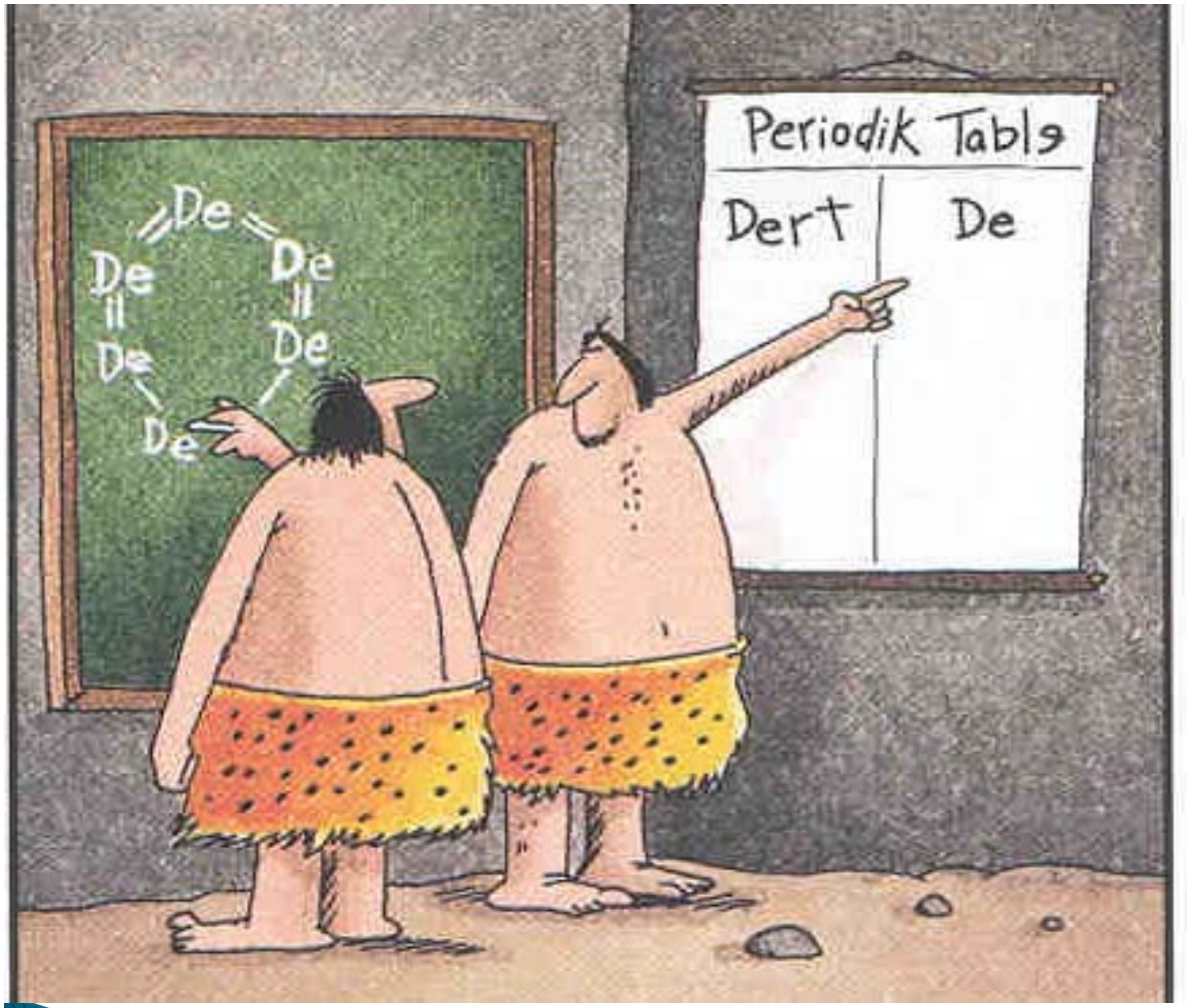
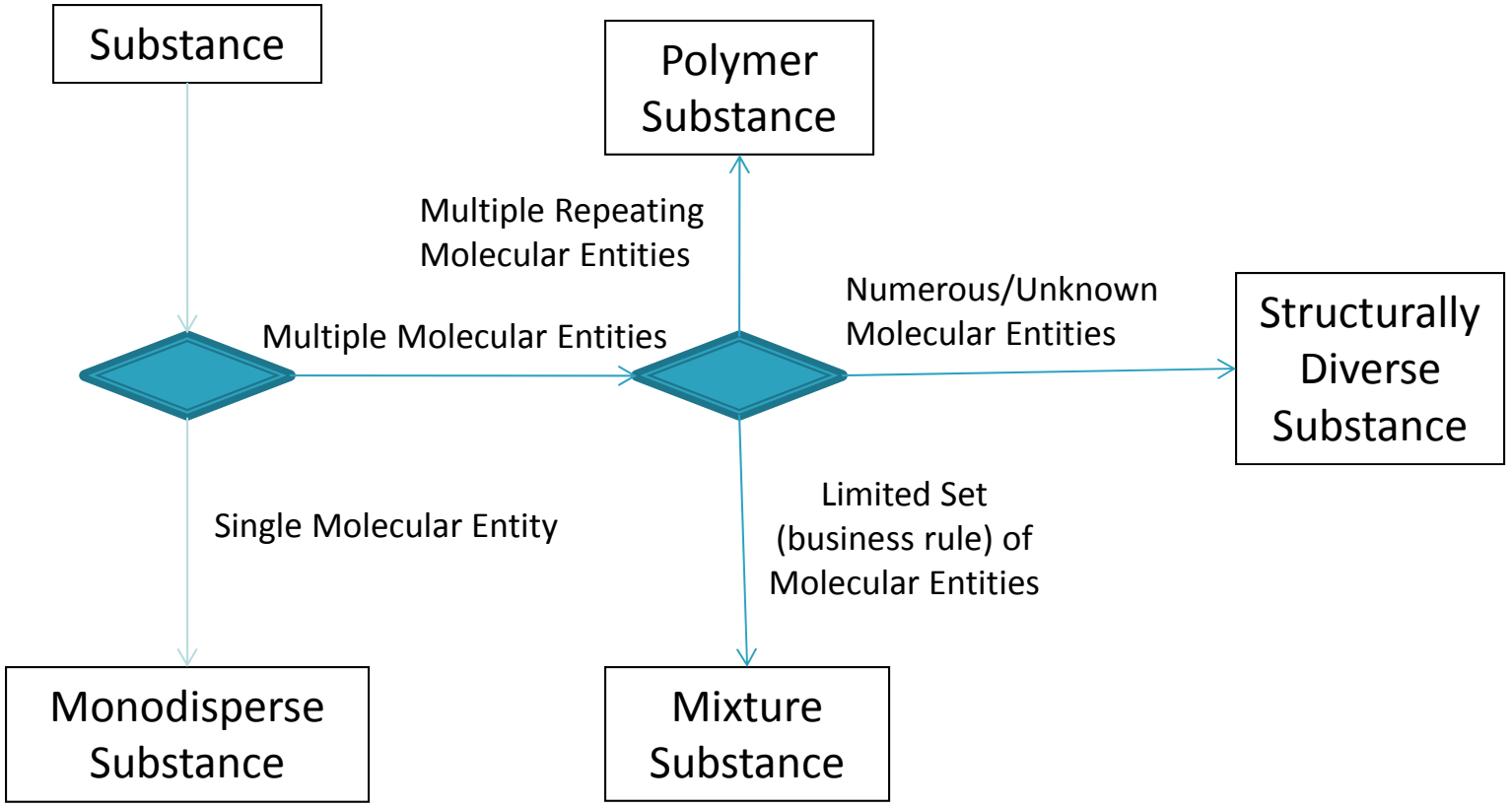
Herbals in GINAS, FDA-SRS, and other Systems

