

C TERPINEN-4-OL

Chemid

TERPINEN4OL

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|----------------------|---------|------------|-------------|----------------------|--|
| Achillea millefolium | Leaf | 3 | 430 | -0.24039913557404782 | -- |
| Acinos alpinus | Shoot | 3 | 3 | -0.1659368758696505 | Velasco-Negueruela,A., Perez-Alonso,M.J., Jiminez,S.M. and Garcia,F.M. 1993. The Volatile Constituents of Acinus alpinus (L.) Moench ssp. meridionalis (Nyman). P.W. Ball Growing in Spain. Flav. & Frag. J. 8:127-130.) |
| Acinos suaveolens | Shoot | 1400 | 1400 | 0.41314255165211494 | Jim Duke's personal files. |
| Acorus calamus | Rhizome | 10 | 500 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Agathosma betulina | Leaf | -- | -- | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| Aloysia citrodora | Plant | 3 | 21 | -0.272339846599895 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Alpinia galanga | Plant | -- | -- | | Abstract (See species file) |
| Alpinia galanga | Rhizome | -- | -- | | -- |
| Alpinia officinarum | Rhizome | -- | -- | | Wealth of India. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|------------------------|---------------------|------------|-------------|----------------------|---|
| Ammi visnaga | Essential Oil | -- | -- | -- | |
| Amomum compactum | Seed | -- | -- | | Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50. |
| Anethum graveolens | Fruit | 12 | 77 | -0.3466854896821412 | -- |
| Anethum graveolens | Seed | 0.1 | 77 | -0.6507040021716104 | -- |
| Anethum graveolens | Leaf | 5 | 15 | -0.33175766291960446 | -- |
| Anethum graveolens | Essential Oil | -- | -- | -- | |
| Angelica archangelica | Root | 0 | 10 | -0.5731321285364237 | -- |
| Angelica archangelica | Root Essent. Oil | -- | -- | -- | |
| Apium graveolens | Leaf Essent. Oil | -- | 1000 | -0.5406868834711872 | -- |
| Apium graveolens | Seed | 1 | 1400 | 0.06885583974834963 | -- |
| Aralia cordata | Root | 6 | 6 | -1.055769710461833 | -- |
| Artemisia annua | Plant | 15 | 1135 | 0.21296450672015324 | -- |
| Artemisia pallens | Plant | -- | -- | -- | |
| Artemisia salsolooides | Shoot | -- | 24500 | 9.988471668153748 | V. Kaul, P. Weyerstahl, H. Wahlberg, H. Marschall, (1992); Volatile constituents of the essential oil and the absolute of Aremsia salsolooides Willd. from Ladakh, Flavour and Fragrance journal, Vol.7, 299-305. |
| Boswellia sacra | Essential Oil | -- | -- | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|---------------------------------------|----------------------|------------|-------------|----------------------|--|
| Boswellia sacra | Resin Essent. Oil | -- | 2000 | | Abdel Wahab, S. M., Aboutabl, E. A., El-Zalabani, S. M., Fouad, H. A., De Pooter, H. L., El-Fallaha, B. 1987. The Essential Oil of Olibanum. Plant Med. 53 (4): 382-384. |
| Boswellia serrata | Essential Oil | -- | -- | | -- |
| Brassica oleracea var. capitata l. | Shoot | -- | 22 | -0.15806106404222492 | -- |
| Calamintha nepeta | Shoot | 105 | 105 | -0.12365620184873419 | Kirimer, N., Baser, K.H.C., Ozek, T. and Kurkcuoglu, M. 1992. Composition of the Essential Oil of Calamintha nepeta subsp. glandulosa. J. Ess. Oil Res. 4:189-190 |
| Capsicum annuum | Fruit | -- | -- | | -- |
| Capsicum frutescens | Fruit | -- | -- | | -- |
| Carthamus tinctorius | Flower | 0.01 | 0.1 | -1.2822283694095995 | -- |
| Carum carvi | Plant | 120 | 985 | 0.14761831910973383 | -- |
| Chrysanthemum parthenium Shoot | | -- | 4 | -0.16552235945768073 | Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of Tanacetum parthenium (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71. |
| Cinnamomum aromaticum | Plant | -- | -- | | -- |
| Cinnamomum camphora | Leaf | 135 | 270 | -0.18615500996262355 | -- |
| Cinnamomum verum | Bark | 36 | 144 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Cinnamomum verum | Leaf | 580 | 1160 | 0.3220267983970355 | -- |
| Cinnamomum verum | Root Bark | -- | -- | | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------------|-------------------------|------------|-------------|----------------------|---|
| <i>Cinnamomum verum</i> | Bark Essent. Oil | -- | 4000 | | -- |
| <i>Cistus ladaniferus</i> | Leaf | 1 | 70 | -0.3003531691445694 | -- |
| <i>Citrus aurantiifolia</i> | Fruit | 166 | 166 | -0.33320430132175255 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1979-1980. |
| <i>Citrus aurantium</i> | Leaf | 50 | 80 | -0.29464326118547207 | -- |
| <i>Citrus limon</i> | Pericarp Essent. Oil | 1000 | 11000 | | Jim Duke's personal files. |
| <i>Citrus limon</i> | Leaf Essent. Oil | 29600 | 31000 | -0.2861319108695746 | Jim Duke's personal files. |
| <i>Citrus limon</i> | Essential Oil | 1 | 40 | -0.6167580897613645 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1979-1980. |
| <i>Citrus limon</i> | Petiole | -- | 22 | | -- |
| <i>Citrus mitis</i> | Fruit Juice | 0.2 | 0.2 | | -- |
| <i>Citrus paradisi</i> | Leaf | -- | 305 | -0.1661703321057829 | -- |
| <i>Citrus paradisi</i> | Pericarp | -- | 3 | | -- |
| <i>Citrus reticulata</i> | Fruit | -- | 0.1 | -0.358333842321623 | -- |
| <i>Citrus reticulata</i> | Leaf Essent. Oil | -- | 71300 | 0.05582026899192498 | -- |
| <i>Citrus sinensis</i> | Fruit | -- | 0.1 | -0.358333842321623 | -- |
