

Dr. Duke's Phytochemical and Ethnobotanical Databases

List of Plants for CAMPESTEROL

| Plant                 | Part            | Low PPM | High PPM | StdDev              | Reference   |
|-----------------------|-----------------|---------|----------|---------------------|---|
| Zingiber officinale   | Root            | 10.0    | 100.0    | -0.2945736885682078 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Zea mays              | Seed Oil        |         |          |                     | --  |
| Zea mays              | Seed            |         | 320.0    | 0.03885369220474866 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Zea mays              | Shoot           |         |          |                     | --  |
| Withania somnifera    | Tissue Culture  |         |          |                     | --  |
| Vitis vinifera        | Seed            |         |          |                     | --  |
| Vitis vinifera        | Plant           |         |          |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Vigna radiata         | Sprout Seedling | 10.0    | 100.0    | -1.0                | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Vigna radiata         | Seed            | 20.0    | 25.0     | -0.5705099108545394 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Vicia faba            | Seed            | 80.0    | 400.0    | 0.204104838797098   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Verbascum thapsus     | Stem            |         |          |                     | --  |
| Valeriana officinalis | Plant           |         |          |                     | Lokar, L. C., Martini, F. 1997. Chemotaxonomic Investigations on the Genus Valeriana L. in the Northeastern Italy and in Tuscany. I. Phytosterols. Dept. of Biology, University of Trieste. Allionia 35: 103-115. |
| Urtica dioica         | Root            |         |          |                     | Gruenwald, J. et al. 1998. PDR for Herbal Medicine. 1st ed. Medical Economics Co., Montvale, NJ. 1244 pp. (abbreviated as PHR or Physicians Herbal Reference in my mind)  |
| Urtica dioica         | Shoot           |         |          |                     | Gruenwald, J. et al. 1998. PDR for Herbal Medicine. 1st ed. Medical Economics Co., Montvale, NJ. 1244 pp. (abbreviated as PHR or Physicians Herbal Reference in my mind)  |

| Plant                     | Part            | Low PPM | High PPM | StdDev              | Reference  |
|---------------------------|-----------------|---------|----------|---------------------|--|
| Uncaria tomentosa         | Bark            |         |          |                     | --   |
| Ulmus rubra               | Wood            |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.   |
| Trigonella foenum-graecum | Seed            |         | 180.0    | -0.2503358143318627 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Trigonella foenum-graecum | Tissue Culture  |         | 10.0     | 0.9999999999999998  | --   |
| Trifolium pratense        | Plant           |         |          |                     | --   |
| Trichosanthes kirilowii   | Seed            |         |          |                     | --   |
| Tribulus terrestris       | Flower          |         |          |                     | --   |
| Thymus vulgaris           | Plant           |         | 30.0     | -0.5969128791852656 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Theobroma cacao           | Sprout Seedling |         |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.   |
| Taraxacum officinale      | Leaf            |         |          |                     | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Tagetes erecta            | Flower          |         |          |                     | Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.   |
| Syzygium aromaticum       | Fruit           |         |          |                     | --   |
| Syzygium aromaticum       | Plant           |         |          |                     | --   |
| Stevia rebaudiana         | Leaf            |         |          |                     | --   |
| Spinacia oleracea         | Sprout Seedling |         |          |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Sophora angustifolia      | Root            |         |          |                     | --   |
| Solanum tuberosum         | Plant           |         |          |                     | --   |

| Plant                   | Part              | Low PPM | High PPM | StdDev              | Reference  |
|-------------------------|-------------------|---------|----------|---------------------|--|
| Solanum dulcamara       | Leaf              |         |          |                     | --   |
| Solanum tuberosum       | Tuber             |         |          |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Sesamum indicum         | Seed Oil          |         |          |                     | --   |
| Sesamum indicum         | Seed              |         | 910.0    | 1.257580898323325   | --   |
| Serenoa repens          | Fruit             | 28.0    | 90.0     | 0.10490824541035179 | --   |
| Senna occidentalis      | Seed              |         |          |                     | --   |
| Scutellaria baicalensis | Root              |         |          |                     | --   |
| Satureja hortensis      | Plant             |         | 10.0     | -0.707452301256611  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Sarracenia purpurea     | Root              |         |          |                     | --   |
| Sarracenia purpurea     | Shoot             |         |          |                     | --   |
| Sambucus canadensis     | Leaf              |         |          |                     | --   |
| Sambucus nigra          | Leaf              |         |          |                     | --   |
| Sambucus canadensis     | Plant             |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| Sambucus nigra          | Flower            |         |          |                     | --   |
| Salvia officinalis      | Fruit             |         |          |                     | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.       |
| Salvia officinalis      | Fruit Essent. Oil |         |          |                     | --   |
| Salvia officinalis      | Leaf              |         | 120.0    | -0.2035509596292973 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Ruscus aculeatus        | Root              |         |          |                     | --   |
| Ruellia tuberosa        | Plant             |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| Rosmarinus officinalis  | Shoot             | 10.0    | 16.0     | -1.0                | --   |
| Rosa multiflora         | Fruit             |         |          |                     | --   |
| Punica granatum         | Seed              |         |          |                     | --   |

