	UK52	Antrim
UP01	Cherkas'ka Oblast'	UK05	Cambridge	UK53	Ards
UP02	Chernihivs'ka Oblast'	UK06	Cheshire	UK54	Armagh
UP03	Chernivets'ka Oblast'	UK07	Cleveland	UK55	Ballymena
UP04	Dnipropetrovs'ka Oblast'	*UK08	Cornwall	UK56	Ballymoney
UP05	Donets'ka Oblast'	UK09	Cumbria	UK57	Banbridge
UP06	Ivano-Frankivs'ka Oblast'	UK10	Derby	UK58	Belfast
UP07	Kharkivs'ka Oblast'	UK11	Devon	UK59	Carrickfergus
UP08	Khersons'ka Oblast'	UK12	Dorset	UK60	Castlereagh
UP09	Khmel'nnyts'ka Oblast'	UK13	Durham	UK61	Coleraine
UP10	Kirovohrads'ka Oblast'	UK14	East Sussex	UK62	Cookstown
UP11	Krym, Respublika	UK15	Essex	UK63	Craigavon
UP12	Kyyiv, Misto	UK16	Gloucester	UK64	Down
UP13	Kyyivs'ka Oblast'	UK17	Greater London	UK65	Dungannon
UP14	Luhans'ka Oblast'	UK18	Greater Manchester	UK66	Fermanagh
UP15	L'vivs'ka Oblast'	*UK19	Hampshire	UK67	Larne
UP16	Mykolayivs'ka Oblast'	UK20	Hereford and Worcester	UK68	Limavady
UP17	Odes'ka Oblast'	UK21	Hertford	UK69	Lisburn
UP18	Poltavs'ka Oblast'	UK22	Humberside	UK70	Londonderry
UP19	Rivnens'ka Oblast'	UK23	Isle of Wight	UK71	Magherafelt
UP20	Sebastopol', Misto	*UK24	Kent	UK72	Moyle
UP21	Sums'ka Oblast'	UK25	Lancashire	UK73	Newry and Mourne
UP22	Ternopil's'ka Oblast'	UK26	Leicester	UK74	Newtownabbey
UP23	Vinnyts'ka Oblast'	UK27	Lincoln	UK75	North Down
UP24	Volyns'ka Oblast'	UK28	Merseyside	UK76	Omagh
UP25	Zakarpats'ka Oblast'	*UK29	Norfolk	UK77	Strabane
UP26	Zaporiz'ka Oblast'	UK31	Northampton	UK78	Borders
UP27	Zhytomyrs'ka Oblast'	UK32	Northumberland	UK79	Central
TC	UNITED ARAB EMIRATES	*UK30	North Yorkshire	UK80	Dumfries and Galloway
TC01	Abu Zaby	UK33	Nottingham	UK81	Fife
TC02	`Ajman	*UK34	Oxford	UK82	Grampian
TC04	Al Fujayrah	UK35	Shropshire	UK83	Highland
TC06	Ash Sharqah	*UK36	Somerset	UK84	Lothian
TC03	Dubayy	UK37	South Yorkshire	*UK85	Orkney
TC05	Ra's al Khaymah	UK38	Stafford	UK86	Shetland
TC07	Umm al Qaywayn	*UK39	Suffolk	UK87	Strathclyde
* UK	UNITED KINGDOM	UK40	Surrey	UK88	Tayside
UK01	Avon	UK41	Tyne and Wear	UK89	Western Isles
UK02	Bedford	UK42	Warwick	UK90	Clwyd
*UK03	Berkshire	UK43	West Midlands	UK91	Dyfed
		UK44	West Sussex	UK92	Gwent
		UK45	West Yorkshire	UK93	Gwynedd
		UK46	Wiltshire	UK94	Mid Glamorgan