| <i>Cleonia lusitanica</i> | Leaf | 2 | 3 | -0.3386095524705212 | Perez-Alonso, M., Velasco-Negueruela, A., and Lopez-Saez, A. 1991. The Essential Oil of Cleonia lusitanica. J. Ess. Oil Res., 3: 441-442. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|---------------------------|----------------------|------------|-------------|----------------------|--|
| <i>Coleus barbatus</i> | Leaf Essent. Oil | -- | 2900 | -0.5245650685397517 | Jim Duke's personal files. |
| <i>Coleus barbatus</i> | Stem Essent. Oil | -- | 2900 | | Jim Duke's personal files. |
| <i>Coriandrum sativum</i> | Fruit | 6 | 80 | -0.34623106760257755 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Coriandrum sativum</i> | Seed Essent. Oil | -- | 13800 | -0.5326666411126562 | -- |
| <i>Coriandrum sativum</i> | Essential Oil | -- | -- | | -- |
| <i>Crocus sativus</i> | Silk Stigma Style | -- | 265000 | | -- |
| <i>Croton eluteria</i> | Bark | -- | -- | | -- |
| <i>Croton lechleri</i> | Plant | -- | -- | | Taylor, Leslie. 2005. The Healing Power of Rainforest Herbs. SquareOne Publisher, Garden City Park, NY. 519 pp. |
| <i>Cuminum cyminum</i> | Fruit | -- | 30 | -0.35380476892863855 | -- |
| <i>Cuminum cyminum</i> | Seed | 30 | 30 | -0.6762665967069378 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Cuminum cyminum</i> | Seed Essent. Oil | -- | 1000 | -0.656858499149851 | -- |
| <i>Cymbopogon nardus</i> | Plant | 21 | 84 | -0.24489444780351885 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Daucus carota</i> | Root | 28 | 28 | 1.5987369901279187 | -- |
| <i>Dictamnus albus</i> | Shoot | 43 | 43 | -0.1493562193908598 | Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of <i>Dictamnus albus</i> from Turkey. <i>Planta Med.</i> 60:481-2 |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------------|----------------------|---------|----------|----------------------|---|
| <i>Dictamnus albus</i> | Shoot | -- | 3 | -0.1659368758696505 | Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of <i>Dictamnus albus</i> from Turkey. <i>Planta Med.</i> 60:481-2 |
| <i>Dictamnus albus</i> | Shoot | -- | 43 | -0.1493562193908598 | Baser, K.H.C., Kosar, M.Malyer, H. & Ozek, T. 1994. The Essential Oil Composition of <i>Dictamnus albus</i> from Turkey. <i>Planta Med.</i> 60:481-2 |
| <i>Elettaria cardamomum</i> | Fruit | 252 | 23200 | 3.155848425568043 | -- |
| <i>Elettaria cardamomum</i> | Fruit Essent. -- Oil | -- | 27000 | 1.4135559855648545 | -- |
| <i>Elettaria cardamomum</i> | Seed Essent. -- Oil | -- | 13000 | -0.5404286322399808 | -- |
| <i>Elsholtzia pilosa</i> | Shoot | 6 | 6 | -0.1646933266337412 | -- |
| <i>Elsholtzia polystachya</i> | Leaf | 2.6 | 2.6 | -0.3388379487888852 | Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from <i>Elsholtzia polystachya</i> from Two Different Locations in India. <i>Planta Medica</i> 58: 376-379. |
| <i>Elsholtzia polystachya</i> | Leaf | -- | 2.6 | -0.3388379487888852 | Mathela,C.S., Melkani,A.B., Bisht,J.C., Pant,A.K., Bestmann,H.J., Erler,J., Kobold,U., Rauscher,J. and Vostrowsky,O. 1992. Chemical Varieties of Essential Oils from <i>Elsholtzia polystachya</i> from Two Different Locations in India. <i>Planta Medica</i> 58: 376-379. |
| <i>Ephedra sinica</i> | Essential Oil | -- | -- | -- | Jim Duke's personal files. |
| <i>Ephedra sinica</i> | Stem | -- | -- | -- | Jim Duke's personal files. |
| <i>Ephedra sinica</i> | Shoot | -- | 39 | -0.15101428503873887 | -- |
| <i>Eucalyptus albens</i> | Shoot | -- | 18 | -0.159719129690104 | Zrira, S. S., Benjlali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. <i>Journal of Essential Oil Res.</i> 4: 259-264. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|--------------------------|-------|---------|----------|----------------------|--|
| Eucalyptus astringens | Shoot | -- | 0.1 | -0.16713897346436285 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus behriana | Leaf | 2.7 | 2.7 | -0.3387808497092941 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus blakelyi | Shoot | -- | 60 | -0.14230944038737373 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus bosistoana | Shoot | -- | 75 | -0.1360916942078272 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus botryoides | Shoot | -- | 0.1 | -0.16713897346436285 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus brassiana | Leaf | -- | 35 | -0.3203378470014099 | Singh, A. K., Gupta, K. C., & Brophy, J. J. 1991. Chemical Constituents of the Leaf Essential Oil of Eucalyptus brassiana S. T. Blake. Journal of Essential Oil Res. 3: 45-7. |
| Eucalyptus bridgesiana | Leaf | -- | 2.7 | -0.3387808497092941 | Singh, A. K., Gupta, K. C., & Brophy, J. J. 1991. Volatile Constituents of the Essential Oil of Eucalyptus bridgesiana Growing in India. Journal of Essential Oil Res. 3: 449-450. |
| Eucalyptus camaldulensis | Shoot | -- | 200 | -0.08427714271160626 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus citriodora | Shoot | -- | 0.1 | -0.16713897346436285 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------|----------------------|------------|-------------|----------------------|--|
| Eucalyptus citriodora | Leaf Essent. Oil | -- | 1000 | -0.5406868834711872 | -- |
