# GEOTRACES IDP2021 Seawater Discrete Sample Parameters

| | Name | Units | Description |
|---|---|---|---|
| 1 | CTDPRS_T_VALUE_SENSOR | dbar | Pressure from CTD sensor |
| 2 | DEPTH | m | Depth below sea surface calculated from pressure |
| 3 | Rosette Bottle Number | | Bottle number on the rosette |
| 4 | GEOTRACES Sample ID | | GEOTRACES sample id |
| 5 | Bottle Flag | | Quality flag for the entire bottle |
| 6 | Cast Identifier | | Cast identifier as string |
| 7 | Sampling Device | | Sampling device descriptor |
| 8 | BODC Bottle Number | | Unique BODC bottle number |
| 9 | BODC Event Number | | Unique BODC event number |
| 10 | Single-Cell ID | | Single-cell identifier |
| 11 | NCBI_Metagenome_BioSample_Accession | | NCBI BioSample accession number for the metagenomic data associated with this bottle number. See: https://www.ncbi.nlm.nih.gov/biosample/ |
| 12 | NCBI_Single-Cell-Genome_BioProject_Accession | | NCBI BioProject accession number for single cell genomics data of Bacteria and Archaea. These BioProjet accession numbers encompass single cell genomes from multiple bottles. See the associated Digital Object Identifiers (DOI) for primary references. See https://www.ncbi.nlm.nih.gov/bioproject/ |
| 13 | NCBI_16S-18S-rRNA-gene_BioSample_Accession | | NCBI BioSample accession numbers for 16S/18S rRNA gene amplicon sequences (i.e., universal SSU rRNA amplicon V4-V5 DNA for high resolution taxonomy) associated with this bottle number. See: https://www.ncbi.nlm.nih.gov/biosample/ |
| 14 | EMBL_EBI_Metagenome_MGNIFY_Analysis_Accession | | Derived functional and taxonomic analysis of the metagenomic data provided by the |
| 15 | CTDTMP_T_VALUE_SENSOR | deg C | Temperature from CTD sensor in the ITS-90 convention. |
| 16 | CTDSAL_D_CONC_SENSOR | pss-78 | Practical salinity from CTD sensor on the PSS-1978 scale. |
| 17 | SALINITY_D_CONC_BOTTLE | pss-78 | Practical salinity from bottle sample on the PSS-1978 scale |
| 18 | CFC-11_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved CFC-11 |
| 19 | CFC-12_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved CFC-12 |
| 20 | CFC113_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved CFC113 |
| 21 | SF6_D_CONC_BOTTLE | fmol/kg | Concentration of dissolved SF6 |
| 22 | He_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Helium |
| 23 | Ne_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Neon |
| 24 | Ar_D_CONC_BOTTLE | umol/kg | Concentration of Argon |
| 25 | Kr_D_CONC_BOTTLE | nmol/kg | Concentration of Krypton |
| 26 | Xe_D_CONC_BOTTLE | nmol/kg | Concentration of Xenon |
| 27 | SALINITY_D_CONC_PUMP | pss-78 | Practical salinity on the PSS-1978 scale |
| 28 | SALINITY_D_CONC_FISH | pss-78 | Practical salinity from a towed fish sample on the PSS-1978 scale |
| 29 | SALINITY_D_CONC_UWAY | pss-78 | Practical salinity from a seawater sample collected using the ship's underway sampling system on the PSS-1978 scale |
| 30 | CFC-11_D_CONC_UWAY | pmol/kg | Concentration of dissolved CFC-11 |

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| 31 | CFC-12_D_CONC_UWAY | pmol/kg | Concentration of dissolved CFC-12 |
| 32 | CFC113_D_CONC_UWAY | pmol/kg | Concentration of dissolved CFC113 |
| 33 | SF6_D_CONC_UWAY | fmol/kg | Concentration of dissolved SF6 |
| 34 | SALINITY_D_CONC_BOAT_PUMP | pss-78 | Practical salinity on the PSS-1978 scale |
| 35 | OXYGEN_D_CONC_BOTTLE | umol/kg | Concentration of dissolved oxygen from a bottle sample |
| 36 | CTDOXY_D_CONC_SENSOR | umol/kg | Concentration of dissolved oxygen from sensor on CTD. |
| 37 | PHOSPHATE_D_CONC_BOTTLE | umol/kg | Concentration of dissolved phosphate, samples may or may not have been filtered |
| 38 | PHOSPHATE_LL_D_CONC_BOTTLE | umol/kg | Concentration of low-level dissolved phosphate determined using filtered seawater |
| 39 | SILICATE_D_CONC_BOTTLE | umol/kg | Concentration of dissolved silicate (silicic acid), samples may or may not have been filtered |
| 40 | NITRATE_D_CONC_BOTTLE | umol/kg | Concentration of dissolved nitrate, samples may or may not have been filtered |
| 41 | NITRATE_LL_D_CONC_BOTTLE | umol/kg | Concentration of low-level dissolved nitrate determined by long path length spectrophotometry using filtered seawater |
| 42 | NITRITE_D_CONC_BOTTLE | umol/kg | Concentration of dissolved nitrite, samples may or may not have been filtered |
| 43 | NITRITE_LL_D_CONC_BOTTLE | umol/kg | Concentration of low-level dissolved nitrite determined by long path length spectrophotometry using filtered seawater |
| 44 | NO2+NO3_D_CONC_BOTTLE | umol/kg | Concentration of dissolved nitrate plus nitrite samples may or may not have been filtered |
| 45 | NO2+NO3_LL_D_CONC_BOTTLE | umol/kg | Concentration of dissolved nitrate plus nitrite determined by long path length spectrophotometry, samples may or may not have been filtered |
| 46 | NH4_D_CONC_BOTTLE | umol/kg | Concentration of dissolved ammonium, samples may or may not have been filtered |
| 47 | TALK_D_CONC_BOTTLE | umol/kg | Concentration of total alkalinity |
| 48 | DIC_D_CONC_BOTTLE | umol/kg | Concentration of dissolved inorganic carbon |
| 49 | PH_SWS_BOTTLE | | pH, referred to seawater scale |
| 50 | PH_TOT_BOTTLE | | pH, referred to total scale |
| 51 | DOC_D_CONC_BOTTLE | umol/kg | Concentration of dissolved organic carbon |
| 52 | TDN_D_CONC_BOTTLE | umol/kg | Total dissolved nitrogen from BOTTLE sample. Metadata must include analytcial method, filter type and pore size. |
| 53 | PHOSPHATE_D_CONC_PUMP | umol/kg | Concentration of dissolved phosphate in a water sample collected using a bottle attached to a pump, samples may or may not have been filtered |
| 54 | SILICATE_D_CONC_PUMP | umol/kg | Concentration of dissolved silicate (silicic acid) in a water sample collected using a bottle attached to a pump, samples may or may not have been filtered |
| 55 | NITRATE_D_CONC_PUMP | umol/kg | Concentration of dissolved nitrate in a water sample collected using a bottle attached to a pump, samples may or may not have been filtered |
| 56 | NITRITE_D_CONC_PUMP | umol/kg | Concentration of dissolved nitrite in a water sample collected using a bottle attached to a pump, samples may or may not have been filtered |
| 57 | PHOSPHATE_D_CONC_FISH | umol/kg | Concentration of dissolved phosphate, samples may or may not have been filtered |
| 58 | PHOSPHATE_LL_D_CONC_FISH | umol/kg | Concentration of low-level dissolved phosphate determined by long path length spectrophotometry using filtered seawater |
| 59 | SILICATE_D_CONC_FISH | umol/kg | Concentration of dissolved silicate (silicic acid), samples may or may not have been filtered |
| 60 | NITRATE_D_CONC_FISH | umol/kg | Concentration of dissolved nitrate, samples may or may not have been filtered |
| 61 | NITRATE_LL_D_CONC_FISH | umol/kg | Concentration of low-level dissolved nitrate determined by long path length spectrophotometry using filtered seawter |