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
UK95	Powys	* US42	Pennsylvania	NH10	Malakula
UK96	South Glamorgan	* US44	Rhode Island	NH11	Paama
UK97	West Glamorgan	* US45	South Carolina	NH12	Pentecote
		* US46	South Dakota	NH13	Santo/Malo
* US	UNITED STATES	* US47	Tennessee	NH14	Shepherd
* US01	Alabama	* US48	Texas	NH15	Tafea
* US02	Alaska	* US49	Utah	VT	VATICAN CITY
* US04	Arizona	* US50	Vermont	VE	VENEZUELA
* US05	Arkansas	* US51	Virginia	VE01	Amazonas
* US06	California	* US53	Washington	VE02	Anzoategui
* US08	Colorado	* US54	West Virginia	VE03	Apure
* US09	Connecticut	* US55	Wisconsin	VE04	Aragua
* US10	Delaware	* US56	Wyoming	VE05	Barinas
* US11	District of Columbia	*UY	URUGUAY	VE06	Bolivar
* US12	Florida	UY01	Artigas	VE07	Carabobo
* US13	Georgia	UY02	Canelones	VE08	Cojedes
* US15	Hawaii	UY03	Cerro Largo	VE09	Delta Amacuro
* US16	Idaho	UY04	Colonia	VE24	Dependencias Federales
* US17	Illinois	UY05	Durazno	VE10	Distrito Federal
* US18	Indiana	UY06	Flores	VE11	Falcon
* US19	Iowa	UY07	Florida	VE12	Guarico
* US20	Kansas	UY08	Lavalleja	VE13	Lara
* US21	Kentucky	UY09	Maldonado	VE14	Merida
* US22	Louisiana	UY10	Montevideo	VE15	Miranda
* US23	Maine	UY11	Paysandu	VE16	Monagas
* US24	Maryland	UY12	Rio Negro	VE17	Nueva Esparta
* US25	Massachusetts	UY13	Rivera	VE18	Portuguesa
* US26	Michigan	UY14	Rocha	VE19	Sucre
* US27	Minnesota	UY15	Salto	VE20	Tachira
* US28	Mississippi	UY16	San Jose	VE21	Trujillo
* US29	Missouri	UY17	Soriano	VE22	Yaracuy
* US30	Montana	UY18	Tacuarembo	VE23	Zulia
* US31	Nebraska	UY19	Treinta y Tres		
* US32	Nevada			VM	VIETNAM
* US33	New Hampshire	UZ	UZBEKISTAN	VM43	An Giang
* US34	New Jersey	NH	VANUATU	VM53	Ba Ria-Vung Tau
* US35	New Mexico	NH05	Ambrym	VM02	Bac Thai
* US36	New York	NH06	Aoba/Maewo	VM03	Ben Tre
* US37	North Carolina	NH07	Banks/Torres	VM54	Binh Dinh
* US38	North Dakota	NH08	Efate	VM55	Binh Thuan
* US39	Ohio	NH09	Epi	*VM56	Can Tho
* US40	Oklahoma				
* US41	Oregon				