| Eucalyptus cladocalyx | Shoot | -- | 36 | -0.15225783427464817 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus cuprea | Leaf | 6.4 | 6.4 | -0.3366681837644281 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus dealbata | Shoot | -- | 115 | -0.11951103772903651 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus desquamata | Leaf | 0 | 15 | -0.33175766291960446 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus diversicolor | Shoot | -- | 0.1 | -0.16713897346436285 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus fasciculosa | Leaf | 0 | 1.3 | -0.3395802368235678 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus globulus | Shoot | -- | 3000 | 1.0763688108037435 | -- |
| Eucalyptus globulus | Fruit Essent. Oil | -- | -- | -- | -- |
| Eucalyptus globulus | Leaf Essent. Oil | -- | 8000 | -0.48129072319747757 | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------|-------|---------|----------|----------------------|--|
| Eucalyptus intertexta | Leaf | 35 | 35 | -0.3203378470014099 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus lansdowneana | Leaf | 110 | 110 | -0.2775135373081802 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus largisparsa | Leaf | 300 | 300 | -0.16902528608533154 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus leucoxylon | Leaf | 0 | 5.5 | -0.3371820754807469 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus maculata | Shoot | -- | 30 | -0.15474493274646678 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus maidenii | Shoot | -- | 55 | -0.14438202244722256 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus melanophloia | Leaf | 0 | 0.8 | -0.33986573222152267 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus melliodora | Shoot | -- | 50 | -0.1464546045070714 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------|-------|---------|----------|----------------------|---|
| Eucalyptus moluccana | Shoot | -- | 325 | -0.0324625912153853 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus occidentalis | Shoot | -- | 145 | -0.10707554536994349 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus ochrophloia | Leaf | 0.5 | 0.5 | -0.34003702946029557 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus odorata | Leaf | 200 | 200 | -0.2261243656763046 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus oviformis | Shoot | -- | 70 | -0.13816427626767605 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus paniculata | Shoot | -- | 5 | -0.16510784304571097 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus polyanthemos | Shoot | -- | 65 | -0.1402368583275249 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus populnea | Leaf | 1.8 | 1.8 | -0.33929474142561294 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Symphyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------|-------|---------|----------|----------------------|--|
| Eucalyptus porosa | Leaf | 425 | 425 | -0.09765143659661539 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus punctata | Shoot | -- | 155 | -0.10293038125024581 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus saligna | Shoot | -- | 40 | -0.1505997686267691 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus siderophloia | Shoot | -- | 28 | -0.15557396557040631 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus sideroxylon | Shoot | -- | 0.1 | -0.16713897346436285 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus sparsa | Leaf | 25 | 25 | -0.3260477549605072 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Eucalyptus tereticornis | Shoot | -- | 75 | -0.1360916942078272 | Zrira, S. S., Benjilali, B. B., Fechtal, M. M., & Richard, H. H. 1991. Essential Oils of Twenty-seven Eucalyptus Species Grown in Morocco. Journal of Essential Oil Res. 4: 259-264. |
| Eucalyptus viridis | Leaf | 0 | 0.5 | -0.34003702946029557 | Bignell, C.M., Dunlop, P.J., Brophy, J.J., and Jackson, J.F. 1995. Volatile Leaf Oils of Some South-western and Southern Australian Species of the Genus Eucalyptus. Part VI. Subgenus Sympyomyrtus, Section Adnataria. Flavour and Fragrance J. 10(6):359-364 |
| Foeniculum vulgare | Fruit | 10 | 60 | -0.34926054813300195 | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------------|------------------------|------------|-------------|----------------------|---|
| <i>Foeniculum vulgare</i> | Seed | 10 | 60 | -0.6599500470035373 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Foeniculum vulgare</i> | Essential Oil | -- | 10300 | -0.5170627044699472 | Jim Duke's personal files. |
| <i>Glechoma hederacea</i> | Plant | 1 | 8 | -0.2780031828594647 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Glycyrrhiza glabra</i> | Rhizome Essent. Oil | 72000 | 72000 | -- | |
| <i>Hedeoma drummondii</i> | Plant | 100 | 100 | -0.2379241877917408 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Hedeoma reverchonii</i> | Plant | 422 | 422 | -0.09764770505470709 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Hedychium flavum</i> | Shoot | -- | 10 | -0.16303526098586213 | -- |
| <i>Hypericum perforatum</i> | Plant | 0.5 | 9 | -0.2775675416087286 | -- |
| <i>Hyptis suaveolens</i> | Shoot | 100 | 100 | -0.12572878390858302 | Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321. |
| <i>Hyptis suaveolens</i> | Shoot | -- | 100 | -0.12572878390858302 | Mallvarapu, G.R., Ramesh, S., Kaul, P.N., Bhattacharya, A.K., and Rao, B.R.R. 1993. The Essential Oil of <i>Hyptis suaveolens</i> (L.) Poit. J. Ess. Oil Res. 5: 321. |
| <i>Hyssopus officinalis</i> | Flower | 2 | 28 | -0.877935181573476 | Flavour and Fragrance Journal, 6: 72. |
| <i>Hyssopus officinalis</i> | Leaf | 1 | 790 | 0.11076020391043574 | Flavour and Fragrance Journal, 6: 72. |