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| 62 | NITRITE_D_CONC_FISH | umol/kg | Concentration of dissolved nitrite, samples may or may not have been filtered |
| 63 | NITRITE_LL_D_CONC_FISH | umol/kg | Concentration of low-level dissolved nitrite determined by long path length spectrophotometry using filtered seawater |
| 64 | NO2+NO3_D_CONC_FISH | umol/kg | Concentration of dissolved nitrate plus nitrite, samples may or may not have been filtered |
| 65 | NO2+NO3_LL_D_CONC_FISH | umol/kg | Concentration of dissolved nitrate plus nitrite determined by long path length spectrophotometry, samples may or may not have been filtered |
| 66 | DOC_D_CONC_FISH | umol/kg | Concentration of dissolved organic carbon |
| 67 | PHOSPHATE_D_CONC_UWAY | umol/kg | Concentration of dissolved phosphate, samples may or may not have been filtered |
| 68 | SILICATE_D_CONC_UWAY | umol/kg | Concentration of dissolved silicate (silicic acid), samples may or may not have been filtered |
| 69 | NITRATE_D_CONC_UWAY | umol/kg | Concentration of dissolved nitrate, samples may or may not have been filtered |
| 70 | NITRITE_D_CONC_UWAY | umol/kg | Concentration of dissolved nitrite, samples may or may not have been filtered |
| 71 | DOC_D_CONC_UWAY | umol/kg | Concentration of dissolved organic carbon |
| 72 | NITRATE_D_CONC_BOAT_PUMP | umol/kg | Concentration of dissolved nitrate, samples may or may not have been filtered |
| 73 | NITRITE_D_CONC_BOAT_PUMP | umol/kg | Concentration of dissolved nitrite, samples may or may not have been filtered |
| 74 | DIC_13_12_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved C isotopes in dissolved inorganic carbon expressed in conventional delta notation referenced to {PDB} |
| 75 | DIC_14_12_D_DELTA_BOTTLE | per 10^3 | DELTA 14C (radiocarbon) of DIC |
| 76 | He_3_4_D_DELTA_BOTTLE | % | Delta 3He of dissolved He referenced to air |
| 77 | TRITIUM_D_CONC_BOTTLE | TU | Concentration of tritium |
| 78 | H2O_2_1_D_DELTA_BOTTLE | per 10^3 | Atom ratio of hydrogen isotopes in water expressed in conventional DELTA notation referenced to {VSMOW} |
| 79 | H2O_18_16_D_DELTA_BOTTLE | per 10^3 | Atom ratio of oxygen isotopes in water expressed in conventional DELTA notation referenced to {VSMOW} |
| 80 | NITRATE_15_14_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved N isotopes in nitrate expressed in conventional DELTA notation referenced to Air N2, samples may or may not have been filtered |
| 81 | NITRATE_18_16_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved O isotopes in nitrate expressed in conventional DELTA notation referenced to {VSMOW}, samples may or may not have been filtered |
| 82 | SILICATE_30_28_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved silicate (silicic acid) Si isotopes expressed in conventional DELTA notation referenced to {NBS28} |
| 83 | Al_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Al |
| 84 | Ba_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Ba |
| 85 | Cd_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Cd |
| 86 | Co_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Co (after UV oxidation) |
| 87 | Cu_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Cu |
| 88 | Fe_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Fe |
| 89 | Fe_II_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Fe(II) |
| 90 | Fe_S_CONC_BOTTLE | nmol/kg | Concentration of operationally defined soluble Fe (colloids excluded) |
| 91 | Ga_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Ga |
| 92 | Hf_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Hf |
| 93 | Hg_0_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved elemental Hg (0) |
| 94 | Hg_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Hg |

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| 95 | Hg_DM_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved DiMethyl Hg |
| 96 | Hg_Me_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved TotalMethyl Hg |
| 97 | Hg_MM_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved MonoMethyl Hg |
| 98 | Hg_T_CONC_BOTTLE | pmol/kg | Concentration of total Hg (unfiltered, dissolved plus total particulate) |
| 99 | I_D_CONC_BOTTLE | nmol/kg | Concentration of total dissolved Iodine |
| 100 | I_V_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Iodate, iodine in the V oxidation state |
| 101 | Mn_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Mn, method may include Mn(II) plus Mn(III) |
| 102 | Mo_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Mo |
| 103 | Nb_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Nb |
| 104 | Ni_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Ni |
| 105 | Pb_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Pb |
| 106 | Pb_TD_CONC_BOTTLE | pmol/kg | Concentration of total dissolvable Pb (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 107 | Ti_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Ti |
| 108 | U_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved U |
| 109 | V_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved V |
| 110 | Zn_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved Zn |
| 111 | Hg_Me_T_CONC_BOTTLE | pmol/kg | Concentration of total (unfiltered, dissolved plus total particulate) TotalMethyl Hg (mono + di methyl Hg) |
| 112 | Al_D_CONC_FISH | nmol/kg | Concentration of dissolved Al |
| 113 | Ba_D_CONC_FISH | nmol/kg | Concentration of dissolved Ba |
| 114 | Cd_D_CONC_FISH | nmol/kg | Concentration of dissolved Cd |
| 115 | Co_D_CONC_FISH | pmol/kg | Concentration of dissolved Co (after UV oxidation) |
| 116 | Cu_D_CONC_FISH | nmol/kg | Concentration of dissolved Cu |
| 117 | Fe_D_CONC_FISH | nmol/kg | Concentration of dissolved Fe |
| 118 | Fe_II_D_CONC_FISH | nmol/kg | Concentration of dissolved Fe(II) |
| 119 | Fe_S_CONC_FISH | nmol/kg | Concentration of operationally defined soluble Fe (colloids excluded) |
| 120 | Ga_D_CONC_FISH | pmol/kg | Concentration of dissolved Ga |
| 121 | Hf_D_CONC_FISH | pmol/kg | Concentration of dissolved Hf |
| 122 | Hg_D_CONC_FISH | pmol/kg | Concentration of dissolved Hg |
| 123 | Mn_D_CONC_FISH | nmol/kg | Concentration of dissolved Mn, method may include Mn(II) plus Mn(III) |
| 124 | Mo_D_CONC_FISH | nmol/kg | Concentration of dissolved Mo |
| 125 | Ni_D_CONC_FISH | nmol/kg | Concentration of dissolved Ni |
| 126 | Pb_D_CONC_FISH | pmol/kg | Concentration of dissolved Pb |
| 127 | Pb_TD_CONC_FISH | pmol/kg | Concentration of total dissolvable Pb (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 128 | Ti_D_CONC_FISH | pmol/kg | Concentration of dissolved Ti |
| 129 | V_D_CONC_FISH | nmol/kg | Concentration of dissolved V |
| 130 | Zn_D_CONC_FISH | nmol/kg | Concentration of dissolved Zn |
| 131 | Hf_D_CONC_UWAY | pmol/kg | Concentration of dissolved Hf |
| 132 | Al_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Al |

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| 133 | Ba_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Ba |
| 134 | Cd_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Cd |
| 135 | Co_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Co (after UV oxidation) |
| 136 | Cu_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Cu |
| 137 | Fe_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Fe |
| 138 | Fe_II_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Fe(II) |
| 139 | Ga_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Ga |
| 140 | Mn_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Mn, method may include Mn(II) plus Mn(III) |
| 141 | Ni_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Ni |
| 142 | Pb_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Pb |
| 143 | V_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved V |
| 144 | Zn_D_CONC_BOAT_PUMP | nmol/kg | Concentration of dissolved Zn |
| 145 | Al_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Al |
| 146 | Ba_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Ba |
| 147 | Cd_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Cd |
| 148 | Co_D_CONC_SUBICE_PUMP | pmol/kg | Concentration of dissolved Co (after UV oxidation) |
| 149 | Cu_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Cu |
| 150 | Fe_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Fe |
| 151 | Ga_D_CONC_SUBICE_PUMP | pmol/kg | Concentration of dissolved Ga |
| 152 | Mn_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Mn, method may include Mn(II) plus Mn(III) |
| 153 | Ni_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Ni |
| 154 | Pb_D_CONC_SUBICE_PUMP | pmol/kg | Concentration of dissolved Pb |
| 155 | V_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved V |
| 156 | Zn_D_CONC_SUBICE_PUMP | nmol/kg | Concentration of dissolved Zn |
| 157 | Ba_138_134_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Ba isotopes expressed in conventional DELTA notation referenced to {NIST 3104a} |
| 158 | Cd_114_110_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Cd isotopes expressed in conventional DELTA notation referenced to {NIST3108} |
| 159 | Cu_65_63_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Cu isotopes expressed in conventional DELTA notation referenced to {NIST976} |
| 160 | Fe_56_54_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Fe isotopes expressed in conventional DELTA notation referenced to {IRMM-14} |
| 161 | Ni_60_58_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Ni isotopes expressed in conventional DELTA notation referenced to {NIST986} |
| 162 | Zn_66_64_D_DELTA_BOTTLE | per 10^3 | Atom ratio of dissolved Zn isotopes expressed in conventional DELTA notation referenced to {Lyon-JMC} |
| 163 | Cd_114_110_D_DELTA_FISH | per 10^3 | Atom ratio of dissolved Cd isotopes expressed in conventional DELTA notation referenced to {NIST3108} |
| 164 | Fe_56_54_D_DELTA_FISH | per 10^3 | Atom ratio of dissolved Fe isotopes expressed in conventional DELTA notation referenced to {IRMM-14} |