Frank Switzer
Chemist, FDA Substance Registration System



Early Chemists describe the first DIRT MOLECULE
(The Far Side by Gary Larson)

Monodisperse, Polydisperse or Mixture Substance Type?



FDA-SRS Content

64,000 Approved Substances (UNII)

- 42,000 chemical
- 17,000 structurally-diverse
- 2000 polymer
- 1700 mixture
- 1000 protein
- 25 nucleic acid

Herbal

62,000 on NLM website

- http://fdasis.nlm.nih.gov/srs/srs.jsp

60,000 in GINAS initial load

- 10,600 Plant Records (3800 organisms)
- 500 Fungus Records (350 organisms)
- 160 Algae Records (140 organisms)

Organism Fields

- KINGDOM
- PHYLUM
- CLASS
- ORDER
- FAMILY
- GENUS
- SPECIES
- HYBRID_SPECIES_MATERNAL_ORGANISM_ID
- HYBRID_SPECIES_PATERNAL_ORGANISM_ID
- HYBRID_TYPE
- INFRASPECIFIC_TYPE
- INFRASPECIFIC_DESCRIPTION
- TAXON_AUTHOR

Arachis hypogaea L.

Taxonomic Serial No.: 26463

Download data (Download Help) ***Arachis hypogaea*** TSN 26463

Taxonomy and Nomenclature

Kingdom:	Plantae
Taxonomic Rank:	Species
Synonym(s):	
Common Name(s):	peanut [English]
Taxonomic Status:	
Current Standing:	accepted
Data Quality Indicators:	
Record Credibility Rating:	verified - standards met

Taxonomic Hierarchy

Kingdom	Plantae – plantes, Planta, Vegetal, plants
Subkingdom	Viridaeplantae – green plants
Infrakingdom	Streptophyta – land plants
Division	Tracheophyta – vascular plants, tracheophytes
Subdivision	Spermatophytina – spermatophytes, seed plants, phanérogames
Infradivision	Angiospermae – flowering plants, angiosperms, plantas com flor, angiosperma, plantes à fleurs, angiospermes, plantes à fruits
Class	Magnoliopsida
Superorder	Rosanae
Order	Fabales
Family	Fabaceae – peas, legumes
Genus	Arachis L. – peanut
Species	Arachis hypogaea L. – peanut

Accepted scientific name:	*Arachis hypogaea* L. (accepted name)
Synonyms:	*Arachis hypogaea* subsp. *oleifera* A.Chev. (synonym) *Arachis nambyquarae* Hoehne (synonym)

Common names:

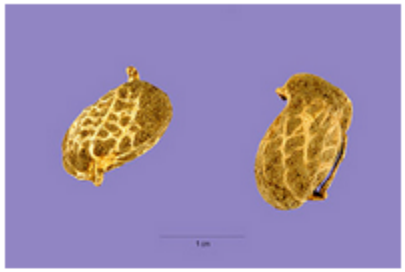
Common name	Language	Country
Goober	-	-
Mani	-	-
Mani Largo	-	-
Pindels	-	-
Eryongok	Uzbek	Uzbekistan

Classification:		Plantae	CoL	LSID
	Phylum	Tracheophyta	CoL	LSID
	Class	Magnoliopsida	CoL	LSID
	Order	Fabales	ILDIS	LSID
	Family	Fabaceae	ILDIS	LSID
	Genus	*Arachis*	ILDIS	LSID