| <i>Hyssopus officinalis</i> | Shoot | 85 | 85 | -0.13194653008812954 | Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. J. Ess. Oil Res. 5: 609-611. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------------|-------------------|---------|----------|----------------------|---|
| <i>Hyssopus officinalis</i> | Shoot | -- | 85 | -0.13194653008812954 | Tsankova, E.T., Konatchiev, A.N. and Genova, E.M. 1993. Chemical Composition of the Essential Oils of Two <i>Hyssopus officinalis</i> cultivars. <i>J. Ess. Oil Res.</i> 5: 609-611. |
| <i>Illicium verum</i> | Fruit | 1 | 100 | -0.3432015870721531 | -- |
| <i>Isanthus brachiatus</i> | Plant | 2 | 2 | -0.28061703036388147 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Juniperus communis</i> | Fruit | 13 | 1050 | -0.19930126187699354 | -- |
| <i>Juniperus communis</i> | Fruit Essent. Oil | -- | -- | -- | -- |
| <i>Juniperus communis</i> | Leaf Essent. Oil | -- | -- | -- | -- |
| <i>Juniperus communis</i> | Essential Oil | -- | 21000 | -0.4130918835519973 | -- |
| <i>Lantana camara</i> | Shoot | -- | 1 | -0.16676590869359004 | -- |
| <i>Laurus nobilis</i> | Leaf | 190 | 1380 | 0.44764477349717596 | -- |
| <i>Laurus nobilis</i> | Leaf Essent. Oil | 7800 | 22000 | -0.3624984026500584 | -- |
| <i>Laurus nobilis</i> | Essential Oil | -- | -- | -- | -- |
| <i>Lavandula latifolia</i> | Plant | 0 | 121 | -0.22877572152628206 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Lavandula x hybrida</i> | Shoot | 35 | 80 | -0.13401911214797838 | Tucker, A.O., Maciarello, M.J., Angell, S., Espaillat, J.R., and French, E.C. 1993. The Essential Oil of <i>Lavandula x hybrida</i> Balb. ex Ging., a Distinct Hybrid from <i>L. x heterophylla</i> Poir. (Labiatae). <i>J. Ess. Oil Res.</i> 5: 443-445. |
| <i>Lavandula x intermedia</i> | Plant | 46 | 279 | -0.1599444039099736 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------------------|---------------------------|------------|-------------|----------------------|--|
| <i>Lepechinia calycina</i> | Plant | 35 | 35 | -0.2662408690895892 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Levisticum officinale</i> | Root | -- | -- | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Lindera benzoin</i> | Twig | 26 | 29 | | -- |
| <i>Litsea glaucescens</i> | Shoot | 195 | 250 | -0.06355132211311788 | Tucker, et al, EB46(1):21-24.1992 |
| <i>Lycopus uniflorus</i> | Plant | 3 | 3 | -0.28018138911314533 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Melaleuca alternifolia</i> | Leaf | 2941 | 11225 | 6.06904915922846 | -- |
| <i>Melaleuca alternifolia</i> | Leaf Essent. Oil | 364000 | 385000 | 2.7176167658294537 | -- |
| <i>Melaleuca alternifolia</i> | Essential Oil | 6000 | 374000 | 3.016973516825227 | -- |
| <i>Melaleuca alternifolia</i> | Resin, Exudate, Sap | -- | -- | | -- |
| <i>Melaleuca alternifolia</i> | Root Essent. Oil | -- | 6900 | | -- |
| <i>Melaleuca linariifolia</i> | Leaf | 5550 | 7400 | 3.8850093648737456 | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| <i>Mentha longifolia</i> | Shoot | 1 | 800 | 0.16443270447025435 | -- |
| <i>Mentha spicata</i> | Leaf | -- | -- | | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| <i>Mentha spicata</i> | Essential Oil | -- | -- | | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------|---------------|---------|----------|----------------------|--|
| Mentha x piperita | Essential Oil | -- | -- | -- | -- |
| Micromeria congesta | Leaf | 25 | 30 | -0.32319280098095854 | Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393. |
| Micromeria fruticosa | Leaf | 2460 | 2460 | 1.0643148330796834 | Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393. |
| Micromeria myrtifolia | Shoot | 0 | 0 | -0.1671804251055598 | Ozek, T., Kirimer, N., and Baser, K.H.C. 1992. Composition of the Essential Oil of <i>Micromeria myrtifolia</i> Boiss. et Hohen. <i>J. Ess. Oil Res.</i> , 4: 79-80. |
| Micromeria teneriffae | Leaf | 140 | 140 | -0.26038381343088834 | Kirimer, N., Ozek, T., and Baser, K.H.C. 1991. Composition of the Essential Oil of <i>Micromeria congesta</i> . <i>J. Ess. Oil Res.</i> , 3: 387-393. |
| Micromeria varia | Shoot | 21 | 21 | -0.1584755804541947 | Pedro, L.G., et al. 1995. Composition of the Essential oil of <i>Micromeria varia</i> Benth. ssp. <i>thymoides</i> (Sol. ex Lowe) Perez var. <i>thymoides</i> , and endemic species of the Madeira Archipelago. <i>flav. & Fragr. J.</i> 10(3): 199-202. |
| Micromeria varia | Shoot | -- | 21 | -0.1584755804541947 | -- |
| Monarda citriodora | Flower | 75 | 75 | -0.19686780421513225 | Collins, J.E., Bishop, C.D., Deans, S.G. and Svoboda, K.P. 1994. Composition of the Essential Oil from the Leaves and Flowers of <i>Monarda citriodora</i> var. <i>citriodora</i> grown in the United Kingdom. <i>J. Ess. Oil Res.</i> 6: 27-9. |
| Monarda citriodora | Leaf | 145 | 145 | -0.2575288594513397 | Collins, J.E., Bishop, C.D., Deans, S.G. and Svoboda, K.P. 1994. Composition of the Essential Oil from the Leaves and Flowers of <i>Monarda citriodora</i> var. <i>citriodora</i> grown in the United Kingdom. <i>J. Ess. Oil Res.</i> 6: 27-9. |
| Monarda punctata | Plant | 40 | 150 | -0.21614212525493431 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Murraya koenigii | Leaf | -- | 140 | -0.26038381343088834 | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|---------------------------|----------------------|------------|-------------|------------------------|--|