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| 165 | Ni_60_58_D_DELTA_FISH | per 10^3 | Atom ratio of dissolved Ni isotopes expressed in conventional DELTA notation referenced to {NIST986} |
| 166 | Zn_66_64_D_DELTA_FISH | per 10^3 | Atom ratio of dissolved Zn isotopes expressed in conventional DELTA notation referenced to {Lyon-JMC} |
| 167 | Ba_138_134_D_DELTA_BOAT_PUMP | per 10^3 | Atom ratio of dissolved Ba isotopes expressed in conventional DELTA notation referenced to {NIST 3104a} |
| 168 | Ba_138_134_D_DELTA_SUBICE_PUMP | per 10^3 | Atom ratio of dissolved Ba isotopes expressed in conventional DELTA notation referenced to {NIST 3104a} |
| 169 | Cs_137_D_CONC_BOTTLE | uBq/kg | Concentration (or activity) of dissolved 137Cs |
| 170 | I_129_D_CONC_BOTTLE | atoms/kg | Concentration of dissolved 129I |
| 171 | Np_237_D_CONC_BOTTLE | uBq/kg | Concentration of dissolved 237Np |
| 172 | Pu_239_D_CONC_BOTTLE | uBq/kg | Concentration of dissolved 239Pu |
| 173 | Pu_239_Pu_240_D_CONC_BOTTLE | uBq/kg | Concentration (or activity) of dissolved 239Pu+240Pu |
| 174 | Pu_240_D_CONC_BOTTLE | uBq/kg | Concentration of dissolved 240Pu |
| 175 | U_236_238_T_RATIO_BOTTLE | per 10^12 | Atom ratio of given isotopes for total (unfiltered, dissolved plus total particulate) U expressed in parts per 10^12 |
| 176 | U_236_D_CONC_BOTTLE | atoms/kg | Concentration of dissolved 236U |
| 177 | U_236_T_CONC_BOTTLE | atoms/kg | Concentration of total (unfiltered, dissolved plus total particulate) 236U |
| 178 | U_236_D_CONC_FISH | atoms/kg | Concentration of dissolved 236U |
| 179 | Cs_137_D_CONC_UWAY | uBq/kg | Concentration (or activity) of dissolved 137Cs |
| 180 | Pu_239_Pu_240_D_CONC_UWAY | uBq/kg | Concentration (or activity) of dissolved 239Pu+240Pu |
| 181 | Pb_206_204_D_RATIO_BOTTLE | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 182 | Pb_206_204_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 183 | Pb_206_207_D_RATIO_BOTTLE | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 184 | Pb_206_207_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 185 | Pb_208_207_D_RATIO_BOTTLE | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 186 | Pb_208_207_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 187 | Pb_207_204_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 188 | Pb_208_204_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 189 | Pb_208_206_D_RATIO_BOTTLE | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 190 | Pb_208_206_TD_RATIO_BOTTLE | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 191 | Pb_206_204_D_RATIO_FISH | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 192 | Pb_206_204_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 193 | Pb_206_207_D_RATIO_FISH | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |

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| 194 | Pb_206_207_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 195 | Pb_208_207_D_RATIO_FISH | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 196 | Pb_208_207_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 197 | Pb_207_204_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 198 | Pb_208_204_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 199 | Pb_208_206_TD_RATIO_FISH | | Atom ratio of given isotopes of total dissolvable Pb isotopes referenced to {NBS981} (dissolved plus reactive particulate phase that dissolves while stored acidified) |
| 200 | Pb_206_204_D_RATIO_BOAT_PUMP | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 201 | Pb_206_207_D_RATIO_BOAT_PUMP | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 202 | Pb_208_207_D_RATIO_BOAT_PUMP | | Atom ratio of given isotopes for dissolved Pb referenced to {NBS981} |
| 203 | Pa_231_D_CONC_BOTTLE | uBq/kg | Concentration (or activity) of dissolved 231Pa |
| 204 | Pb_210_D_CONC_BOTTLE | mBq/kg | Concentration (or activity) of dissolved 210Pb |
| 205 | Po_210_D_CONC_BOTTLE | mBq/kg | Concentration (or activity) of dissolved 210Po |
| 206 | Ra_224_D_CONC_BOTTLE | mBq/kg | Concentration (or activity) of dissolved 224Ra |
| 207 | Ra_226_D_CONC_BOTTLE | mBq/kg | Concentration (or activity) of dissolved 226Ra |
| 208 | Ra_228_T_CONC_BOTTLE | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 228Ra |
| 209 | Ra_228_D_CONC_BOTTLE | mBq/kg | Concentration (or activity) of dissolved 228Ra |
| 210 | Th_230_T_CONC_BOTTLE | uBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 230Th |
| 211 | Th_230_D_CONC_BOTTLE | uBq/kg | Concentration (or activity) of dissolved 230Th |
| 212 | Th_232_T_CONC_BOTTLE | pmol/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 232Th |
| 213 | Th_232_D_CONC_BOTTLE | pmol/kg | Concentration (or activity) of dissolved 232Th |
| 214 | Th_234_T_CONC_BOTTLE | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 234Th |
| 215 | Ac_227_D_CONC_PUMP | uBq/kg | Concentration (or activity) of dissolved 227AC |
| 216 | Be_7_T_CONC_PUMP | uBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 7Be |
| 217 | Be_7_D_CONC_PUMP | uBq/kg | Concentration of dissolved 7Be |
| 218 | Ra_223_D_CONC_PUMP | mBq/kg | Concentration (or activity) of dissolved 223Ra |
| 219 | Ra_224_D_CONC_PUMP | mBq/kg | Concentration (or activity) of dissolved 224Ra |
| 220 | Ra_226_D_CONC_PUMP | mBq/kg | Concentration (or activity) of dissolved 226Ra |
| 221 | Ra_228_T_CONC_PUMP | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 228Ra |
| 222 | Ra_228_D_CONC_PUMP | mBq/kg | Concentration (or activity) of dissolved 228Ra |
| 223 | Th_228_D_CONC_PUMP | uBq/kg | Concentration (or activity) of dissolved 228Th |
| 224 | Th_234_T_CONC_PUMP | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 234Th |
| 225 | Pa_231_D_CONC_FISH | uBq/kg | Concentration (or activity) of dissolved 231Pa |
| 226 | Pb_210_D_CONC_FISH | mBq/kg | Concentration (or activity) of dissolved 210Pb |
| 227 | Po_210_D_CONC_FISH | mBq/kg | Concentration (or activity) of dissolved 210Po |
| 228 | Ra_226_D_CONC_FISH | mBq/kg | Concentration (or activity) of dissolved 226Ra |
| 229 | Ra_228_T_CONC_FISH | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 228Ra |