| Plant                          | Part    | Low PPM | High PPM | StdDev               | Reference   |
|--------------------------------|---------|---------|----------|----------------------|---|
| <i>Ptychopetalum olacoides</i> | Plant   |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                            |
| <i>Prunus persica</i>          | Seed    |         |          |                      | --  |
| <i>Prunus dulcis</i>           | Seed    |         | 50.0     | -0.5188689275444304  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                          |
| <i>Prunus armeniaca</i>        | Fruit   | 10.0    | 100.0    | 0.18983396788539855  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                          |
| <i>Prunus armeniaca</i>        | Seed    |         |          |                      | --  |
| <i>Prosopis glandulosa</i>     | Stem    |         |          |                      | Zirvi, K. A., Jewers, K., Nagler, M. J. 1977. Phytochemical Investigation of <i>Prosopis glandulosa</i> Stems. <i>Planta Med. Suppl.</i> 32: 244-246. |
| <i>Pluchea carolinensis</i>    | Shoot   |         |          |                      | Tramil  |
| <i>Plantago ovata</i>          | Seed    |         |          |                      | --  |
| <i>Pisum sativum</i>           | Seed    |         |          |                      | --  |
| <i>Piper methysticum</i>       | Rhizome |         |          |                      | --  |
| <i>Piper nigrum</i>            | Fruit   | 30.0    | 60.0     | -0.14986892201478846 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                          |
| <i>Pinus sylvestris</i>        | Plant   |         |          |                      | --  |
| <i>Pinus sylvestris</i>        | Bark    |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.                            |
| <i>Pimenta dioica</i>          | Fruit   |         | 10.0     | -0.574497534390022   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                          |
| <i>Phoenix dactylifera</i>     | Stem    |         |          |                      | Abstract (See species file)   |
| <i>Phellodendron amurense</i>  | Bark    |         |          |                      | --  |
| <i>Phaseolus vulgaris</i>      | Seed    |         | 30.0     | -0.5601817141925177  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                          |

| Plant                       | Part            | Low PPM | High PPM | StdDev                | Reference   |
|-----------------------------|-----------------|---------|----------|-----------------------|---|
| <i>Petroselinum crispum</i> | Sprout Seedling |         |          |                       | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Petasites hybridus</i>   | Root            |         |          |                       | --  |
| <i>Persea americana</i>     | Plant           |         |          |                       | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.  |
| <i>Perilla frutescens</i>   | Plant           |         |          |                       | Han, J. S. 1978. A Study on Sterol in <i>Perilla frutescens</i> . Yongnam Taehakkyo Nonmumjip Chayon Kwahak Pyon, 11: 211-215.  |
| <i>Papaver somniferum</i>   | Seed            | 200.0   | 240.0    | -0.1263974543876007   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Panax ginseng</i>        | Root            |         |          |                       | --  |
| <i>Panax quinquefolius</i>  | Plant           |         |          |                       | --  |
| <i>Panax japonicus</i>      | Rhizome         |         |          |                       | --  |
| <i>Paeonia suffruticosa</i> | Root Bark       |         |          |                       | Chemical Constituents of Oriental Herbs (3 diff. books)   |
| <i>Paeonia moutan</i>       | Root Bark       |         |          |                       | --  |
| <i>Oryza sativa</i>         | Plant           |         |          |                       | --  |
| <i>Origanum vulgare</i>     | Plant           | 120.0   | 130.0    | -0.044215768828538185 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Origanum majorana</i>    | Plant           |         | 30.0     | -0.5969128791852656   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Opuntia ficus-indica</i> | Seed Oil        |         | 140000.0 |                       | --  |
| <i>Ononis spinosa</i>       | Root            |         | 22.0     | -1.5254708872282197   | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. |
| <i>Oenothera biennis</i>    | Fruit           |         |          |                       | --  |
| <i>Oenothera biennis</i>    | Seed            | 103.0   | 220.0    | -0.16771024103568802  | --  |