ECOTOX Code Appendix

Code	Description	Code	Description	Code	Description
VM05	Cao Bang	VM76	Tuyen Quang	YM05	Shabwah
VM44	Dac Lac	VM77	Vinh Long	YM15	Sa`dah
VM45	Dong Nai	VM50	Vinh Phu	YM16	San`a'
VM46	Dong Thap	VM78	Yen Bai	YM17	Ta`izz
VM57	Gia Lai				
VM11	Ha Bac	* VQ	VIRGIN ISLANDS	CG	ZAIRE
VM58	Ha Giang			CG01	Bandundu
VM51	Ha Noi	WQ	WAKE ISLAND	CG08	Bas-Zaire
VM59	Ha Tay			CG02	Equateur
VM60	Ha Tinh	WF	WALLIS AND FUTUNA	CG09	Haut-Zaire
VM12	Hai Hung			CG03	Kasai-Occidental
VM13	Hai Phong	WE	WEST BANK	CG04	Kasai-Oriental
VM52	Ho Chi Minh			CG06	Kinshasa
VM61	Hoa Binh	WI	WESTERN SAHARA	CG07	Kivu
VM62	Khanh Hoa			CG05	Shaba
VM47	Kien Giang	WS	WESTERN SAMOA		
VM63	Kon Tum	WS01	A`ana	G1ZA	ZAMBIA
VM22	Lai Chau	WS02	Aiga-i-le-Tai	ZA02	Central
VM23	Lam Dong	WS03	Atua	ZA08	Copperbelt
VM39	Lang Son	WS04	Fa`asaleleaga	ZA03	Eastern
VM64	Lao Cai	WS05	Gaga`emauga	ZA04	Luapula
VM24	Long An	WS07	Gagaifomauga	ZA09	Lusaka
VM48	Minh Hai	WS08	Palauli	ZA05	Northern
VM65	Nam Ha	WS09	Satupa`itea	ZA06	North-Western
VM66	Nghe An	WS10	Tuamasaga	ZA07	Southern
VM67	Ninh Binh	WS06	Va`a-o-Fonoti	ZA01	Western
VM68	Ninh Thuan	WS11	Vaisigano	*ZI	ZIMBABWE
VM69	Phu Yen			ZI01	Manicaland
VM70	Quang Binh	YM	YEMEN	ZI03	Mashonaland Central
VM29	Quang Nam-Da Nang	YM01	Abyan	ZI04	Mashonaland East
VM71	Quang Ngai	YM02	`Adan	ZI05	Mashonaland West
VM30	Quang Ninh	YM07	Al Bayda'	ZI06	Matabeleland North
VM72	Quang Tri	YM08	Al Hudaydah	ZI07	Matabeleland South
VM73	Soc Trang	YM09	Al Jawf	ZI02	Midlands
VM49	Song Be	YM03	Al Mahrah	ZI08	Masvingo
VM32	Son La	YM10	Al Mahwit		
VM33	Tay Ninh	YM11	Dhamar	*TW	TAIWAN
VM35	Thai Binh	YM04	Hadramawt	TW01	Fu-chien
VM34	Thanh Hoa	YM12	Hajjah	TW02	Kao-hsiung
VM74	Thua Thien	YM13	Ibb	TW03	T'ai-pei
VM37	Tien Giang	YM06	Lahij	TW04	T'ai-wan
VM75	Tra Vinh	YM14	Ma'rib		

ECOTOX Code Appendix

*=designation that the code is in the ECOTOX valid code file. Codes are added as needed.

Appendix AC. Aquatic Field Name Codes

Field Name	Remark Abbreviation
Grade	GRADE
Purity	PURITY
Formulation	FO
Characteristics	CHAR
Radiolabel	RADIO
Carrier or Solvent	CARRIER
Solvent Grade	SOLVGRADE
Solvent Purity	SOLVPURITY
Solvent Formulation	SOLVFO
Solvent Characteristics	SOLVCHAR
Media	FW,SW
Location	LAB,FIELD
Organism Source	SOURCE
Organism Char	LIFESTG
Gender	SEX
Control	CONTR
Test Number	TESTID
Test Method	TMETH
Study Type	STYPE
Number of Doses	DNUM
Concentrations at each dose and Unit	DOSES
Intake Rate & Unit	INTAKE
Steady State	STST
Response Site	SITE
Effect	In EE Remark
Trend	TREND
Endpt	In EE Remark
Companion Endpoint	COMPEP
Measurement	MSMT
Effect Percent	EFCT%
Signif	SIGNIF
Level	LEVEL

Field Name	Remark Abbreviation
Concentration	CONC
BCF	BCF
Observed Time	OTIME
Exposure Type	TYPE
Exposure Time & Unit	ETIME
Method Conc	CONC
Temperature	TEMP
Hardness	HARD
Alkalinity	ALK
Dissolved Oxygen	DO
Humic acid & Units	HMA
Sodium & Units	NA
Chlorine & Units	CL
Potassium & Units	POT
Magnesium & Units	MG
Sulfate and Units	SO4
Sulfur and Units	SULF
pH	PH
Salinity	SALIN
Conductivity	COND
Organic C	ORG C
Dissolved Inorganic Carbon & Units	DIC
% Lipid	LD
Initial Weight	WTINT
Weight at time of result	WTAT
Dry or Wet Weight %	DW
Habitat Descr	HAB
Substrate Info	SUBSTR
Water Depth	DEPTH
Location	LOC
Sta/Pro/Country	NONE
Latitude	LAT
Longitude	LONG