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| 230 | Th_230_D_CONC_FISH | uBq/kg | Concentration (or activity) of dissolved 230Th |
| 231 | Th_232_D_CONC_FISH | pmol/kg | Concentration (or activity) of dissolved 232Th |
| 232 | Th_234_T_CONC_FISH | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 234Th |
| 233 | Pa_231_D_CONC_UWAY | uBq/kg | Concentration (or activity) of dissolved 231Pa |
| 234 | Po_210_D_CONC_UWAY | mBq/kg | Concentration (or activity) of dissolved 210Po |
| 235 | Pb_210_D_CONC_UWAY | mBq/kg | Concentration (or activity) of dissolved 210Pb |
| 236 | Ra_224_D_CONC_UWAY | mBq/kg | Concentration (or activity) of dissolved 224Ra |
| 237 | Ra_226_D_CONC_UWAY | mBq/kg | Concentration (or activity) of dissolved 226Ra |
| 238 | Ra_228_D_CONC_UWAY | mBq/kg | Concentration (or activity) of dissolved 228Ra |
| 239 | Th_228_D_CONC_UWAY | uBq/kg | Concentration (or activity) of dissolved 228Th |
| 240 | Th_230_D_CONC_UWAY | uBq/kg | Concentration (or activity) of dissolved 230Th |
| 241 | Th_232_D_CONC_UWAY | pmol/kg | Concentration (or activity) of dissolved 232Th |
| 242 | Th_234_T_CONC_UWAY | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 234Th |
| 243 | Pa_231_D_CONC_BOAT_PUMP | uBq/kg | Concentration (or activity) of dissolved 231Pa |
| 244 | Th_230_D_CONC_BOAT_PUMP | uBq/kg | Concentration (or activity) of dissolved 230Th |
| 245 | Th_232_D_CONC_BOAT_PUMP | pmol/kg | Concentration (or activity) of dissolved 232Th |
| 246 | Pa_231_D_CONC_SUBICE_PUMP | uBq/kg | Concentration (or activity) of dissolved 231Pa |
| 247 | Th_230_D_CONC_SUBICE_PUMP | uBq/kg | Concentration (or activity) of dissolved 230Th |
| 248 | Th_232_D_CONC_SUBICE_PUMP | pmol/kg | Concentration (or activity) of dissolved 232Th |
| 249 | Th_234_T_CONC_SUBICE_PUMP | mBq/kg | Concentration (or activity) of total (unfiltered, dissolved plus total particulate) 234Th |
| 250 | Hf_176_177_D_EPSILON_BOTTLE | per 10^4 | Atom ratio of dissolved Hf isotopes expressed in conventional EPSILON notation |
| 251 | Nd_143_144_D_EPSILON_BOTTLE | per 10^4 | Atom ratio of dissolved Nd isotopes expressed in conventional EPSILON notation |
| 252 | Hf_176_177_D_EPSILON_FISH | per 10^4 | Atom ratio of dissolved Hf isotopes expressed in conventional EPSILON notation |
| 253 | Nd_143_144_D_EPSILON_FISH | per 10^4 | Atom ratio of dissolved Nd isotopes expressed in conventional EPSILON notation |
| 254 | Nd_143_144_D_EPSILON_UWAY | per 10^4 | Atom ratio of dissolved Nd isotopes expressed in conventional EPSILON notation |
| 255 | Y_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Yttrium |
| 256 | La_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved La |
| 257 | Ce_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Ce |
| 258 | Pr_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Pr |
| 259 | Nd_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Nd |
| 260 | Sm_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Sm |
| 261 | Eu_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Eu |
| 262 | Gd_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Gd |
| 263 | Tb_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Tb |
| 264 | Dy_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Dy |
| 265 | Ho_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Ho |
| 266 | Er_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Er |
| 267 | Tm_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Tm |
| 268 | Yb_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Yb |
| 269 | Lu_D_CONC_BOTTLE | pmol/kg | Concentration of dissolved Lu |

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| 270 | Y_D_CONC_FISH | pmol/kg | Concentration of dissolved Yttrium |
| 271 | La_D_CONC_FISH | pmol/kg | Concentration of dissolved La |
| 272 | Ce_D_CONC_FISH | pmol/kg | Concentration of dissolved Ce |
| 273 | Pr_D_CONC_FISH | pmol/kg | Concentration of dissolved Pr |
| 274 | Nd_D_CONC_FISH | pmol/kg | Concentration of dissolved Nd |
| 275 | Sm_D_CONC_FISH | pmol/kg | Concentration of dissolved Sm |
| 276 | Eu_D_CONC_FISH | pmol/kg | Concentration of dissolved Eu |
| 277 | Gd_D_CONC_FISH | pmol/kg | Concentration of dissolved Gd |
| 278 | Tb_D_CONC_FISH | pmol/kg | Concentration of dissolved Tb |
| 279 | Dy_D_CONC_FISH | pmol/kg | Concentration of dissolved Dy |
| 280 | Ho_D_CONC_FISH | pmol/kg | Concentration of dissolved Ho |
| 281 | Er_D_CONC_FISH | pmol/kg | Concentration of dissolved Er |
| 282 | Tm_D_CONC_FISH | pmol/kg | Concentration of dissolved Tm |
| 283 | Yb_D_CONC_FISH | pmol/kg | Concentration of dissolved Yb |
| 284 | Lu_D_CONC_FISH | pmol/kg | Concentration of dissolved Lu |
| 285 | La_D_CONC_UWAY | pmol/kg | Concentration of dissolved La |
| 286 | Ce_D_CONC_UWAY | pmol/kg | Concentration of dissolved Ce |
| 287 | Pr_D_CONC_UWAY | pmol/kg | Concentration of dissolved Pr |
| 288 | Nd_D_CONC_UWAY | pmol/kg | Concentration of dissolved Nd |
| 289 | Sm_D_CONC_UWAY | pmol/kg | Concentration of dissolved Sm |
| 290 | Eu_D_CONC_UWAY | pmol/kg | Concentration of dissolved Eu |
| 291 | Gd_D_CONC_UWAY | pmol/kg | Concentration of dissolved Gd |
| 292 | Tb_D_CONC_UWAY | pmol/kg | Concentration of dissolved Tb |
| 293 | Dy_D_CONC_UWAY | pmol/kg | Concentration of dissolved Dy |
| 294 | Ho_D_CONC_UWAY | pmol/kg | Concentration of dissolved Ho |
| 295 | Er_D_CONC_UWAY | pmol/kg | Concentration of dissolved Er |
| 296 | Tm_D_CONC_UWAY | pmol/kg | Concentration of dissolved Tm |
| 297 | Yb_D_CONC_UWAY | pmol/kg | Concentration of dissolved Yb |
| 298 | Lu_D_CONC_UWAY | pmol/kg | Concentration of dissolved Lu |
| 299 | La_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved La |
| 300 | Ce_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Ce |
| 301 | Pr_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Pr |
| 302 | Nd_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Nd |
| 303 | Sm_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Sm |
| 304 | Eu_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Eu |
| 305 | Gd_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Gd |
| 306 | Tb_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Tb |
| 307 | Dy_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Dy |
| 308 | Ho_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Ho |
| 309 | Er_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Er |