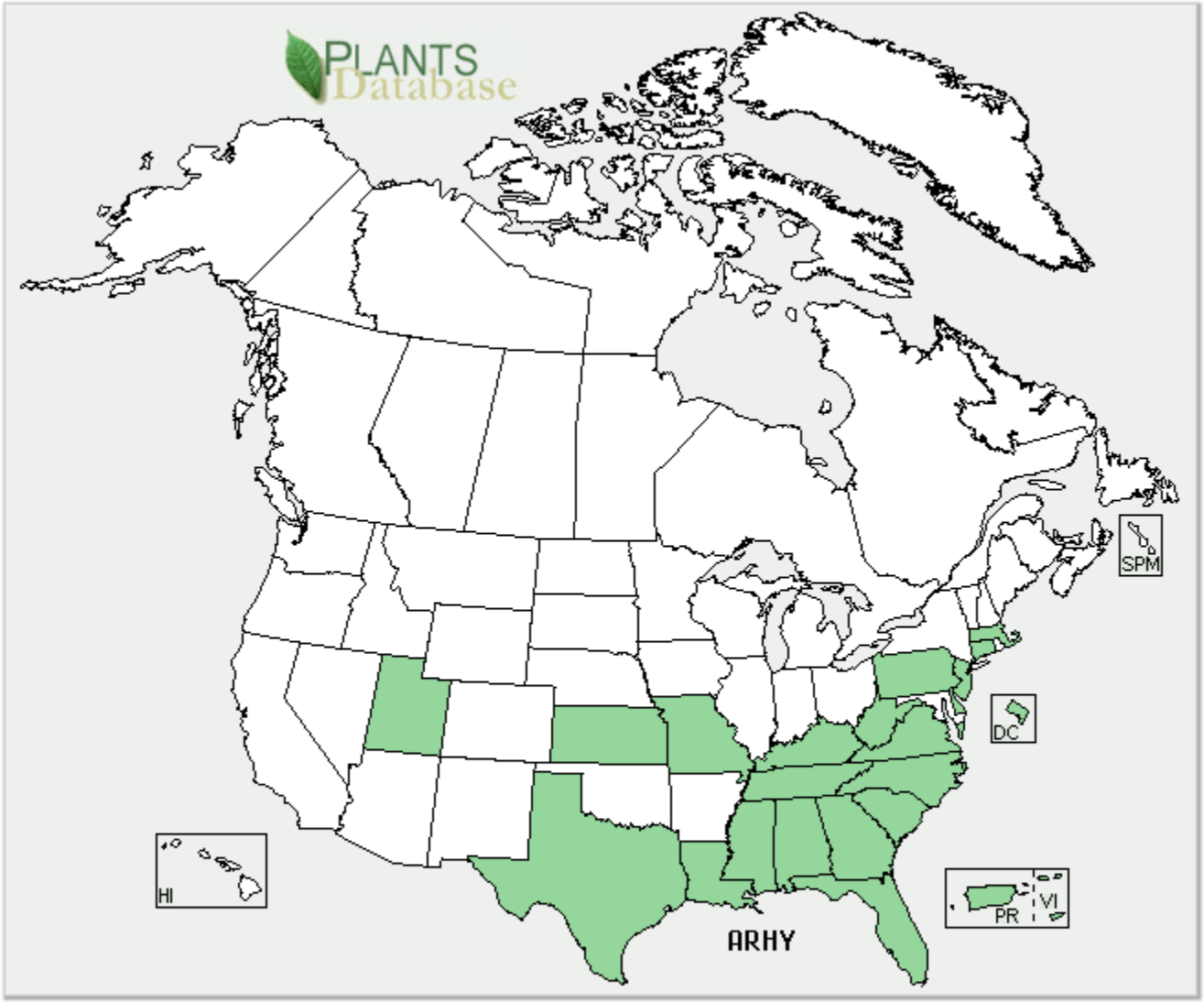
Distribution:	AGE-BA; AGE-CH; AGE-CN; AGE-CO; AGE-ER; AGE-FO; AGE-LP; AGE-MI; AGS-CB; AGS-NE; AGS-RN; AGS-SC; AGS-SF; AGW-CA; ALT-OO; AMU-OO; ANG-OO; ARI-OO; ARK-OO; ASS-AS; ASS-MA; ASS-ME; ASS-MI
Lifezones:	Terrestrial
Additional data:	Climbing: Not climbing; Conservation Status: Cultigen not known in the wild; Habit: Herb; Lifespan: Annual
Source database:	ILDIS, 12, May 2014 96% ★★★★☆
Latest taxonomic scrutiny:	-
Online resource:	http://www.ildis.org/LegumeWeb?version~10.01&LegumeWeb&tno~1295
CoL taxon LSID:	urn:lsid:catalogueoflife.org:taxon:fe86b777-ac8e-11e3-805d-020044200006:col20140530