Field Name	Remark Abbreviation
AP Type	AP TY
AP Frequency	AP FREQ
AP Rate	AP RATE
Half Life	HALF
AP Season	AP SEAS
AP Date	AP DATE

Appendix AD. Terretox Field Name Codes

I. Quality Assurance Parameters

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Reference Number	REF #, AUTHOR, YEAR	none
Total Tests	TOTAL TESTS	none
Reviewer/Date	REVIEWER, DATE	none
QA Date/Initials	QA DATE, INITIALS	none
TestNumber	TEST ID	none

II. Test Chemical Parameters

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Chemical Name, Type	TEST, POSITIVE CONTROL, CARRIER	none, PC CARRIER
Grade	GRADE	GRADE
Purity	PURITY	none
Formulation	FORMULATION	FO
Comments	CHARACTERSTICS	CHAR
Radiolabel	RADIOLAB	RADIO
CAS number	CAS #	none

III. Test Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Species Number/Latin Name	SPECIES #/LATIN NAME	none
Organism Source	ORG SOURCE	SOURCE
Lifestage/Age	LIFESTG/AGE	LIFESTG/ AGE
Organism Characteristics	ORG CHAR	OCHAR
Test Location	TEST LOCATION	LOC
Exposure Type	EXPO TYPE	TYPE
Control	CONTROL TYPE	CONTR
Number of Doses	DOSE NUM	DNUM
Application Frequency	APPL FREQUENCY	AP FREQ
Application Date	AP DATE	
Application Season	AP SEAS	
Application Rate	AP RATE	

Field Name	Coding Sheet Abbreviation	Remarks Abbreviations
Exposure Duration	EXPOSURE DURATION	ETIME
Study Duration	STUDY DURATION	STIME
Study Type	STYPE	
Test Method	TMETH	
Trend	TREND	
Media Type	MEDIA TYPE	MEDIA
Soil Type	SOIL TYPE	SOIL
Soil Texture	SOIL TEXTURE	TEXTURE
Temperature	TEMP	
Media pH	MEDIA PH	pH
Media Organic Matter	MEDIA ORGANIC MATTER	OM
Media Moisture	MEDIA MOISTURE	MOIST
Media CEC	MEDIA CEC	CEC
Soil Concentration Measured/ Concentration measured on Dry or Wet Basis	SOIL CONC MEASURED DRY-WET WEIGHT	none
Remarks	REMARKS	none
Experimental Design	---	EDES
Habitat	HAB	
Location	LOC	
Habitat Code	HABCODE	
Geographic Code	GEO	
Latitude	LAT	
Longitude	LONG	
Effect Percent	EFCT%	
Other Effects	none	OEF

IV. Exposure Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Dose Number	DOSE NO	none
Dose ID	DOSE ID	none
Sample Number	N	none
Gender	SEX	SEX
Concentrations at each dose and Unit	DOSES	
Exposure Dose and Unit	DOSE/UNIT	DOSE/ DUNIT
Concentration Type	CONCTYPE	

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Intake Rate and Unit	INTAKE	
Ion	ION	ION
Chemical Analysis Method	METHOD	ANALYSIS
Steady State	STST	
Remark Number	RN	none
Remarks	REMARKS	none

V. Results Information

Field Name	Coding Sheet Abbreviation	Remarks Abbreviation
Dose Number/ID	DOSE NO/ID	none
Sample Number and Unit	N/UNIT	SAMPN/ NUNIT
Observation Time	O	OTIME
Effect	EFFECT	EFCT
Effect Measurement	MEASMENT	MSMT
Endpoint/Assigned	ENDPT/ASG	ENDPT
Result Set	R	none
Companion Endpoint	COMPEP	
Statistical Significance	SIG/NSIG	SIGNIF
Level	LEVEL	none
Paper/Reviewer Assigned Data	P R	none
Response Site	RESP SITE	RSITE
Observed Response Value/ Unit	OBSERV RESPONSE VALUE/UNIT	RVALUE RUNIT
Initial Weight	WTINT	
Weight at time of result	WTAT	
Dry or Wet Weight	DW %	DW
Percent Lipid	%LIPID	LD
Remark Number	RN	none
Remarks	REMARKS	none