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| 310 | Tm_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Tm |
| 311 | Yb_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Yb |
| 312 | Lu_D_CONC_BOAT_PUMP | pmol/kg | Concentration of dissolved Lu |
| 313 | Cu_Cu'_D_CONC_BOTTLE | fmol/kg | Concentration of dissolved inorganic Cu |
| 314 | L1Cu_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved L1 Cu-binding ligand |
| 315 | L1Cu_D_LogK_BOTTLE | | Log of the conditional stability constant for binding of Cu by L1 Cu-binding ligand |
| 316 | LFe_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved iron binding ligand when only one ligand is determined |
| 317 | LFe_D_LogK_BOTTLE | | Log of the conditional stability constant for binding of Fe by the dissolved Fe-binding ligand when only one ligand is determined |
| 318 | L1Fe_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved L1 Fe-binding ligand |
| 319 | L1Fe_D_LogK_BOTTLE | | Log of the conditional stability constant for binding of Fe by L1 Fe-binding ligand |
| 320 | L2Fe_D_CONC_BOTTLE | nmol/kg | Concentration of dissolved L2 Fe-binding ligand |
| 321 | L2Fe_D_LogK_BOTTLE | | Log of the conditional stability constant for binding of Fe by L2 Fe-binding ligand |
| 322 | Cu_Cu'_D_CONC_FISH | fmol/kg | Concentration of dissolved inorganic Cu |
| 323 | L1Cu_D_CONC_FISH | nmol/kg | Concentration of dissolved L1 Cu-binding ligand |
| 324 | L1Cu_D_LogK_FISH | | Log of the conditional stability constant for binding of Cu by L1 Cu-binding ligand |
| 325 | L1Fe_D_CONC_FISH | nmol/kg | Concentration of dissolved L1 Fe-binding ligand |
| 326 | L1Fe_D_LogK_FISH | | Log of the conditional stability constant for binding of Fe by L1 Fe-binding ligand |
| 327 | L2Fe_D_CONC_FISH | nmol/kg | Concentration of dissolved L2 Fe-binding ligand |
| 328 | L2Fe_D_LogK_FISH | | Log of the conditional stability constant for binding of Fe by L2 Fe-binding ligand |
| 329 | Al_TP_CONC_BOTTLE | nmol/kg | Concentration of total particulate aluminium determined by filtration from a water sampling bottle |
| 330 | Al_TPL_CONC_BOTTLE | nmol/kg | Concentration of labile particulate aluminium determined by filtration from a water sampling bottle |
| 331 | Al_TPR_CONC_BOTTLE | nmol/kg | Concentration of refractory particulate aluminium determined by filtration from a water sampling bottle |
| 332 | Ba_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate barium determined by filtration from a water sampling bottle |
| 333 | Ba_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate barium determined by filtration from a water sampling bottle |
| 334 | Cd_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate cadmium determined by filtration from a water sampling bottle |
| 335 | Cd_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate cadmium determined by filtration from a water sampling bottle |
| 336 | Cd_TPR_CONC_BOTTLE | pmol/kg | Concentration of refractory particulate cadmium determined by filtration from a water sampling bottle |
| 337 | Co_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate cobalt determined by filtration from a water sampling bottle |
| 338 | Co_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate cobalt determined by filtration from a water sampling bottle |
| 339 | Co_TPR_CONC_BOTTLE | pmol/kg | Concentration of refractory particulate cobalt determined by filtration from a water sampling bottle |
| 340 | Cr_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate chromium determined by filtration from a water sampling bottle |
| 341 | Cu_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate copper determined by filtration from a water sampling bottle |

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| 342 | Cu_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate copper determined by filtration from a water sampling bottle |
| 343 | Fe_TP_CONC_BOTTLE | nmol/kg | Concentration of total particulate iron determined by filtration from a water sampling bottle |
| 344 | Fe_TPL_CONC_BOTTLE | nmol/kg | Concentration of labile particulate iron determined by filtration from a water sampling bottle |
| 345 | Fe_TPR_CONC_BOTTLE | nmol/kg | Concentration of refractory particulate iron determined by filtration from a water sampling bottle |
| 346 | Mn_TP_CONC_BOTTLE | nmol/kg | Concentration of total particulate manganese determined by filtration from a water sampling bottle |
| 347 | Mn_TPL_CONC_BOTTLE | nmol/kg | Concentration of labile particulate manganese determined by filtration from a water sampling bottle |
| 348 | Mn_TPR_CONC_BOTTLE | nmol/kg | Concentration of refractory particulate manganese determined by filtration from a water sampling bottle |
| 349 | Mo_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate molybdenum determined by filtration from a water sampling bottle |
| 350 | Mo_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate molybdenum determined by filtration from a water sampling bottle |
| 351 | Ni_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate nickel determined by filtration from a water sampling bottle |
| 352 | Ni_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate nickel determined by filtration from a water sampling bottle |
| 353 | P_TP_CONC_BOTTLE | nmol/kg | Concentration of total particulate phosphorus determined by filtration from a water sampling bottle |
| 354 | P_TPL_CONC_BOTTLE | nmol/kg | Concentration of labile particulate phosphorus determined by filtration from a water sampling bottle |
| 355 | P_TPR_CONC_BOTTLE | nmol/kg | Concentration of refractory particulate phosphorus determined by filtration from a water sampling bottle |
| 356 | Pb_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate lead determined by filtration from a water sampling bottle |
| 357 | Pb_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate lead determined by filtration from a water sampling bottle |
| 358 | Sc_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate scandium determined by filtration from a water sampling bottle |
| 359 | Th_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate thorium determined by filtration from a water sampling bottle |
| 360 | Th_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate thorium determined by filtration from a water sampling bottle |
| 361 | Ti_TP_CONC_BOTTLE | nmol/kg | Concentration of total particulate titanium determined by filtration from a water sampling bottle |
| 362 | Ti_TPL_CONC_BOTTLE | nmol/kg | Concentration of labile particulate titanium determined by filtration from a water sampling bottle |
| 363 | Ti_TPR_CONC_BOTTLE | nmol/kg | Concentration of refractory particulate titanium determined by filtration from a water sampling bottle |
| 364 | V_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate vanadium determined by filtration from a water sampling bottle |
| 365 | V_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate vanadium determined by filtration from a water sampling bottle |
| 366 | Zn_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate zinc determined by filtration from a water sampling bottle |
| 367 | Zn_TPL_CONC_BOTTLE | pmol/kg | Concentration of labile particulate zinc determined by filtration from a water sampling bottle |

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| 368 | Ag_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate silver determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 369 | Ag_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate silver determined by in situ filtration (pump) collected on a main filter (small particles) |
| 370 | Al_TP_CONC_PUMP | nmol/kg | Concentration of total particulate aluminium determined by in situ filtration (pump) without size fractionation |
| 371 | Al_LPT_CONC_PUMP | nmol/kg | Concentration of total particulate aluminium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 372 | Al_SPT_CONC_PUMP | nmol/kg | Concentration of total particulate aluminium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 373 | Al_SPL_CONC_PUMP | nmol/kg | Concentration of labile particulate aluminium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 374 | Ba_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate barium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 375 | Ba_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate barium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 376 | Ba_SPL_CONC_PUMP | pmol/kg | Concentration of labile particulate barium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 377 | Cd_TP_CONC_PUMP | pmol/kg | Concentration of total particulate cadmium determined by in situ filtration (pump) without size fractionation |
| 378 | Cd_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate cadmium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 379 | Cd_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate cadmium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 380 | Co_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate cobalt determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 381 | Co_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate cobalt determined by in situ filtration (pump) collected on a main filter (small particles) |
| 382 | Cu_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate copper determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 383 | Cu_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate copper determined by in situ filtration (pump) collected on a main filter (small particles) |
| 384 | Cu_SPL_CONC_PUMP | pmol/kg | Concentration of labile particulate copper determined by in situ filtration (pump) collected on a main filter (small particles) |
| 385 | Fe_TP_CONC_PUMP | nmol/kg | Concentration of total particulate iron determined by in situ filtration (pump) without size fractionation |
| 386 | Fe_LPT_CONC_PUMP | nmol/kg | Concentration of total particulate iron determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 387 | Fe_SPT_CONC_PUMP | nmol/kg | Concentration of total particulate iron determined by in situ filtration (pump) collected on a main filter (small particles) |