Arachis hypogaea L.
peanut

Show All



General Information	
Symbol:	ARHY
Group:	Dicot
Family:	Fabaceae
Duration:	Annual Perennial
Growth Habit:	Forb/herb
Native Status:	PR I L48 I VI I
Data Source and Documentation	



View Native Status

Present Absent/Unreported

See U.S. county distributions (when available) by clicking on the map or the linked states below:

USA (AL, CT, DC, DE, FL, GA, KS, KY, LA, MA, MO, MS, NC, NJ, PA, SC, TN, TX, UT, VA, WV), **USA+** (PR, VI)

The Plant List

A working list of all plant species

Home | About | Browse | Statistics | Feedback | How to use this site

The Plant List → *Angiosperms* → *Leguminosae* → *Arachis* → *Arachis hypogaea* L.

Arachis hypogaea L. is an accepted name

This name is the accepted name of a species in the genus *Arachis* (family *Leguminosae*).

The record derives from ILDIS (data supplied on 2010-07-14) which reports it as an accepted name (record 2050↗ [mirro

Synonyms:

See "Status", "Confidence level", "Source" for definitions.

Sort the name records using the ▲▼ buttons.

Name	Status	Confidence level	Source	Da
Arachis hypogaea var. *hypogaea*	Synonym	★☆☆	TRO	
Arachis hypogaea subsp. *nambyquarae* (Hoehne) A. Chev.	Synonym	★☆☆	TRO	
Arachis hypogaea var. *nambyquarae* (Hoehne) Burkart	Synonym	★☆☆	TRO	
Arachis hypogaea subsp. *oleifera* A.Chev.	Synonym	★☆☆	ILDIS	
Arachis nambyquarae Hoehne	Synonym	★★★	ILDIS	
Lathyrus esquirolii H. Lév.	Synonym	★★☆	TRO	

Arachis hypogaea - L.

Common Name	Peanut
Family	Fabaceae or Leguminosae
Synonyms	Arachis nambyquarae. Lathyrus esquirolii.
Known Hazards	⚠ Of greatest concern is possible contamination of damaged or spoiled seeds with the teratogenic, carcinogenic aflatoxins. Two principal toxins, aflatoxins B, and G, and their less toxic dihydro derivatives, aflatoxins B2 and G2 are formed by the aflatoxin producing moulds (Aspergillus flavus et al). Prevention of mould growth is the mainstay, there being no satisfactory way to remove the toxins from feed and foods (however, peanut oils are free of aflatoxins because of alkaline processing)[269]. Avoid if any suggestion of allergy.
Habitats	Not known in a truly wild state.
Range	S. America.
Edibility Rating	🍏🍏🍏🍏
Medicinal Rating	❤❤
Care	❄3 💧 ☼

http://commons.wikimedia.org/wiki/File:Arachis_hypogaea_Blanco1.157-cropped.jpg

Edible Uses

Edible Parts: Leaves; Oil; Oil; Seed; Seedpod.
Edible Uses: Coffee; Oil; Oil.