Appendix AE. Organic Carbon/Matter Type and Units

Organic Matter Types

Code	Definition
ASH	Ash Free Dry Mass
C	Carbon
C:N	Carbon to Nitrogen Ratio
Cox	Oxidized Carbon
DOC	Dissolved Organic Carbon
HUM	Humus
LOI	Loss On Ignition
N	Nitrogen
NR	Not Reported
OC	Organic Carbon
OM	Organic Matter
peat	Peat
POC	Particulate Organic Carbon
TOC	Total Organic Carbon

Organic Carbon/Matter Units

Code	Definition
%	percent
cmol/kg	centimoles per kilogram
g	grams
g/100g	grams per 100 grams
g/kg	grams per kilogram
g/m ²	grams per square meter
LOW	Low
mg/100g soil	milligrams per 100 grams of soil
mg/g soil	milligrams per gram soil
mg/kg soil	milligrams per kilogram soil
mM	millimolar
MOD	Moderate
NR	not reported
ug	micrograms
ug/L	micrograms per liter
uM	microMolar

Code	Definition
umol/g LIT	micromoles per gram litter
umol/L	micromoles per liter

Appendix AF. Cation Exchange Capacity Units

Dose	Definition
cmol P+/kg	centimoles P+ per kilogram soil
cmol/kg	centimoles per kilogram soil
cmol+/100 g	centimoles +ions per 100 grams soil
cmol+/kg	centimoles + ions per kilogram soil
g/dm ³	grams per cubic decimeter
me/100g	milliequivalents per 100 grams s
meq	milliequivalents
meq A/100 g	milliequivalents NH4 per 100 g
meq mg/g	milliequivalent milligrams per g
meq/100g	milliequivalents per 100 grams s
meq/100ml	milliequivalents per 100 milliliters
meq/g	milliequivalents per gram
meq/kg	milliequivalents per kilogram
mmol K+/kg	millimoles K+ per kilogram soil
mmol/100g	millimoles per 100 grams soil
mmol/dm ³	millimoles per cubic decimeter
mmol/kg	millimoles per kilogram soil
mol/kg	moles per kilogram soil
mval/100g	millivalue per 100 grams (mval=ppm*(ion charge)/(atomic weight))
NR	not reported

Appendix AG. ECOTOX Study Type Codes

Code	Name	Definition
ACTELS	Acute Early Life Stage	These tests include continuous exposure of the early life stages which have a sudden onset of a response, lasting a short time. Of a stimulus, severe enough to induce a response rapidly. (ECOTOX)
ACUTE	Acute	Having a sudden onset, lasting a short time. Of a stimulus, severe enough to induce a response rapidly. Can be used to define either the exposure or the response to an exposure (effect). For clarity, the length of the exposure (short, medium, or long) and the nature of the effect end point (lethal or nonlethal) should be specified. The duration of an acute aquatic toxicity test is generally 4d or less and mortality is the response measured. (ECOTOX)
CHRELS	Chronic Early Life Stage	These tests include continuous exposure of the early life stages which involve a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years, depending of the reproductive life cycle of the organism. (ECOTOX)
CHRONIC	Chronic	Involving a stimulus that is lingering or continues for a long time; often signifies periods from several weeks to years, depending of the reproductive life cycle of the aquatic species. Can be used to define either the exposure or the response to an exposure (effect). For clarity the length of the exposure and the nature of the effect end point should be specified. Chronic exposure typically induces a biological response of relatively slow progress and long continuance. The chronic aquatic toxicity test is used to study the effects of continuous, long-term exposure to a chemical or other potentially toxic material on organisms. (ECOTOX)
ELS	Early Life Stage	These tests include continuous exposure of the early life stages (e.g., egg, embryo, larva, fry) of aquatic organisms to various concentrations of chemical for 1-2 months, depending on the species. (Rand and Petrocelli, 1985)
FLC	Full Life Cycle	A chronic (or full chronic) study in which all the significant life stages of an organism are exposed to a test material. Generally, a life cycle is from birth until the organism reproduces (Rand and Petrocelli, 1985)
GEN	Generational	A study that encompasses multiple generations of the test organism (e.g. P, F1,F2) either exposed to a toxicant during different generations or exposure to one generation and results measured in subsequent generations.(ECOTOX)