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| 388 | Fe_SPL_CONC_PUMP | nmol/kg | Concentration of labile particulate iron determined by in situ filtration (pump) collected on a main filter (small particles) |
| 389 | Ga_TP_CONC_PUMP | pmol/kg | Concentration of total particulate gallium determined by in situ filtration (pump) without size fractionation |
| 390 | Hg_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate mercury determined by in situ filtration (pump) collected on a main filter (small particles) |
| 391 | Hg_MM_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate monomethyl mercury determined by in situ filtration (pump) collected on a main filter (small particles) |
| 392 | Mn_TP_CONC_PUMP | nmol/kg | Concentration of total particulate manganese determined by in situ filtration (pump) without size fractionation |
| 393 | Mn_LPT_CONC_PUMP | nmol/kg | Concentration of total particulate manganese determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 394 | Mn_SPT_CONC_PUMP | nmol/kg | Concentration of total particulate manganese determined by in situ filtration (pump) collected on a main filter (small particles) |
| 395 | Mn_SPL_CONC_PUMP | nmol/kg | Concentration of labile particulate manganese determined by in situ filtration (pump) collected on a main filter (small particles) |
| 396 | Mo_TP_CONC_PUMP | pmol/kg | Concentration of total particulate molybdenum determined by in situ filtration (pump) without size fractionation |
| 397 | Mo_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate moybdenum determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 398 | Mo_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate molybdenum determined by in situ filtration (pump) collected on a main filter (small particles) |
| 399 | Ni_TP_CONC_PUMP | pmol/kg | Concentration of total particulate nickel determined by in situ filtration (pump) without size fractionation |
| 400 | Ni_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate nickel determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 401 | Ni_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate nickel determined by in situ filtration (pump) collected on a main filter (small particles) |
| 402 | Ni_SPL_CONC_PUMP | pmol/kg | Concentration of labile particulate nickel determined by in situ filtration (pump) collected on a main filter (small particles) |
| 403 | P_TP_CONC_PUMP | nmol/kg | Concentration of total particulate phosphorus determined by in situ filtration (pump) without size fractionation |
| 404 | P_LPT_CONC_PUMP | nmol/kg | Concentration of total particulate phosphorus determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 405 | P_SPT_CONC_PUMP | nmol/kg | Concentration of total particulate phosphorus determined by in situ filtration (pump) collected on a main filter (small particles) |
| 406 | P_SPL_CONC_PUMP | nmol/kg | Concentration of labile particulate phosphorus determined by in situ filtration (pump) collected on a main filter (small particles) |
| 407 | Pb_TP_CONC_PUMP | pmol/kg | Concentration of total particulate lead determined by in situ filtration (pump) without size fractionation |

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| 408 | Pb_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate lead determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 409 | Pb_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate lead determined by in situ filtration (pump) collected on a main filter (small particles) |
| 410 | Th_TP_CONC_PUMP | pmol/kg | Concentration of total particulate thorium determined by in situ filtration (pump) without size fractionation |
| 411 | Th_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate thorium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 412 | Th_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate thorium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 413 | Ti_LPT_CONC_PUMP | nmol/kg | Concentration of total particulate titanium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 414 | Ti_SPT_CONC_PUMP | nmol/kg | Concentration of total particulate titanium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 415 | U_TP_CONC_PUMP | pmol/kg | Concentration of total particulate uranium determined by in situ filtration (pump) without size fractionation |
| 416 | V_TP_CONC_PUMP | pmol/kg | Concentration of total particulate vanadium determined by in situ filtration (pump) without size fractionation |
| 417 | V_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate vanadium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 418 | V_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate vanadium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 419 | V_SPL_CONC_PUMP | pmol/kg | Concentration of labile particulate vanadium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 420 | Zn_TP_CONC_PUMP | pmol/kg | Concentration of total particulate zinc determined by in situ filtration (pump) without size fractionation |
| 421 | Al_TP_CONC_FISH | nmol/kg | Concentration of total particulate aluminium determined by towed fish without size fractionation |
| 422 | Al_TPL_CONC_FISH | nmol/kg | Concentration of labile particulate aluminum determined by towed fish without size fractionation |
| 423 | Ba_TP_CONC_FISH | pmol/kg | Concentration of total particulate barium determined by towed fish without size fractionation |
| 424 | Ba_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate barium determined by towed fish without size fractionation |
| 425 | Cd_TP_CONC_FISH | pmol/kg | Concentration of total particulate cadmium determined by towed fish without size fractionation |
| 426 | Cd_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate cadmium determined by towed fish without size fractionation |
| 427 | Co_TP_CONC_FISH | pmol/kg | Concentration of total particulate cobalt determined by towed fish without size fractionation |
| 428 | Co_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate cobalt determined by towed fish without size fractionation |
| 429 | Cu_TP_CONC_FISH | pmol/kg | Concentration of total particulate copper determined by towed fish without size fractionation |
| 430 | Cu_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate copper determined by towed fish without size fractionation |
| 431 | Fe_TP_CONC_FISH | nmol/kg | Concentration of total particulate iron determined by towed fish without size fractionation |
| 432 | Fe_TPL_CONC_FISH | nmol/kg | Concentration of labile particulate iron determined by towed fish without size fractionation |

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| 433 | Mn_TP_CONC_FISH | nmol/kg | Concentration of total particulate manganese determined by towed fish without size fractionation |
| 434 | Mn_TPL_CONC_FISH | nmol/kg | Concentration of labile particulate manganese determined by towed fish without size fractionation |
| 435 | Ni_TP_CONC_FISH | pmol/kg | Concentration of total particulate nickel determined by towed fish without size fractionation |
| 436 | Ni_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate nickel determined by towed fish without size fractionation |
| 437 | P_TP_CONC_FISH | nmol/kg | Concentration of total particulate phosphorus determined by towed fish without size fractionation |
| 438 | P_TPL_CONC_FISH | nmol/kg | Concentration of labile particulate phosphorus determined by towed fish without size fractionation |
| 439 | Pb_TP_CONC_FISH | pmol/kg | Concentration of total particulate lead determined by towed fish without size fractionation |
| 440 | Pb_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate lead determined by towed fish without size fractionation |
| 441 | Th_TP_CONC_FISH | pmol/kg | Concentration of total particulate thorium determined by towed fish without size fractionation |
| 442 | Th_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate thorium determined by towed fish without size fractionation |
| 443 | Ti_TP_CONC_FISH | nmol/kg | Concentration of total particulate titanium determined by towed fish without size fractionation |
| 444 | Ti_TPL_CONC_FISH | nmol/kg | Concentration of labile particulate titanium determined by towed fish without size fractionation |
| 445 | V_TP_CONC_FISH | pmol/kg | Concentration of total particulate vanadium determined by towed fish without size fractionation |
| 446 | V_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate vanadium determined by towed fish without size fractionation |
| 447 | Zn_TP_CONC_FISH | pmol/kg | Concentration of total particulate zinc determined by towed fish without size fractionation |
| 448 | Zn_TPL_CONC_FISH | pmol/kg | Concentration of labile particulate zinc determined by towed fish without size fractionation |
| 449 | bSi_30_28_TP_DELTA_PUMP | per 10^3 | Atom ratio of Si isotopes in biogenic Si (opal) expressed in conventional DELTA notation determined by in situ filtration (pump) without size fractionation referenced to {NBS28} |
| 450 | PIC_LPT_CONC_PUMP | umol C/kg | Concentration of particulate inorganic carbon determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 451 | PIC_SPT_CONC_PUMP | umol C/kg | Concentration of particulate inorganic carbon determined by in situ filtration (pump) collected on a main filter (small particles) |
| 452 | C_LPT_CONC_PUMP | umol C/kg | Concentration of particulate total carbon determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 453 | C_SPT_CONC_PUMP | umol C/kg | Concentration of particulate total carbon determined by in situ filtration (pump) collected on a main filter (small particles) |
| 454 | POC_LPT_CONC_PUMP | umol C/kg | Concentration of particulate organic carbon determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 455 | POC_SPT_CONC_PUMP | umol C/kg | Concentration of particulate organic carbon determined by in situ filtration (pump) collected on a main filter (small particles) |
| 456 | N_LPT_CONC_PUMP | nmol N/kg | Concentration of particulate nitrogen determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 457 | N_SPT_CONC_PUMP | nmol N/kg | Concentration of particulate nitrogen determined by in situ filtration (pump) collected on a main filter (small particles) |