Seed - raw, cooked or ground into a powder. Peanuts are a staple food in many tropical zones and are widely exported to temperate area of the world. The seeds have a delicious nutty flavour and can be eaten on their own either raw or roasted[K]. The seeds are commonly ground up and used as peanut butter in sandwiches etc[269]. They can also be cooked in a variety of dishes and are also ground into a powder when they can be used with cereals to greatly improve the protein content of breads, cakes etc[K]. The seed is very rich in protein and oil, it is also a good source of minerals and vitamins, especially the B complex[200]. A nutritional analysis is available[218]. A non-drying edible oil is obtained from the seed[200]. This is one of the most commonly used edible oils is the world. It is similar in composition to olive oil and is often used in cooking, making margarines, salad oils etc[200]. The oilseed cake is said to be a good source of arginine and glutamic acid, used in treating mental deficiencies[269]. The roasted seed makes an excellent coffee substitute[7, 269]. Young pods may be consumed as a vegetable[269]. Young leaves and tips are suitable as a cooked green vegetable[269]. Javanese use the tips for lablab, and germinating seeds to make toge[269].

Composition

Figures in grams (g) or miligrams (mg) per 100g of food.

Seed (Fresh weight)

- 500 Calories per 100g
- Water : 13%
- Protein: 29g; Fat: 45g; Carbohydrate: 15g; Fibre: 2.7g; Ash: 2.5g;
- Minerals - Calcium: 49mg; Phosphorus: 409mg; Iron: 3.8mg; Magnesium: 0mg; Sodium: 0mg; Potassium: 0mg; Zinc: 0mg;
- Vitamins - A: 15mg; Thiamine (B1): 0.79mg; Riboflavin (B2): 0.14mg; Niacin: 15.5mg; B6: 0mg; C: 1mg;
- Reference: [218]
- Notes: The figures given here are the median figures of those quoted in the report.

Medicinal Uses

Plants For A Future can not take any responsibility for any adverse effects from the use of plants. Always seek advice from a professional before using a plant medicinally.

Antiseborrheic; Aperient; Demulcent; Emollient; Pectoral.

The oil from the seed is aperient, demulcent, emollient and pectoral[218]. The seed is used mainly as a nutritive food[268]. The seeds have been used in folk medicine as an anti-inflammatory, aphrodisiac and decoagulant[269]. Peanuts play a small role in various folk pharmacopoeias. In China the nuts are considered demulcent, pectoral, and peptic; the oil aperient and emollient, taken internally in milk for treating gonorrhoea, externally for treating rheumatism[269]. In Zimbabwe the peanut is used in folk remedies for plantar warts. Haemostatic and vasoconstrictor activity are reported. The alcoholic extract is said to affect isolated smooth muscles and frog hearts like acetylcholine. The alcoholic lipoid fraction of the seed is said to prevent haemophiliac tendencies and for the treatment of some blood disorders (mucorrhagia and arthritic haemorrhages) in haemophilia[269].

Other Uses

Biomass; Oil; Oil.

The seeds yield a non-drying oil that has a wide range of uses including the manufacture of pharmaceuticals, soaps, cold creams, pomades and lubricants, paints, emulsions for insect control, and fuel for diesel engines[268, 269]. Peanut hulls are used for furfural, fuel, as a filler for fertilizers or for sweeping compounds[269].

Arachis hypogaea

Taxonomy ID: 3818
Genbank common name: **peanut**
Inherited blast name: **eudicots**
Rank: species
Genetic code: Translation table 1 (Standard)
Mitochondrial genetic code: Translation table 1 (Standard)
Other names:

common name: **ground-nut**

common name: **goober**

authority: **Arachis hypogaea L.**

Lineage (full)

cellular organisms; Eukaryota; Viridiplantae; Streptophyta; Streptophytina; Embryophyta; Tracheophyta; Euphyllophyta; Spermatophyta; Magn
Gunneridae; Pentapetalae; rosids; fabids; Fabales; Fabaceae; Papilionoideae; Dalbergieae; Arachis

Comments and References:

GRIN (Nov 08, 2010)

Name verified on 8 November 2010 in: USDA, ARS, National Genetic Resources Program. Germplasm Resources Information Network - (GR

Peanut

- UNII – QE1QX6B99R
- FAMILY – FABACEAE
- GENUS – ARACHIS
- SPECIES – HYPOGAEA
- TAXON_AUTHOR – L.
- PART – SEED

Elm

(elm).