| Plant                   | Part           | Low PPM | High PPM | StdDev               | Reference  |
|-------------------------|----------------|---------|----------|----------------------|--|
| Oenothera biennis       | Inflorescence  |         |          |                      | --   |
| Ocimum basilicum        | Leaf           |         | 90.0     | -0.37970082853926607 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Nigella sativa          | Seed           |         |          |                      | --   |
| Nigella sativa          | Seed Oil       |         |          |                      | --   |
| Nerium oleander         | Plant          |         |          |                      | --   |
| Myristica fragrans      | Seed           |         | 30.0     | -0.5601817141925177  | --   |
| Myristica fragrans      | Aril           |         | 60.0     |                      | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Musa x paradisiaca      | Fruit          | 20.0    | 80.0     | 0.019982522935305048 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Morus alba              | Plant          |         |          |                      | --   |
| Moringa oleifera        | Seed           |         |          |                      | --   |
| Mitchella repens        | Plant          |         |          |                      | --   |
| Melissa officinalis     | Tissue Culture |         | 0.1      | -1.0                 | Gbolade, A.A. and Lockwood, G.B. 1991. The Constituents of Melissa officinalis L. Cultures. J. Ess. Oil Res., 3: 111-114.  |
| Medicago sativa         | Plant          |         |          |                      | --   |
| Malus domestica         | Fruit          | 10.0    | 60.0     | -0.14986892201478846 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Magnolia kobus          | Seed           |         |          |                      | --   |
| Lycopersicon esculentum | Fruit          |         |          |                      | --   |
| Lycium chinense         | Seed           |         |          |                      | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |

| Plant                | Part            | Low PPM | High PPM | StdDev               | Reference  |
|----------------------|-----------------|---------|----------|----------------------|--|
| Lycium chinense      | Leaf            |         |          |                      | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Linum usitatissimum  | Seed            |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.   |
| Lepidium meyenii     | Root            |         |          |                      | --   |
| Laurus nobilis       | Leaf            |         | 60.0     | -0.5558506974492348  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Lactuca sativa       | Seed            |         |          |                      | --   |
| Kalanchoe spathulata | Flower          |         |          |                      | --   |
| Juniperus communis   | Fruit           |         |          |                      | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.  |
| Juglans nigra        | Seed            |         | 60.0     | -0.4982125342203867  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Juglans regia        | Seed            | 20.0    | 85.0     | -0.44657155091027756 | --   |
| Jatropha curcas      | Leaf            |         |          |                      | --   |
| Inula helenium       | Root            |         |          |                      | --   |
| Illicium verum       | Fruit           |         | 130.0    | 0.4446111353105388   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Humulus lupulus      | Stem            |         |          |                      | --   |
| Hordeum vulgare      | Sprout Seedling |         | 330.0    | 1.0                  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)   |
| Hibiscus sabdariffa  | Seed            |         |          |                      | --   |
| Heliotropium indicus | Plant           |         |          |                      | --   |

| Plant                    | Part      | Low PPM | High PPM | StdDev               | Reference  |
|--------------------------|-----------|---------|----------|----------------------|--|
| Helianthus annuus        | Seed      | 750.0   | 770.0    | 0.9683913917867137   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Harpagophytum procumbens | Tuber     |         |          |                      | --   |
| Glycine max              | Seed      | 90.0    | 270.0    | -0.06442827441546968 | --   |
| Ginkgo biloba            | Seed      |         |          |                      | Jim Duke's personal files.   |
| Gaultheria procumbens    | Shoot     |         |          |                      | --   |
| Fritillaria thunbergii   | Bulb      |         |          |                      | Chemical Constituents of Oriental Herbs (3 diff. books)  |
| Fragaria spp             | Fruit     |         |          |                      | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Foeniculum vulgare       | Leaf      | 10.0    | 12.0     | -0.8376904877051847  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Ficus carica             | Fruit     | 10.0    | 50.0     | -0.2347946444898352  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Fagopyrum esculentum     | Seed      | 200.0   | 230.0    | -0.14705384771164434 | --   |
| Euphorbia pulcherrima    | Plant     |         |          |                      | --   |
| Euphorbia hirta          | Plant     |         |          |                      | --   |
| Eriobotrya japonica      | Fruit     |         |          |                      | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Equisetum arvense        | Plant     |         |          |                      | --   |
| Equisetum arvense        | Strobilus |         |          |                      | Jim Duke's personal files.   |
| Eleutheria cardamomum    | Seed      | 40.0    | 55.0     | -0.5085407308824086  | --   |
| Dioscorea villosa        | Root      | 20.0    | 200.0    | 1.2834996430471919   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Digitalis lanata         | Plant     |         |          |                      | --   |
| Daucus carota            | Root      |         |          |                      | --   |