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| 458 | bSi_TP_CONC_PUMP | nmol Si/kg | Concentration of particulate biogenic silicon determined by in situ filtration (pump) without size fractionation, see metadata for assumed molecular composition (e.g., opal, calculated as 67.9 g opal/mole Si) |
| 459 | bSi_LPT_CONC_PUMP | nmol Si/kg | Concentration of particulate biogenic silicon determined by in situ filtration (pump) collected on a prefilter (large particles), see metadata for assumed molecular composition (e.g., opal, calculated as 67.9 g opal/mole Si) |
| 460 | bSi_SPT_CONC_PUMP | nmol Si/kg | Concentration of particulate biogenic silicon determined by in situ filtration (pump) collected on a main filter (small particles), see metadata for assumed molecular composition (e.g., opal, calculated as 67.9 g opal/mole Si) |
| 461 | PARTICLEMASS_LPT_CONC_PUMP | ug/kg | Concentration of particulate mass (dry weight) determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 462 | PARTICLEMASS_SPT_CONC_PUMP | ug/kg | Concentration of particulate mass (dry weight) determined by in situ filtration (pump) collected on a main filter (small particles) |
| 463 | Po_210_TP_CONC_BOTTLE | mBq/kg | Concentration of total particulate Po-210 determined by filtration from a water sampling bottle |
| 464 | Pb_210_TP_CONC_BOTTLE | mBq/kg | Concentration of total particulate Pb-210 determined by filtration from a water sampling bottle |
| 465 | Po_210_SPT_CONC_PUMP | mBq/kg | Concentration of total particulate Po-210 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 466 | Po_210_LPT_CONC_PUMP | mBq/kg | Concentration of total particulate Po-210 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 467 | Pb_210_SPT_CONC_PUMP | mBq/kg | Concentration of total particulate Pb-210 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 468 | Pb_210_LPT_CONC_PUMP | mBq/kg | Concentration of total particulate Pb-210 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 469 | Pa_231_TP_CONC_PUMP | uBq/kg | Concentration of total particulate Pa-231 determined by in situ filtration (pump) without size fractionation |
| 470 | Pa_231_SPT_CONC_PUMP | uBq/kg | Concentration of total particulate Pa-231 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 471 | Pa_231_LPT_CONC_PUMP | uBq/kg | Concentration of total particulate Pa-231 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 472 | Th_228_SPT_CONC_PUMP | uBq/kg | Concentration of total particulate Th-228 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 473 | Th_228_LPT_CONC_PUMP | uBq/kg | Concentration of total particulate Th-228 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 474 | Th_230_TP_CONC_PUMP | uBq/kg | Concentration of total particulate Th-230 determined by in situ filtration (pump) without size fractionation |
| 475 | Th_230_SPT_CONC_PUMP | uBq/kg | Concentration of total particulate Th-230 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 476 | Th_230_LPT_CONC_PUMP | uBq/kg | Concentration of total particulate Th-230 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 477 | Th_232_TP_CONC_PUMP | pmol/kg | Concentration of total particulate Th-232 determined by in situ filtration (pump) without size fractionation |

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| 478 | Th_232_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate Th-232 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 479 | Th_232_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate Th-232 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 480 | Th_234_SPT_CONC_PUMP | mBq/kg | Concentration of total particulate Th-234 determined by in situ filtration (pump) collected on a main filter (small particles) |
| 481 | Th_234_LPT_CONC_PUMP | mBq/kg | Concentration of total particulate Th-234 determined by in situ filtration (pump) collected on a pre filter (large particles) |
| 482 | Po_210_TP_CONC_UWAY | mBq/kg | Concentration of total particulate Po-210 determined by ship's underway seawater system without size fractionation |
| 483 | Pb_210_TP_CONC_UWAY | mBq/kg | Concentration of total particulate Pb-210 determined by ship's underway seawater system without size fractionation |
| 484 | Nd_143_144_TP_EPSILON_PUMP | per 10^4 | Atom ratio of total particulate Nd isotopes expressed in conventional EPSILON notation determined by in situ filtration (pump) without size fractionation |
| 485 | Y_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate yttrium determined by filtration from a water sampling bottle |
| 486 | La_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate lanthanum determined by filtration from a water sampling bottle |
| 487 | Ce_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate cerium determined by filtration from a water sampling bottle |
| 488 | Pr_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate praseodymium determined by filtration from a water sampling bottle |
| 489 | Nd_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate neodymium determined by filtration from a water sampling bottle |
| 490 | Sm_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate samarium determined by filtration from a water sampling bottle |
| 491 | Eu_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate europium determined by filtration from a water sampling bottle |
| 492 | Gd_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate gadolinium determined by filtration from a water sampling bottle |
| 493 | Tb_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate terbium determined by filtration from a water sampling bottle |
| 494 | Dy_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate dysprosium determined by filtration from a water sampling bottle |
| 495 | Ho_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate holmium determined by filtration from a water sampling bottle |
| 496 | Er_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate erbium determined by filtration from a water sampling bottle |
| 497 | Tm_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate thullium determined by filtration from a water sampling bottle |
| 498 | Yb_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate ytterbium determined by filtration from a water sampling bottle |
| 499 | Lu_TP_CONC_BOTTLE | pmol/kg | Concentration of total particulate lutetium determined by filtration from a water sampling bottle |
| 500 | Y_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate yttrium determined by in situ filtration (pump) collected on a prefilter (large particles) |

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| 501 | Y_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate yttrium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 502 | Nd_TP_CONC_PUMP | pmol/kg | Concentration of total particulate neodymium determined by in situ filtration (pump) without size fractionation |
| 503 | Nd_LPT_CONC_PUMP | pmol/kg | Concentration of total particulate neodymium determined by in situ filtration (pump) collected on a prefilter (large particles) |
| 504 | Nd_SPT_CONC_PUMP | pmol/kg | Concentration of total particulate neodymium determined by in situ filtration (pump) collected on a main filter (small particles) |
| 505 | Y_TP_CONC_FISH | pmol/kg | Concentration of total particulate yttrium determined by towed fish without size fractionation |
| 506 | La_TP_CONC_FISH | pmol/kg | Concentration of total particulate lantanum determined by towed fish without size fractionation |
| 507 | Fe_56_54_TP_DELTA_BOTTLE | per 10^3 | Atom ratio of total particulate Fe isotopes expressed in conventional DELTA notation determined by filtration from a water sampling bottle referenced to {IRMM-14} |
| 508 | Ba_138_134_SPL_DELTA_PUMP | per 10^3 | Atom ratio of labile particulate Ba isotopes expressed in conventional DELTA notation determined by in situ filtration (pump) collected on a main filter (small particles) referenced to {NIST 3104a} |
| 509 | Cu_65_63_SPT_DELTA_PUMP | per 10^3 | Atom ratio of total particulate Cu isotopes expressed in conventional DELTA notation determined by in situ filtration (pump) collected on a main filter (small particles) referenced to {NIST976} |
| 510 | Cu_65_63_SPL_DELTA_PUMP | per 10^3 | Atom ratio of labile particulate Cu isotopes expressed in conventional DELTA notation determined by in situ filtration (pump) collected on a main filter (small particles) referenced to {NIST976} |
| 511 | Allo_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Alloxanthin measured using HPLC method |
| 512 | Anth_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Antheraxanthin measured using HPLC method |
| 513 | But fuco_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of 19' Butanoyloxyfucoxanthin measured using HPLC method |
| 514 | Alpha Car_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of alpha-Carotene measured using HPLC method |
| 515 | Beta Car_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of beta-Carotene measured using HPLC method |
| 516 | Diadino_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Diadinoxanthin measured using HPLC method |
| 517 | Diato_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Diatoxanthin measured using HPLC method |
| 518 | Fuco_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Fucoxanthin measured using HPLC method |
| 519 | Hex fuco_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of 19' hexanoyloxyfucoxanthin measured using HPLC method |
| 520 | Lut_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of lutein measured using HPLC method |
| 521 | Neo_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Neoxanthin measured using HPLC method |
| 522 | Perid_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Peridinin measured using HPLC method |
| 523 | Pras_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Prasinoxanthin measured using HPLC method |
| 524 | Viola_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Violaxanthin measured using HPLC method |
| 525 | Zea_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Zeaxanthin measured using HPLC method |
| 526 | Gyrox_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of gyroxanthin-diester measured using HPLC method |
| 527 | Allo_HPLC_TP_CONC_FISH | ng/liter | concentration of Alloxanthin measured using HPLC method |
| 528 | But fuco_HPLC_TP_CONC_FISH | ng/liter | concentration of 19' Butanoyloxyfucoxanthin measured using HPLC method |
| 529 | Beta Car_HPLC_TP_CONC_FISH | ng/liter | concentration of beta-Carotene measured using HPLC method |
| 530 | Diadino_HPLC_TP_CONC_FISH | ng/liter | concentration of Diadinoxanthin measured using HPLC method |
| 531 | Fuco_HPLC_TP_CONC_FISH | ng/liter | concentration of Fucoxanthin measured using HPLC method |