DEFINITION

Elm is the dried inner bark of *Ulmus rubra* Muhl. (*Ulmus fulva* Michx.) (Fam. Ulmaceae).

IDENTIFICATION

- **A. Mucilaginous Substance**

  Sample: 1 g of finely powdered Elm

  Analysis: Macerate the *Sample* with 40 mL of cold water for 1 h.

  Acceptance criteria: The resulting mixture is of a thick mucilaginous consistency and yellowish brown in color.

- **B. Thin-Layer Chromatographic Identification Test**

  Standard solution: 0.025% rutin in methanol

  Sample solution: Extract 1 g of powdered Elm with 10 mL of 60% methanol on a water bath for 15 min. Cool, filter, and concentrate the filtrate to 2.5 mL.

  Chromatographic system

  (See *Chromatography* ⟨ 621 ⟩, *Thin-Layer Chromatography*.)

  Adsorbent: 0.25-mm layer of chromatographic silica gel mixture, typically 20 cm long (TLC plates)

  Application volume: 20 µL

  Developing solvent system: Ethyl acetate, anhydrous formic acid, glacial acetic acid, and water (100:11:11:27)

  Spray reagent: 1% solution of 2-aminoethyl diphenylborinate ester in methanol, followed by a 5% solution of polyethylene glycol 4000 in alcohol

  Analysis

Organism/Part Materials

- Whole Organisms
- Parts of Organisms
- Oils (liquid fats and/or terpenes)
- Butters (semi-solid fats)
- Animal Fats (usually solid)
- Volatile Oils/Waters (steam distilled)
- Waxes (fatty esters)
- Seedcakes (expressed oil residue)

What About CAS RNs?

- 0 to many RNs for substances –**not an identity standard**
- CAS has no consistent way to capture polydispersity
- Single CAS Registry record for all extracts and oils from a plant species
- CAS RNs are copyrighted

Data Precision

Even in the case of lifeless things that make sounds, such as the pipe or harp, how will anyone know what tune is being played unless there is a distinction in the notes? Again, if the trumpet does not sound a clear call, who will get ready for battle? 1 Cor 14:7-8 NIV

Mapped WHO Drug Names

- Alpinia galanga rhizome
- Curcuma longa root
- Anethum graveolens seed oil
- Rubus idaeus leaf extract

Unmapped WHO Drug Names

- Alpinia galanga
- Amoracia rusticana
- Amoracia rusticana extract
- Artemisia annua
- Avena sativa extract

Taxonomy is a moving target

Sugar Kelp

<SUBSTANCE_ID> 68CMP2MB55

- Source Type – brown alga
- Kingdom – Chromista
- Phylum – Ochrophyta
- Class – Phaeophyceae
- Order – Laminariales
- Family – Laminariaceae
- Genus – **Saccharina**
- Species – **Latissima**
- Part – Whole
- Taxon Author – (L.) C.E. Lane, C. Mayes, Druehl & G.W. Saunders

Synonym – Laminaria saccharina (L.) J.V. Lamour.

Barcode of Life

Identifying Species with DNA Barcoding

PUBLICATIONS

OBSERVATIONS ON AN IRRUPTION EVENT OF THE MOTH ACHAEA CATOCALOIDES (LEPIDOPTERA: EREBIDAE) AT KAKAMEGA FOREST, KENYA
Martins, D.J.; Miller, S.E.; Cords, M.; Hirschauer, M.T. and Goodale, C.B., 103(1): 31–38, Apr 6 2014, *Journal of East African Natural History*

The Protist Ribosomal Reference database (PR2): a catalog of unicellular eukaryote Small Sub-Unit rRNA sequences with curated taxonomy
Guillou L, Bachar D, Audic S, Bass D, Berney C, Bittner L, Boutte C, Burgaud G, de Vargas C, Decelle J, Del Campo J, Dolan JR, Dunthorn M, Edvardsen B, Holzmann M, Kooistra WH, Lara E, Le Bescot N, Logares R, Mahé F, Massana R, Montresor M, Morard R, Not F, Pawlowski J,

UPCOMING EVENTS

There are no upcoming events. Revisit past events here.