| <i>Myristica fragrans</i> | Seed | 600 | 4800 | 1.9180648061337349 | -- |
| <i>Myristica fragrans</i> | Essential Oil | 30000 | 63000 | -0.0049821192011661975 | -- |
| <i>Myristica fragrans</i> | Seed Essent. Oil | 30000 | 247000 | 1.729953772502488 | -- |
| <i>Myrrhis odorata</i> | Leaf Oil | -- | 6000 | -0.49826105470425175 | -- |
| <i>Myrtus communis</i> | Plant | 3 | 4 | -0.27974574786240924 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Nepeta racemosa</i> | Shoot | 45 | 45 | -0.14852718656692027 | Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7. |
| <i>Nepeta racemosa</i> | Shoot | -- | 45 | -0.14852718656692027 | Baser, K.H.C., Ozek, T., Akgul, A. and Tumen, G. 1993. Composition of the Essential Oil of <i>Nepeta racemosa</i> Lam. J. Ess. Oil Res. 5: 215-7. |
| <i>Ocimum basilicum</i> | Plant | 2 | 120 | -0.2292113627770182 | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| <i>Ocimum basilicum</i> | Leaf Oil | 24300 | 25700 | -0.33110328936252614 | -- |
| <i>Ocimum basilicum</i> | Essential Oil | 1700 | 6800 | -0.5510718514991831 | -- |
| <i>Ocimum basilicum</i> | Shoot Essent. Oil | -- | -- | -- | -- |
| <i>Ocimum gratissimum</i> | Plant | 5 | 50 | -0.2597062503285473 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Ocimum gratissimum</i> | Shoot | 0.1 | 0.1 | -0.16713897346436285 | Vostrowsky, O., Garbe, W., Bestmann, H.J. and Maia, J.G.S. 1990. Essential Oil of Alfavaca, <i>Ocimum gratissimum</i> , from Brazilian Amazon. Zeitschr. Naturforschung 45(C): 1073-6. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|--------------------------|----------------------|---------|----------|----------------------|---|
| Ocimum kilimandscharicum | Flower | 75 | 200 | 1.6144816036528034 | Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum killimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128. |
| Ocimum kilimandscharicum | Leaf | 65 | 160 | -0.24896399751269374 | Charles, D.J., and Simon, J.E. 1992. Essential Oil Constituents of Ocimum killimandscharicum Guerke. J. Ess. Oil Res., 4: 125-128. |
| Ocimum tenuiflorum | Leaf | -- | -- | | =ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp |
| Origanum majorana | Plant | 1365 | 7826 | 5.665014759682814 | -- |
| Origanum majorana | Leaf | 135 | 1530 | 0.5332933928836353 | -- |
| Origanum majorana | Shoot Essent. Oil | -- | 176700 | 1.412151043457717 | -- |
| Origanum majorana | Leaf Essent. Oil | -- | 310000 | 2.081229334325422 | -- |
| Origanum majorana | Essential Oil | -- | 103000 | 0.3836938468472445 | -- |
| Origanum minutiflorum | Shoot | 155 | 205 | -0.08220456065175742 | Baser, K.H.C., Tumen, G., Sezik, E. 1991. The Essential Oil of Origanum minutiflorum O. Schwarz and P.H. Davis. J. Ess. Oil Res. 3: 445-446. |
| Origanum onites | Plant | 144 | 144 | -0.2187559727593511 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Origanum onites | Shoot | 325 | 325 | -0.0324625912153853 | Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. Flav. & Frag. J. 8: 331-7. |
| Origanum sipyleum | Shoot | 520 | 520 | 0.048368109118719395 | Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of Origanum sipyleum of Turkish Origin. J. Ess. Oil Res. 4: 139-142. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-------------------|-------|------------|-------------|-----------------------|--|
| Origanum sipyleum | Shoot | -- | 200 | -0.08427714271160626 | Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of <i>Origanum sipyleum</i> of Turkish Origin. <i>J. Ess. Oil Res.</i> 4: 139-142. |
| Origanum sipyleum | Shoot | -- | 520 | 0.048368109118719395 | Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of <i>Origanum sipyleum</i> of Turkish Origin. <i>J. Ess. Oil Res.</i> 4: 139-142. |
| Origanum sipyleum | Shoot | -- | 270 | -0.055260993873722526 | Baser, K.H.C., Ozek, T., Kurkcuoglu, M. and Tumen, G. 1992. Composition of the Essential Oil of <i>Origanum sipyleum</i> of Turkish Origin. <i>J. Ess. Oil Res.</i> 4: 139-142. |
| Origanum syriacum | Shoot | 335 | 335 | -0.028317427095687624 | Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123. |
| Origanum syriacum | Shoot | -- | 315 | -0.03660775533508298 | Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123. |
| Origanum syriacum | Shoot | -- | 335 | -0.028317427095687624 | Fleisher, A. & Fleisher, Z. 1991. Chemical Composition of <i>Origanum syriacum</i> L. Essential Oil. <i>J. Ess. Oil Res.</i> 3: 121-123. |
| Origanum vulgare | Plant | 35 | 35 | -0.2662408690895892 | Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431. |
| Origanum vulgare | Plant | 95 | 95 | -0.24010239404542144 | Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431. |
| Origanum vulgare | Plant | 220 | 220 | -0.18564723770340524 | Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431. |
| Origanum vulgare | Plant | 0 | 0 | -0.28148831286535375 | Sezik, E., Tumen, G., Kirimer, N., Ozek, T., and Baser, K.H.C. 1993. Essential Oil Composition of Four <i>Origanum vulgare</i> Subspecies of Anatolian Origin. <i>J. Ess. Oil Res.</i> , 5: 425-431. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|------------------------------------|----------------------|------------|--------------------|-----------------------|--|