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| 532 | Hex fuco_HPLC_TP_CONC_FISH | ng/liter | concentration of 19' hexanoyloxyfucoxanthin measured using HPLC method |
| 533 | Lut_HPLC_TP_CONC_FISH | ng/liter | concentration of lutein measured using HPLC method |
| 534 | Perid_HPLC_TP_CONC_FISH | ng/liter | concentration of Peridinin measured using HPLC method |
| 535 | Viola_HPLC_TP_CONC_FISH | ng/liter | concentration of Violaxanthin measured using HPLC method |
| 536 | Zea_HPLC_TP_CONC_FISH | ng/liter | concentration of Zeaxanthin measured using HPLC method |
| 537 | Chl a_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Chlorophyll a measured using HPLC method |
| 538 | Chl b_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Chlorophyll b measured using HPLC method |
| 539 | Chl c3_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of Chlorophyll c3 measured using HPLC method |
| 540 | Chl c1-chl c2_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of chlorophyll c1 + chlorophyll c2 measured using HPLC method |
| 541 | Chl c TOT_HPLC_TP_CONC_BOTTLE | ng/liter | sum of the concentrations of chl c1 + chl c2 + chl c3 when reported together |
| 542 | Chl a allom_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of chlorophyll a allomer measured using HPLC method |
| 543 | Chl a epimer_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of chlorophyll a epimer (ie. chl a') measured using HPLC method |
| 544 | Chlide a_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of chlorophyllide a measured using HPLC method |
| 545 | DV chl a_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of divinyl chlorophyll a measured using HPLC method |
| 546 | Chl a-DV chla_HPLC_TP_CONC_BOTTLE | ng/liter | concentration of chlorophyll a + divinyl chlorophyll a measured using HPLC method |
| 547 | Chl a_HPLC_TP_CONC_FISH | ng/liter | concentration of Chlorophyll a measured using HPLC method |
| 548 | Chl b_HPLC_TP_CONC_FISH | ng/liter | concentration of Chlorophyll b measured using HPLC method |
| 549 | Chl c3_HPLC_TP_CONC_FISH | ng/liter | concentration of Chlorophyll c3 measured using HPLC method |
| 550 | DV chl a_HPLC_TP_CONC_FISH | ng/liter | concentration of divinyl chlorophyll a measured using HPLC method |
| 551 | CHLA_FLUOR_TP_CONC_BOTTLE | ng/liter | Concentration of Chlorophyll a via fluorometric method without size fractionation of particles |
| 552 | PHAEO_FLUOR_TP_CONC_BOTTLE | ng/liter | Concentration of phaeopigments via fluorometric method without size fractionation of particles |
| 553 | PEP_VAAEAVLSMTK_NiSOD_ProSyn_TP_CONC_PUMP | fmol/liter | Nickel-containing superoxide dismutase [Synechococcus WH8102 and Prochlorococcus]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 554 | PEP_SPYNQSLVANQIVNK_IdiA_Pro_TP_CONC_PUMP | fmol/liter | Iron ABC transporter, substrate binding protein (IdiA) [Prochlorococcus marinus MIT 9515]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 555 | PEP_LHNFISSAESPK_Fld_Pro_TP_CONC_PUMP | fmol/liter | Flavodoxin [Prochlorococcus marinus MIT 9515]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 556 | PEP_AGADMVGYVDK_Fld_Pro_TP_CONC_PUMP | fmol/liter | Flavodoxin [Prochlorococcus marinus MIT 9515]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 557 | PEP_TVGIYYATTTGK_Fld_Pro_TP_CONC_PUMP | fmol/liter | Flavodoxin [Prochlorococcus marinus MIT 9515]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 558 | PEP_VNSVIDAIAEAAK_P-II-glnB-glnK_Pro_TP_CONC_PUMP | fmol/liter | Nitrogen Regulatory Protein P-II glnB glnK [Prochlorococcus]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |

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| 559 | PEP_LSHQAIAEAIGSTR_NtcA_Cyano_TP_CONC_PUMP | fmol/liter | Nitrogen Regulatory Protein NtcA [Cyanobacteria]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 560 | PEP_SKLEDDPANPELILTAR_PhoP_Syn_TP_CONC_PUMP | fmol/liter | Two Component Phosphate Regulator PhoP [Synechococcus WH8109] (45% Identity to Bacillus subtilis PY79 PhoP). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 561 | PEP_LIDQDGVPVVFGGWTSASR_UreaTran_Pro_TP_CONC_PUMP | fmol/liter | Urea ABC transporter, substrate binding protein [Prochlorococcus marinus MIT 9215]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 562 | PEP_VVGEDYLPLGNTEVAPIISK_UreaTran_Pro_TP_CONC_PUMP | fmol/liter | Urea ABC transporter, substrate binding protein [Prochlorococcus marinus MIT 9215]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 563 | PEP_IEYIVEDGASDWPTFAEK_UreaTran_ProSyn_TP_CONC_PUMP | fmol/liter | Urea ABC transporter [Prochlorococcus and Synechococcus]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 564 | PEP_IPEDIAFAESR_UreC_Pro_TP_CONC_PUMP | fmol/liter | Urease Alpha subunit UreC (Prochlorococcus). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 565 | PEP_VGVAGPVGSGK_UreG_Pro_TP_CONC_PUMP | fmol/liter | Urease UreG (Prochlorococcus). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 566 | PEP_FDYDGDYGTVLNR_UDP-sulfoquin_m-taxa_TP_CONC_PUMP | fmol/liter | sulfolipid (UDP-sulfoquinovose, multiple taxa). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 567 | PEP_NEAVENDLIVDNK_UDP-sulfoquin_Pro_TP_CONC_PUMP | fmol/liter | sulfolipid (UDP-sulfoquinovose, Prochlorococcus). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 568 | PEP_EAYPDFASAK_NH4-transporter_Pro_TP_CONC_PUMP | fmol/liter | Ammonium transporter [Prochlorococcus MIT9312]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 569 | PEP_FDSLINSADNVMTYK_Glut-synt_Pro_TP_CONC_PUMP | fmol/liter | Glutamine synthetase, glutamate--ammonia ligase [Prochlorococcus marinus MIT 9215]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 570 | PEP_EGYFPVSPNDTAQDIR_Glut-synt_Pro_TP_CONC_PUMP | fmol/liter | Glutamine synthetase, glutamate--ammonia ligase [Prochlorococcus marinus MIT 9215]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 571 | PEP_HAPSFLAFTNPTTNSYK_Glut-synt_ProSyn_TP_CONC_PUMP | fmol/liter | Glutamine synthetase, glutamate--ammonia ligase [Prochlorococcus and Synechococcus]. The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |

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| 572 | PEP_VASLTGADINYLPNPR_UDP-sulfoquin_Pro_TP_CONC_PUMP | fmol/liter | sulfolipid (UDP-sulfoquinovose, Prochlorococcus). The letters correspond to abbreviations while the numbers are unique internal identifiers to differentiate sequences. Refer to Table S3 (PDF) for more information, including the sequence. |
| 573 | CELL_VOLUME_BOTTLE | um^3 | Volume of cell in cubic microns |
| 574 | CELL_TYPE_BOTTLE | | Information about type of cell, including taxon, assigned a numeric code: 1=diatom, 2=autotrophic flagellate, 3=autotrophic picoplankton, 4=ciliates, 5=autotrophic dinoflagellate. |
| 575 | Fe_CELL_CONC_BOTTLE | amol/cell | Fe measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 576 | C_CELL_CONC_BOTTLE | fmol/cell | C measured in a specific individual cell with SXRF |
| 577 | Si_CELL_CONC_BOTTLE | amol/cell | Si measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 578 | P_CELL_CONC_BOTTLE | amol/cell | P measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 579 | S_CELL_CONC_BOTTLE | amol/cell | S measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 580 | Mn_CELL_CONC_BOTTLE | amol/cell | Mn measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 581 | Co_CELL_CONC_BOTTLE | amol/cell | Co measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 582 | Ni_CELL_CONC_BOTTLE | amol/cell | Ni measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 583 | Cu_CELL_CONC_BOTTLE | amol/cell | Cu measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |
| 584 | Zn_CELL_CONC_BOTTLE | amol/cell | Zn measured in a specific individual cell with SXRF (attomoles (10^-18 moles) per cell |