VIEW ALL

RECENT ACTIVITY

Katy Klymus, Cyrus Amirinia and Apichart Vanavichit joined Connect.BarcodeofLife.net
14 hours ago

FRANCK is now a member of Connect.BarcodeofLife.net
6 days ago

Dr Roger Moore and Hiran Ariyawan joined Connect.BarcodeofLife.net
7 days ago

VIEW ALL

Specified Substance

A single set of elements

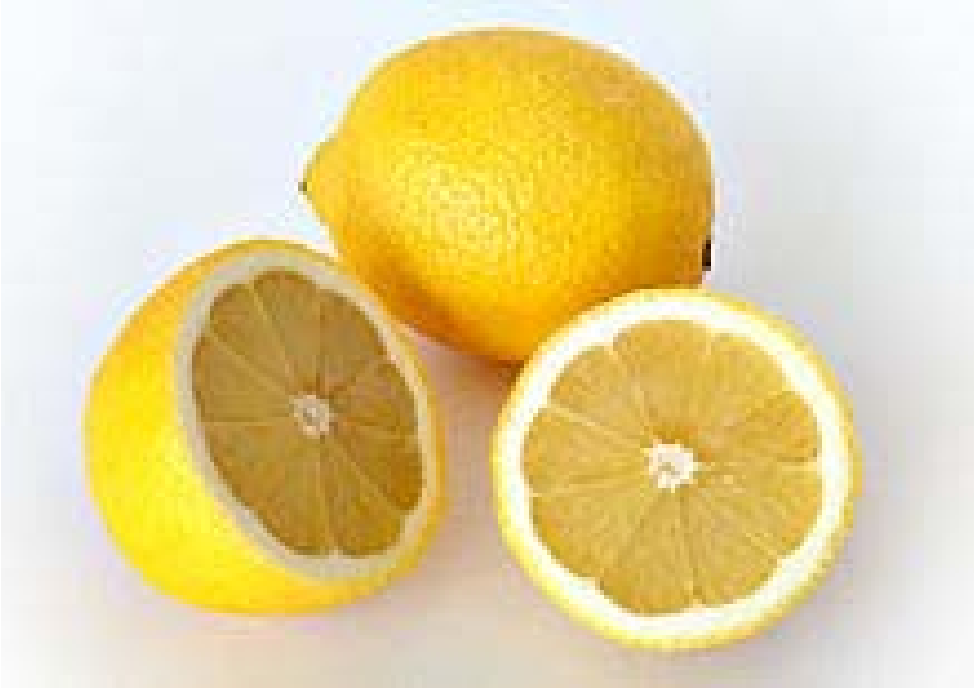
- Components of multi-substance materials (includes proportions)
- Detailed information about substances

Specified Substance

- A specified substance can contain different levels of detailed information depending on the:
  - the region it is implemented
  - the use in the description of the product
  - the actual material

Lemon Oils

- Source Type – Plant
- Kingdom – Plantae
- Phylum – Magnoliophyta
- Class – Magnoliopsida
- Order – Sapindales
- Family – Rutaceae
- Genus – **Citrus**
- Species – **Limon**
- Part – Fruit Peel
- Taxon Author – (L.) Burm. f



Lemon Oils

LEMON OIL UNII-I9GRO824LL
LEMON OIL, DISTILLED UNII-ET5GD00TRP

Food Chemicals Codex (FCC) Monographs

- Lemon Oil, Cold-pressed I9GRO824LL
- Lemon Oil, Desert Type, Cold-pressed I9GRO824LL
- Lemon Oil, Distilled ET5GD00TRP

Contact

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