| <i>Origanum vulgare</i> | Plant | 17 | 390 | -0.11158822507826323 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Origanum vulgare</i> | Essential Oil | -- | 20000 | -0.42280878270320754 | -- |
| <i>Origanum vulgare</i> | Shoot Essent. Oil | -- | 44800 | -0.639953869859281 | -- |
| <i>Pelargonium roseum</i> | Shoot | -- | 1080 | 0.2804972998217893 | -- |
| <i>Petroselinum crispum</i> | Leaf | 0.72 | 0.72 | -0.3399114114851954 | -- |
| <i>Peumus boldus</i> | Leaf | 120 | 650 | 0.030821492483073667 | -- |
| <i>Pimenta dioica</i> | Fruit | 1260 | 1260 | -0.1674917163075372 | -- |
| <i>Pimenta racemosa</i> | Leaf | 0 | 190 | -0.21755950373765864 | -- |
| <i>Pinus sylvestris</i> | Essential Oil | -- | -- | -- | -- |
| <i>Pinus sylvestris</i> | Leaf Essent. Oil | -- | -- | -- | -- |
| <i>Piper nigrum</i> | Fruit | -- | -- | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| <i>Piper nigrum</i> | Fruit Essent. Oil | 1900 | -0.669433558721516 | -- | |
| <i>Pycnanthemum clinopodioides</i> | Shoot | 294 | 308 | -0.039509370218871354 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Pycnanthemum loomisii</i> | Shoot | 396 | 714 | 0.12878429304085434 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Pycnanthemum montanum</i> | Shoot | 14 | 16 | -0.16054816251404352 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|--------------------------|---------------|---------|----------|----------------------|--|
| Pycnanthemum pilosum | Flower | 48 | 175 | 1.2522117220792164 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Pycnanthemum pilosum | Leaf | 48 | 175 | -0.24039913557404782 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Pycnanthemum setosum | Shoot | 220 | 341 | -0.02583032862386902 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Pycnanthemum tenuifolium | Shoot | 2 | 40 | -0.1505997686267691 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| Ravensara aromatica | Leaf | -- | 100 | -0.2832234452672775 | -- |
| Rosa damascena | Essential Oil | -- | -- | -- | -- |
| Rosmarinus eriocalyx | Shoot | 75 | 150 | -0.10500296331009465 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus eriocalyx | Shoot | 75 | 150 | -0.10500296331009465 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus officinalis | Leaf | 40 | 40 | -0.3174828930218612 | Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33. |
| Rosmarinus officinalis | Leaf | -- | 40 | -0.3174828930218612 | Soliman, F.M., El-Kashoury, M.M., Fathy, M.M. and Gonaid, M.H. 1994. Analysis and Biological Activity of the Essential Oil of Rosmarinus officinalis L. from Egypt. Flavour and Fragrance J. 9: 29-33. |
| Rosmarinus officinalis | Plant | 4 | 521 | -0.05451922123183026 | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| Rosmarinus officinalis | Shoot | -- | 18 | -0.159719129690104 | Tucker, A. O. and Maciarello, M. J. 1998. The essential oils of some rosemary cultivars. Flavor and Fragrance Journal, 1: 137-142. 1986. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|----------------------------|---------------------------|---------|----------|----------------------|---|
| Rosmarinus officinalis | Shoot | 25 | 240 | -0.06769648623281556 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus officinalis | Shoot | 60 | 190 | -0.08842230683130393 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus officinalis | Essential Oil | 40000 | 68000 | 0.04360237655488514 | -- |
| Rosmarinus officinalis | Resin, Exudate, Sap | -- | -- | -- | -- |
| Rosmarinus officinalis | Leaf Essent. Oil | -- | 1000 | -0.5406868834711872 | -- |
| Rosmarinus officinalis | Shoot Essent. Oil | -- | 36300 | -0.7721971735984355 | -- |
| Rosmarinus tomentosus | Shoot | 48 | 170 | -0.0967126350706993 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus x lavandulaceus | Shoot | 26 | 130 | -0.11329329154949 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Rosmarinus x mendizabalii | Shoot | 27 | 55 | -0.14438202244722256 | Soriano Cano, M.C., Sotomayor Sanchez, J.A., Sanchez Gomez, P. and Garcia Vallejo, M.C. 1993. Essential Oils of the Rosmarinus eriocalyx-tomentosus Complex in Southeast Spain. J. Ess. Oil Res. 5: 243-246. |
| Salvia canariensis | Leaf | 0.1 | 0.1 | -0.3402654257786595 | Casnigueral,S., Iglesias,J., Vila,R., Virgili,A. and Ibanez,C.1994. The Essential Oil from Leaves of Salvia canariensis L. Flav. & Frag. J. 9:201-204. S. Canigueral, Facultat de Farmacia, Universitat de Barcelona, Ave.Diagonal 643,E-08028, Barcelone Spain |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------------|--------------------|---------|----------|----------------------|--|
| <i>Salvia gilliesii</i> | Shoot | 7.5 | 7.5 | -0.16407155201578655 | Velasco-Negueruela, A. et al. 1993. The Essential Oil of <i>Salvia gilliesii</i> Benth. J. Ess. Oil Res. 5: 319-320. |
| <i>Salvia officinalis</i> | Leaf | 10 | 1120 | 0.29918716656064637 | -- |
| <i>Salvia officinalis</i> | Essential Oil | -- | 4500 | -0.5734207195469667 | -- |
| <i>Salvia officinalis</i> | Leaf Essent. Oil | 2000 | 3000 | -0.523716551964413 | -- |
| <i>Salvia sclarea</i> | Plant | 1 | 6 | -0.27887446536093696 | Flavour and Fragrance Journal, 6: 154. |
| <i>Sambucus nigra</i> | Flower Essent. Oil | -- | -- | -- | -- |
| <i>Sassafras albidum</i> | Leaf | -- | 0 | -0.34032252485825043 | -- |
| <i>Satureja cilicica</i> | Shoot | 55 | 55 | -0.14438202244722256 | Tumen, G. Baser, K.H.C. and Kirimer, N. 1993. The Essential Oil of <i>Satureja cilicica</i> P.H. Davis. J. Ess. Oil Res. 5: 547-548. |