ECOTOX Code Appendix

Code	Name	Definition
PLC	Partial Life Cycle	The test organism is exposed to toxicant through part of the life cycle which includes life stages observed to be especially sensitive to chemical exposure (Rand and Petrocelli, 1985)
SBACUTE	Subacute	Intermediate between acute and chronic, not quite being one or the other (http://www.amershamhealth.com/public/glossary/s.shtml). Adverse effects occurring as a result of repeated daily dosing of a chemical, or exposure to the chemical, for part of an organism's lifespan (usually not exceeding 10%). With experimental animals, the period of exposure may range from a few days to 6 months. (http://www.bio.hw.ac.uk/edintox/glossall.htm)
SBCHRON	Subchronic	Intermediate between acute and chronic toxicities; subchronic toxicity studies involve repeated daily exposures of animals to a chemical for part (not exceeding 10%) of a lifespan. In rodents, this period extends up to 90 days of exposure. (www.uoguelph.ca/GTI/urbanpst/glossn_z.htm) Of intermediate duration, usually used to describe studies or periods of exposure lasting between 5 and 90 days (www.afrpa.hq.af.mil/kelly/Terms/stterms.html)

Appendix AH. ECOTOX Test Method Codes

Code	Name	Citation
ABNT	Brazilian National Standards Organization	Includes: ABNT 2012. Aquatic ecotoxicology-Chronic toxicity of short duration-Test method urchin. ABNT/CEE-106 Analises Ecotoxicologicas. http://www.abnt.org.br/ ABNT-Associacao Brasileira de Normas Tecnicas
AFNOR	French Association for Standardization	Various Information available on line at: www.afnor.fr
AFNORISO	AFNOR and ISO methods	Used French Association for Standardization (AFNOR) and International Standard Organization (ISO) methods when testing
AFNOROECD	AFNOR and OECD methods	Used French Association for Standardization (AFNOR) and Organization for Economic Cooperation and Development (OECD) methods when testing
ASISOEEP	ASTM, ISO, OECD, and USEPA methods)	Used ASTM, ISO, OECD and USEPA methods when testing.
ASTM	American Society for Testing and Materials	Specific names of test methods include: FETAX American Society for Testing and Materials (ASTM). (Various years). American Society for Testing and Materials. Annual Book of ASTM Standards. American Society for Testing and Materials, Philadelphia, PA. Information available on line at: http://www.astm.org
ASTMOECD	ASTM and OECD methods	Used both ASTM and OECD methods when testing.
BSI	British Standard	Standards produced by the BSI Group which is incorporated under a Royal Charter (and which is formally designated as the National Standards Body (NSB) for the UK). Also: BS and British Standard Guidelines. (https://shop.bsigroup.com/)
CCME	Canadian Council of Ministers of the Environment	Various Information available on line at: http://www.ccme.ca/
CEN	European Committee for Standardization	Various Information available on line at: http://www.cen.eu/cen/pages/default.aspx
CETESB	Technology Centre for Environment Conservation	Government agency in Brazil - http://www.cetesb.sp.gov.br
ECAN	Environment Canada	Various publications. Includes Environment Canada (1990). Biological Test Methods: Acute Lethality Test Using Daphnia spp. EPS 1/RM/11. Ottawa, ON. Information available on line at: http://www.mbb.ec.gc.ca/