| Plant                         | Part                | Low PPM | High PPM | StdDev               | Reference   |
|-------------------------------|---------------------|---------|----------|----------------------|---|
| <i>Cymbopogon parkeri</i>     | Plant               |         |          |                      | Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986. |
| <i>Curcuma longa</i>          | Rhizome             |         |          |                      | --  |
| <i>Curcuma longa</i>          | Root                |         | 90.0     | -0.45238102172974776 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                        |
| <i>Cuminum cyminum</i>        | Seed                |         | 50.0     | -0.5188689275444304  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                        |
| <i>Cucurbita pepo</i>         | Seed                |         |          |                      | --  |
| <i>Cucumis sativus</i>        | Seed                |         |          |                      | --  |
| <i>Cucumis melo</i>           | Seed                |         |          |                      | --  |
| <i>Corylus avellana</i>       | Plant               |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| <i>Corylus avellana</i>       | Seed                |         |          |                      | --  |
| <i>Coriandrum sativum</i>     | Fruit               |         | 30.0     | -0.4046460894399287  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                        |
| <i>Commiphora myrrha</i>      | Resin, Exudate, Sap |         |          |                      | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                      |
| <i>Commelina benghalensis</i> | Plant               |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| <i>Coix lacryma-jobi</i>      | Seed                |         |          |                      | Chemical Constituents of Oriental Herbs (3 diff. books)   |
| <i>Coffea arabica</i>         | Seed                | 110.0   | 120.0    | -0.3742741742761247  | --  |
| <i>Cocos nucifera</i>         | Seed Oil            |         |          |                      | Jim Duke's personal files.  |
| <i>Cocos nucifera</i>         | Fruit               |         | 30.0     | -0.4046460894399287  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                        |
| <i>Cnicus benedictus</i>      | Plant               |         |          |                      | Jim Duke's personal files.  |
| <i>Clematis vitalba</i>       | Plant               |         |          |                      | --  |

| Plant                      | Part          | Low PPM | High PPM | StdDev               | Reference  |
|----------------------------|---------------|---------|----------|----------------------|--|
| Citrus limon               | Fruit         |         | 20.0     | -0.48957181191497545 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |
| Citrus paradisi            | Fruit         |         | 20.0     | -0.48957181191497545 | --   |
| Citrus reticulata          | Root          |         |          |                      | --   |
| Citrus sinensis            | Fruit         |         | 40.0     | -0.31972036696488193 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |
| Citrus reticulata          | Pericarp      |         |          |                      | --   |
| Citrullus lanatus          | Seed          |         |          |                      | --   |
| Citrullus lanatus          | Fruit         |         |          |                      | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |
| Citrullus lanatus          | Seed Oil      |         |          |                      | --   |
| Cinnamomum verum           | Bark          |         | 30.0     |                      | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |
| Chrysanthemum x morifolium | Flower        |         |          |                      | Wealth of India.   |
| Chenopodium album          | Plant         |         |          |                      | --   |
| Ceratonia siliqua          | Seed          |         |          |                      | Wealth of India.   |
| Centella asiatica          | Plant         |         |          |                      | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Centella asiatica          | Essential Oil |         | 2000.0   |                      | Jim Duke's personal files.   |
| Caulophyllum thalictroides | Root          |         |          |                      | Jim Duke's personal files.   |
| Carum carvi                | Seed          |         | 30.0     | -0.5601817141925177  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |
| Carica papaya              | Seed Oil      |         |          |                      | Jim Duke's personal files.   |
| Capsicum annuum            | Fruit         | 20.0    | 530.0    | 3.841640034312409    | --   |
| Capsicum frutescens        | Fruit         | 20.0    | 30.0     | -0.4046460894399287  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)                                 |