| <i>Satureja cuneifolia</i> | Shoot | 135 | 135 | -0.11122070948964116 | Tumen, G. 1991. The Volatile Constituents of <i>Satureja cuneifolia</i> . J. Ess. Oil Res., 3: 365-366. |
| <i>Satureja douglasii</i> | Plant | 104 | 143 | -0.21919161401008722 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Satureja grandiflora</i> | Shoot | 30 | 30 | -0.15474493274646678 | Carnat, A., Chossegros, A., and Lamaison, J. 1991. The Essential Oil of <i>Satureja grandiflora</i> (L.) Scheele from France. J. Ess. Oil Res., 3: 361-362 |
| <i>Satureja hortensis</i> | Plant | -- | -- | -- | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Satureja montana</i> | Plant | 1 | 1610 | 0.41989410081981476 | -- |
| <i>Satureja montana</i> | Essential Oil | -- | -- | -- | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|----------------------------|------------------|---------|----------|----------------------|---|
| Satureja obovata | Leaf | 855 | 855 | 0.14787460564456814 | Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83. |
| Satureja obovata | Leaf | -- | 825 | 0.13074488176727628 | Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83. |
| Satureja obovata | Leaf | -- | 970 | 0.213538547174187 | Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83. |
| Satureja obovata | Leaf | -- | 855 | 0.14787460564456814 | Arrebola, M.L., Navaro, M.C., Jimenez, J. and Ocana, F.A. 1994. Variations in Yield and Composition of the Essential Oil of Satureja obovata. Phytochemistry 35(1): 83. |
| Satureja obovata | Shoot | 270 | 575 | 0.07116651177705662 | Fitoterapia No.60: 277. |
| Scutellaria baicalensis | Root Essent. Oil | -- | -- | -- | |
| Sideritis athoa | Shoot | 0.2 | 0.2 | -0.16709752182316592 | Ozek, T., Baser, K.H.C. and Tumen, G. 1993. The Essential Oil of Sideritis athoa Papanikolaou Et Kokkini. J. Ess. Oil Res. 5: 669-670. |
| Sideritis germanicolpitana | Plant | 7 | 36 | -0.2658052278388531 | J. Essential Oil, 4: 533. |
| Sideritis mugronensis | Flower | 1 | 95 | 0.09294810104373745 | Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397. |
| Sideritis mugronensis | Leaf | 20 | 50 | -0.31177298506276396 | Manez, S., Jimenez, A., and Villar, A. 1991. Volatiles of Sideritis mugronensis Flower and Leaf. J. Ess. Oil Res., 3: 395-397. |
| Sideritis pauli | Shoot | 35 | 35 | -0.15267235068661794 | Burzaco, A., Velasco-Negueruela, A. and Perez-Alonso, M.J. 1992. Essential Oil Analysis of Sideritis pauli Pau. FFJ7: 47-8. 1992. |
| Syzygium aromaticum | Essential Oil | -- | -- | -- | |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------------|-----------------------|------------|-------------|----------------------|---|
| <i>Tagetes minuta</i> | Flower Essent. Oil | -- | 500 | | -- |
| <i>Tamarindus indica</i> | Fruit | -- | -- | | -- |
| <i>Tamarindus indica</i> | Fruit Essent. Oil | -- | -- | | -- |
| <i>Tanacetum parthenium</i> | Shoot | -- | 4 | -0.16552235945768073 | Hendriks, H., Bos, R., and Woerdenbag, H. J. 1996. The Essential Oil of <i>Tanacetum parthenium</i> (L.) Schultz-Bip. Flavor and Fragrance Journal 11(6): 367-71. |
| <i>Tanacetum parthenium</i> | Fruit Essent. Oil | -- | 1000 | -0.7441224268433381 | -- |
| <i>Tanacetum parthenium</i> | Essential Oil | -- | 28000 | -0.3450735894935254 | -- |
| <i>Telosma cordata</i> | Flower | 47 | 47 | -0.6026100715775499 | K. Furukawa, T. Arai, S. Hashimoto, (1993); Volatile components of <i>Telosma cordata</i> Merrill flowers, Flavour Fragr. J., Vol 8, 221-223. |
| <i>Teucrium arduini</i> | Shoot | 3 | 3 | -0.1659368758696505 | Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of <i>Teucrium arduini</i> L. J. Ess. Oil Res. 4: 223-225. |
| <i>Teucrium arduini</i> | Shoot | -- | 3 | -0.1659368758696505 | Blazevic, N., Kalodera, Z., Petricic, J., and Plazibat, M. 1992. Essential Oil Content and Composition of <i>Teucrium arduini</i> L. J. Ess. Oil Res. 4: 223-225. |
| <i>Teucrium asiaticum</i> | Shoot | 1.73 | 1.73 | -0.16646331171285209 | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. Phytochemistry 29(4): 1165-9. |
| <i>Teucrium cyprium</i> | Leaf | 0 | 0 | -0.34032252485825043 | Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. J. Ethnopharm. 35: 105-113. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|----------------------------------|-------|------------|-------------|----------------------|--|
| <i>Teucrium divaricatum</i> | Leaf | 0 | 0 | -0.34032252485825043 | Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113. |
| <i>Teucrium gnaphalodes</i> | Shoot | 2.5 | 2.5 | -0.16614413407563539 | Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian <i>Teucrium</i> Species. <i>J. Ess. Oil Res.</i> 5: 397-402. |
| <i>Teucrium kotschyanum</i> | Leaf | 0 | 0 | -0.34032252485825043 | Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113. |
| <i>Teucrium micropodioides</i> | Leaf | 12 | 12 | -0.3334706353073337 | Arnold, N., Bellomaria, B., Valentini G. and Rafaiani, S.M. 1991. Comparative Study on Essential Oil of Some <i>Teucrium</i> Species from Cyprus. <i>J. Ethnopharm.</i> 35: 105-113. |
| <i>Teucrium oxylepis</i> | Shoot | 1.1 | 1.1 | -0.16672445705239308 | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9. |
| <i>Teucrium oxylepis</i> | Shoot | 2.41 | 2.41 | -0.16618144055271272 | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9. |