Code	Name	Citation
EEC	European Economic Community	EEC.(1984) In 84/449/EEC: Commission Directive of 25 April 1984 adapting to technical progress for the sixth time council Directive 67/548/EEC on the approximation of the laws, regulations and administrative provisions relating to the classification packing and labeling of dangerous substances. Official Journal of the European Communities L251, 27, p:155-159
EPAASTM	USEPA and ASTM methods	Used both U.S.EPA and ASTM methods when testing
EPAECCE	USEPA, ECAN, and CETESB methods	Used U.S.EPA, Environment Canada and Technology Centre for Environment Conservation (CETESB - government agency in Brazil - http://www.cetesb.sp.gov.br) methods when testing
EPAOECD	USEPA and OECD methods	Used both United States Environmental Protection Agency (USEPA) and Organization for Economic Cooperation and Development (OECD) methods
EPAOM	USEPA and Other Methods	Used both U.S.EPA and Other Methods (OM) when testing
EPASTD	USEPA and STDMETH methods	Used both Standard Methods and U.S.EPA methods when testing
EPPO	European and Mediterranean Plant Protection Organization	Various Information available on line at: http://archives.eppo.int/index.htm
FAO	Food and Agriculture Organization of the United Nations	Various publications. Includes FAO (1977) Manual Methods in Aquatic Environment Research, Part-4 Bases for Selective Biological Tests to Evaluate Marine Pollution. PAO Fisheries Technical Paper 164. Information available on line at: http://www.fao.org/
GLP	Good Laboratory Practices	published by the U.S. Department of Health, education and Welfare, Food and Drug Administration (1978) and the U.S.EPA (1980) Information available on line at: http://www.accessdata.fda.gov/scripts/cdrh/cfdocs
GLPUK	Department of Health's United Kingdom Compliance Programme good laboratory practice	Various Information available on line at: http://www.mhra.gov.uk
IOBC	International Organisation for Biological Control of noxious animals and plants	Various publications. Includes: IOBC standard sequential testing methods for Pesticides and beneficial organisms, http://www.iobc-wprs.org/expert_groups/wg_PBOs_publics_list_1988-99.pdf . Information on line at: http://www.iobc-wprs.org/
IRAC	Insecticide Resistance Action Committee	Includes: IRAC Susceptibility Test Method 007. Method suitable for leaf-eating Lepidoptera and Coleoptera on cotton, vegetable and field crops. Information available at: http://www.irac-online.org/methods/leaf-eating-lepidoptera-coleoptera-larvae/

Code	Name	Citation
IRSA	Water Research Institute	The Water Research Institute, (IRSA-CNR) Quaderni dell'Istituto di Ricerca sulle Quelle, Consiglio Nazionale delle Ricerche- Roma, Italy Various Information available on line at: www.irsa.cnr.it
ISEPOE	ISO, USEPA, and OECD methods	Used International Standard Organization (ISO) (www.iso.org) , United States Environmental Protection Agency and Organization for Economic Cooperation methods when testing
ISO	International Standard Organisation	Used International Standard Organisation (ISO). Also known as International Organization for Standardization. Various Information available on line at: http://www.iso.org/iso/home.htm
ISOOECD	ISO and OECD methods	Used International Standard Organization (ISO) and Organization for Economic Cooperation and Development (OECD) methods when testing
ISOOECDCCME	ISO, OECD, and CCME methods	Used International Standard Organization (ISO), Organization for Economic Cooperation and Development (OECD) and Canadian Council of Ministers of the Environment (CCME) methods when testing
ISTA	International Seed Testing Association	Various Information available on line at: http://www.seedtest.org/en/home.html
MFE	New Zealand Minister for the Environment	https://www.mfe.govt.nz
OECD	Organization for Economic Cooperation and Development	Most Recent: OECD (2002). OECD Chemical Testing Guidelines - Health Effects. Organization for Economic Cooperation and Development. Information available on line at http://www.oecd.org/
OECDMFE	OECD and MFE methods	Used both Organization for Economic Cooperation and Development (OECD) and New Zealand Minister for the Environment (MFE) (https://www.mfe.govt.nz/) methods when testing
OEEPAS	OECD, USEPA and ASTM methods	Used OECD, U.S.EPA and ASTM methods when testing
OM	Other Method	Other Method
OPPTS	Office of Prevention, Pesticides and Toxic Substances Harmonized Test Guidelines	Most Recent: United States Environmental Protection Agency (USEPA). 2002. Office of Prevention , Pesticides, and Toxic Substances Harmonized Test Guidelines. Series 870 Health Effects Test. Information available on line at: http://www.epa.gov/oppts/pubs/frs/home/guidelin.htm
SS	Swedish Standard	Various information available on line at: http://www.sis.se/en/environment-health-protection-safety/water-quality/sewage-water/ss-28106
STDASTM	STD METH and ASTM methods	Used both Standard Methods and ASTM methods when testing