| Plant  | Part     | Low PPM | High PPM | StdDev              | Reference   |
|--|----------|---------|----------|---------------------|---|
| <i>Cannabis sativa</i>                           | Plant    |         |          |                     | Turner, C. E., El Sohly, M. A., Boeren, E. G. 1980. Constituents of <i>Cannabis sativa</i> L. XVII. A Review of the Natural Constituents. <i>J Natural Products</i> , 432: 169-234. |
| <i>Cannabis sativa</i>                           | Seed     |         |          |                     | --  |
| <i>Cannabis sativa</i>                           | Root     |         |          |                     | --  |
| <i>Camellia sinensis</i>                         | Seed Oil |         |          |                     | --  |
| <i>Camellia sinensis</i>                         | Seed     |         |          |                     | --  |
| <i>Calendula officinalis</i>                     | Flower   |         |          |                     | --  |
| <i>Brassica oleracea</i> var. <i>capitata</i> l. | Leaf     | 20.0    | 200.0    | 0.2661820241306193  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Brassica rapa</i>                             | Plant    |         |          |                     | --  |
| <i>Brassica napus</i> var. <i>napobrassica</i>   | Seed     |         |          |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants.</i> Taylor & Frost, London. 791 pp.                       |
| <i>Brassica oleracea</i> var. <i>gemmifera</i>   | Leaf     | 60.0    | 600.0    | 2.614846942930202   | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Brassica rapa</i>                             | Root     | 10.0    | 100.0    | -0.2945736885682078 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Brassica juncea</i>                           | Leaf     |         | 100.0    | -0.3209842055692765 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Brassica oleracea</i> var. <i>botrytis</i> l. | Flower   | 30.0    | 300.0    |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Brassica rapa</i>                             | Leaf     | 20.0    | 200.0    | 0.2661820241306193  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Beta vulgaris</i>                             | Leaf     |         |          |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| <i>Avena sativa</i>                              | Seed     |         |          |                     | --  |

| Plant                       | Part  | Low PPM | High PPM | StdDev              | Reference   |
|-----------------------------|-------|---------|----------|---------------------|---|
| Arundo donax                | Leaf  |         |          |                     | --  |
| Artemisia dracunculus       | Shoot |         | 30.0     | 1.0                 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Armoracia rusticana         | Root  |         | 200.0    | 1.2834996430471919  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Apium graveolens            | Seed  |         | 50.0     | -0.5188689275444304 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Apium graveolens            | Pt    |         |          |                     | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Annona muricata             | Plant |         |          |                     | --  |
| Annona cherimola            | Seed  | 1700.0  | 2200.0   | 3.9222556371249584  | --  |
| Anethum graveolens          | Plant |         | 490.0    | 1.9454938284556806  | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Ananas comosus              | Fruit |         | 10.0     | -0.574497534390022  | --  |
| Amaranthus spinosus         | Leaf  |         |          |                     | Wealth of India.  |
| Aloe vera                   | Leaf  |         |          |                     | --  |
| Aloe vera                   | Plant |         |          |                     | --  |
| Allium cepa                 | Bulb  | 10.0    | 50.0     | -1.0                | --  |
| Allium schoenoprasum        | Leaf  |         | 10.0     | -0.8494338122991827 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)  |
| Allium cepa                 | Seed  |         |          |                     | Kintia, P. K., Degtiaryova, L. P., Balashova, N. N., Shvets, S. A. 1987. Sterols and Steroidal Glycosides of Bulb Onion Seeds. Fecs. Int. Conf. Chem. Biotechol. Biol. Act. Nat. Prod., (Proc.) 3rd: 166-170. |
| Allium sativum var. sativum | Bulb  | 0.0     | 150.0    | 1.0                 | --  |
| Aleurites fordii            | Plant |         |          |                     | --  |
| Aesculus hippocastanum      | Bark  |         |          |                     | Jim Duke's personal files.  |

| Plant                  | Part  | Low PPM | High PPM | StdDev              | Reference  |
|------------------------|-------|---------|----------|---------------------|--|
| Aesculus hippocastanum | Leaf  |         |          |                     | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.                            |
| Aesculus hippocastanum | Seed  |         |          |                     | Jim Duke's personal files.   |
| Acacia farnesiana      | Plant |         |          |                     | Pakistan Encyclopedia Planta Medica. 1986.   |
| Acacia farnesiana      | Seed  |         |          |                     | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.       |
| Abrus precatorius      | Seed  |         |          |                     | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| Abelmoschus esculentus | Fruit |         | 30.0     | -0.4046460894399287 | Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.) |
| Abelmoschus moschatus  | Seed  |         |          |                     | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.    |