| <i>Teucrium polium</i> | Shoot | 22 | 22 | -0.15806106404222492 | Perez-Alonso, M.J. Velasco-Negueruela, A. and Lopez-Saez, J.A. 1993. The Essential Oils of Two Iberian <i>Teucrium</i> Species. <i>J. Ess. Oil Res.</i> 5: 397-402. |
| <i>Teucrium pseudoscorodonia</i> | Shoot | -- | -- | | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9. |
| <i>Teucrium salviastrum</i> | Shoot | -- | -- | | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|-----------------------------|-------|---------|----------|----------------------|---|
| <i>Teucrium scorodonia</i> | Shoot | 0.24 | 0.24 | -0.16708094116668715 | Velasco-Negueruela, A. and Perez-Alonso, M.J. 1990. The Volatiles of Six <i>Teucrium</i> Species from the Iberian Peninsula and the Balearic Islands. <i>Phytochemistry</i> 29(4): 1165-9. |
| <i>Thymus broussonettii</i> | Shoot | 0.1 | 0.1 | -0.16713897346436285 | Tantaoui-Elaraki, A., Lattaoui, N., Errifi, A. and Benjilali, B. 1993. Composition and Antimicrobial Activity of the Essential Oils of <i>Thymus broussonettii</i> , <i>T. zygis</i> and <i>T. saturejoides</i> . <i>J. Ess. Oil Res.</i> 5: 45-53. |
| <i>Thymus capitatus</i> | Plant | 50 | 70 | -0.2509934253138247 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Thymus capitatus</i> | Shoot | 37 | 37 | -0.1518433178626784 | Biondi, D., Cianci, P., Geraci, C. and Ruberto, G. 1993. Antimicrobial Activity and Chemical Composition of Essential Oils from Sicilian Aromatic Plants. <i>Flav. & Fragr. J.</i> 8: 331-7. |
| <i>Thymus cilicicus</i> | Shoot | 450 | 450 | 0.019351960280835658 | Tumen, G., Koyuncu, M., Kirimer, N., and Baser, K.H.C. 1994. Composition of the Essential Oil of <i>Thymus cilicicus</i> Boiss. & Bal. <i>J. Ess. Oil Res.</i> 6: 97-8. |
| <i>Thymus funkii</i> | Shoot | 105 | 105 | -0.12365620184873419 | Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383. |
| <i>Thymus funkii</i> | Shoot | -- | 105 | -0.12365620184873419 | Vila, R., et al. 1995. Composition and study of the variability of the essential oil of <i>Thymus funkii</i> Cousson. <i>Flav. & Fragr. J.</i> 10(6): 379-383. |
| <i>Thymus longicaulis</i> | Shoot | 1.5 | 1.5 | -0.16655865048760515 | Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5. |
| <i>Thymus longicaulis</i> | Shoot | -- | 30 | -0.15474493274646678 | Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5. |
| <i>Thymus longicaulis</i> | Shoot | -- | 1.5 | -0.16655865048760515 | Baser, K.H.C., Ozek, T., Kirimer, N. and Tumen, G. 1993. The Occurrence of Three Chemotypes of <i>Thymus longicaulis</i> C. Presl subsp. <i>longicaulis</i> in the same Population. <i>J. Ess. Oil Res.</i> 5: 291-5. |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|---------------------------------|---------------|---------|----------|----------------------|---|
| <i>Thymus mastichina</i> | Plant | 10 | 70 | -0.2509934253138247 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| <i>Thymus orospedanus</i> | Plant | 140 | 140 | -0.2204985377622956 | J. Nat. Prod. |
| <i>Thymus riatarum</i> | Shoot | 275 | 275 | -0.05318841181387369 | Iglesias, J., Vila, R., Canigueral, S., Bellakdhar, and II Idrissi, A. 1991. Analysis of the Essential Oil of <i>Thymus riatarum</i> . J. Ess. Oil Res. 3: 43-4. |
| <i>Thymus saturejoides</i> | Shoot | 40 | 40 | -0.1505997686267691 | Tantaoui-Elaraki, A., Lattaoui, N., Errifi, A. and Benjlali, B. 1993. Composition and Antimicrobial Activity of the Essential Oils of <i>Thymus broussonettii</i> , <i>T. zygis</i> and <i>T. saturejoides</i> . J. Ess. Oil Res. 5: 45-53. |
| <i>Thymus serpyllum</i> | Plant | 10 | 191 | -0.198280833974753 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| <i>Thymus vulgaris</i> | Essential Oil | -- | -- | -- | |
| <i>Thymus zygis</i> | Shoot | 0.1 | 250 | -0.06355132211311788 | De Cunha, A.P. and Salguiero, L.R. 1991. The Chemical Polymorphism of <i>Thymus zygis</i> ssp. <i>sylvestris</i> from Central Portugal. J. Ess. Oil Res. 3: 409-12. |
| <i>Thymus zygis</i> | Shoot | 185 | 185 | -0.09049488889115277 | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. <i>Thymus zygis</i> Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEO5: 153-8. |
| <i>Thymus zygis</i> | Shoot | -- | 185 | -0.09049488889115277 | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. <i>Thymus zygis</i> Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEO5: 153-8. |
| <i>Trichostemma dichotomum</i> | Shoot | 13 | 13 | -0.16179171174995283 | Tucker, A.O. and Maciarelllo, M.J. 1990. The Essential Oil of <i>Trichostemma dichotomum</i> . J. Ess. Oil Res. 2: 149-150. |
| <i>Umbellularia californica</i> | Plant | 280 | 1120 | 0.2064298879591113 | -- |
| <i>Vetiveria zizanioides</i> | Root | -- | 15 | 0.030164848870338087 | -- |

| Plant | Part | Low PPM | High PPM | StdDev | Reference |
|---------------------|------------------------|------------|-------------|----------------------|--|
| Vitex agnus-castus | Leaf | -- | 11 | -0.3340416261032434 | Ekundayo, O., Laakso, I., Holopainen, M., Hiltunen, R., Oguntiemein, B., and Kauppinen, V. 1990. The Chemical Composition and Antimicrobial Activity of the Leaf Oil of Vitex agnus-castus L. J. Essential Oil Research, 2: 115-119. |
| Vitex agnus-castus | Leaf Essent. Oil | -- | 38200 | -0.22503871744518758 | Jim Duke's personal files. |
| Zingiber officinale | Rhizome | -- | -- | -- | |
| Zingiber officinale | Rhizome Essent. Oil | -- | -- | -- | |