Code	Name	Citation
STDASTUS	STDMETH, ASTM, and USEPA methods	Used Standard Methods for the Examination of Water and Wastewater, American Society for Testing and Materials, and United States Environmental Protection Agency methods when testing.
STDMETH	Standard Methods for the Examination of Water and Wastewater	Published jointly by: American Public Health Association, American Water Works Association and Water Pollution Control Federation (APHA,AWWA,WPCF). Various years Information available on line at: http://www.standardmethods.org/
STDOECD	STDMETH and OECD methods	Used both Standard Methods and OECD methods when testing
STOEGL	STDMETH, OECD, and GLP methods	Used Standard Methods, Organization for Economic Cooperation and Good Laboratory Practice methods when testing
TEPA	Taiwan Environmental Protection Agency	Various Information available on line at: http://www.epa.gov.tw/en/
TEPAOECD	TEPA and OECD methods	Used both TEPA and OECD methods when testing.
TSCA	Toxic Substances Control Act Test Standard	Various information available on line at: https://www.congress.gov/bill/94th-congress/senate-bill/3149 and https://www.gpo.gov/fdsys/granule/CFR-2000-title40-vol24/CFR-2000-title40-vol24-sec797-1930
UNEP	United Nations Environment Programme	Various publications. Includes: UNEP/FAO/IAEA (1989). Estimation of the Acute Lethal Toxicity of Pollutants to Marine Fish and Invertebrates. Reference Methods for Marine Pollution Studies, No.43. United Nations Environment Programme, Nairobi. Information available on line at: http://www.unep.ch/regionalseas/pubs/rsrm.htm
USEPA	United States Environmental Protection Agency	Various Information available on line at: http://www.epa.gov/
WHO	World Health Organization	Various publications. Includes: WHO. 1963. Criteria and meaning of tests for determining susceptibility or resistance of insects to insecticides. Technical Rep. Ser. N 265: 135-138. Information available on line at: http://www.who.int/en/

Appendix AI. ECOTOX Gender Codes

Code	Description	Definition
--	Unspecified	
B	Both	male and female
F	Female	
M	Male	

Code	Description	Definition
NC	Not Coded	
NR	Not Reported	

Appendix AJ. ECOTOX Statistical Method Codes

Code	Definition
--	Unspecified
CI	Confidence Interval
CL	Confidence Limit
CV	Confidence Value
FL	Fuducial Limit
NR	Not Reported
R	Range
SD	Standard Deviation
SE	Standard Error

Appendix AK. ECOTOX Trend Codes

Code	Definition
--	Unspecified
CHG	Change
DEC	Decreasing
INC	Increasing
NEF	No effect
NR	Not reported

Appendix AL. ECOTOX Statistical Significance Codes

Code	Description	Definition
--	Unspecified	
ANOSIG	Not significant at all concentrations	Data that has been statistically analyzed and there is no difference between all doses and control.
ASIG	Significant at all concentrations	Data that has been statistically analyzed and there is a difference between all doses and control.

Code	Description	Definition
MULT	Multiple significance	Data that has been statistically analyzed but there are both differences and no differences between all doses and control and there is no clean dose response (non-monotonic).
NA	Not applicable	
NOSIG	No significance	Data that has been statistically analyzed and there is no difference between dose and control.
NR	Not reported	
SIG	Significant	Data that has been statistically analyzed and there is a difference between dose and control.

Appendix AM. ECOTOX Endpoint Assignment Codes

Code	Definition
M	Multiple values
NC	Not coded
NR	Not reported
P	Publication reported endpoint
R	Reviewer assigned endpoint
X	Unknown

Appendix AN. ECOTOX Season Codes

Code	Definition
--	Unspecified
AU	Autumn
NC	Not coded
NR	Not reported
SP	Spring
SU	Summer
WI	Winter

Appendix AO. ECOTOX Result Dry/Wet

Code	Definition
NC	Not coded
NR	Not reported
Dry	Dry
Wet	Wet