

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Eucalyptus citriodora*

| Activities Count | Chemical                | Plant Part          | Low PPM  | High PPM | StdDev               | Refernce Citation  |
|------------------|-------------------------|---------------------|----------|----------|----------------------|--|
| 20               | CITRONELLAL             | Leaf Essent. Oil    | 320000.0 | 851000.0 | 1.0                  | --   |
| 20               | CITRONELLAL             | Shoot               |          | 563000.0 | 4.472076870734973    | --   |
| 15               | CITRONELLOL             | Leaf Essent. Oil    | 56000.0  | 517000.0 | 1.3754627990800758   | --   |
| 35               | TANNIN                  | Resin, Exudate, Sap |          | 482000.0 | 1.4131379750921393   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 3                | ISOPULEGOL              | Leaf Essent. Oil    | 12000.0  | 229000.0 | 1.0                  | --   |
| 0                | CITRONELLOL-ACETATE     | Shoot               |          | 114000.0 |                      | --   |
| 0                | CITRONELLOL-ACETATE     | Leaf Essent. Oil    | 14000.0  | 103000.0 |                      | --   |
| 15               | CITRONELLOL             | Shoot               |          | 78000.0  | 5.9919646233410475   | --   |
| 0                | CITRONELLIC-ACID        | Shoot               |          | 47000.0  | 4.35889230757669     | --   |
| 0                | BETA-CARYOPHYLLENE      | Leaf Essent. Oil    | 27000.0  | 35000.0  | -0.19751887883201752 | --   |
| 67               | 1,8-CINEOLE             | Leaf Essent. Oil    | 5000.0   | 32000.0  | -0.717969108838231   | --   |
| 31               | CARYOPHYLLENE           | Leaf Essent. Oil    |          | 28000.0  | -0.887674564369413   | --   |
| 0                | EO                      | Leaf                | 5000.0   | 20000.0  | 0.7445770670718886   | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 67               | 1,8-CINEOLE             | Shoot               |          | 20000.0  | 0.1512353485319403   | --   |
| 20               | CITRONELLAL             | Leaf                | 50.0     | 18020.0  | 2.6441768651034985   | --   |
| 0                | ALPHA-TERPINEOL ACETATE | Shoot               |          | 18000.0  | -1.0                 | --   |
| 13               | BETA-PINENE             | Shoot               |          | 17000.0  | 1.0697157887932147   | --   |
| 13               | BETA-PINENE             | Leaf Essent. Oil    | 11600.0  | 17000.0  | -0.2051606962498346  | --   |
| 87               | RUTIN                   | Leaf                |          | 12500.0  | -0.2285170026254041  | --   |
| 3                | BETA-PHELLANDRENE       | Leaf Essent. Oil    |          | 12000.0  | 0.07288220829298371  | --   |
| 0                | ISOPROPYLHEXANE         | Leaf Essent. Oil    |          | 12000.0  |                      | --   |
| 11               | GAMMA-TERPINENE         | Leaf Essent. Oil    | 2000.0   | 12000.0  | -0.5677373616532569  | --   |
| 35               | TANNIN                  | Leaf                |          | 11600.0  | -1.2077381028807002  | --   |

| Activities Count | Chemical          | Plant Part       | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|-------------------|------------------|---------|----------|----------------------|--|
| 0                | EO                | Shoot            |         | 10500.0  | 0.018840549396875548 | 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. |
| 0                | ROSE-OXIDE        | Shoot            |         | 10000.0  | 1.0                  | --   |
| 0                | BICYCLOGERMACRENE | Leaf Essent. Oil |         | 10000.0  |                      | --   |
| 23               | ALPHA-TERPINEOL   | Shoot            |         | 9000.0   | 8.99383026200346     | --   |
| 0                | LINALOOL-OXIDE    | Leaf Essent. Oil |         | 9000.0   | -0.14334554477024922 | --   |
| 0                | LINALOOL-ACETATE  | Leaf Essent. Oil | 2000.0  | 7500.0   | -0.9659400518731338  | --   |
| 0                | ISO-ISOPULEGOLE   | Leaf Essent. Oil |         | 7000.0   |                      | --   |
| 11               | GAMMA-TERPINENE   | Shoot            |         | 6000.0   | 3.7512735106236      | --   |
| 28               | ALPHA-PINENE      | Leaf Essent. Oil | 2900.0  | 6000.0   | -0.7201483597577595  | --   |
| 3                | ISOPULEGOL        | Leaf             | 35.0    | 5960.0   | 2.4484137394913246   | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.   |
| 16               | P-CYMENE          | Leaf Essent. Oil | 1000.0  | 5800.0   | -0.692534761440564   | --   |
| 60               | LIMONENE          | Leaf Essent. Oil |         | 5000.0   | -0.6561226246926355  | --   |
| 0                | BETA-CUBEBENE     | Leaf Essent. Oil |         | 5000.0   | -0.27151722480926643 | --   |
| 60               | LIMONENE          | Shoot            |         | 4000.0   | 1.7077573607595666   | --   |
| 16               | P-CYMENE          | Shoot            |         | 4000.0   | 2.6695087722036925   | --   |
| 15               | CITRONELLOL       | Leaf             | 230.0   | 4000.0   | 2.2356095710654493   | --   |
| 23               | ALPHA-TERPINEOL   | Leaf Essent. Oil | 3000.0  | 4000.0   | -0.7838280847561147  | --   |
| 67               | 1,8-CINEOLE       | Leaf             | 50.0    | 3580.0   | -0.06974461771091683 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 53               | LINALOOL          | Leaf Essent. Oil |         | 3000.0   | -0.6768515885425165  | --   |
| 0                | CRYPTONE          | Leaf Essent. Oil |         | 3000.0   | -1.0                 | --   |
| 9                | TERPINOLENE       | Leaf Essent. Oil |         | 3000.0   | -0.49764555396661486 | --   |
| 53               | LINALOOL          | Shoot            |         | 3000.0   | -0.11096454712265409 | --   |

| Activities Count | Chemical               | Plant Part       | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|------------------------|------------------|---------|----------|----------------------|--|
| 2                | ALPHA-HUMULENE         | Leaf Essent. Oil |         | 2000.0   | -0.6471039886127844  | --   |
| 60               | LIMONENE               | Leaf             | 20.0    | 1420.0   | 1.046056762223089    | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 2                | CITRONELLYL-ACETATE    | Shoot            |         | 1200.0   | 4.358662928826771    | 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. |
| 35               | GERANIOL               | Leaf             | 250.0   | 1000.0   | 0.23399684457505263  | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.   |
| 8                | CARYOPHYLLENE-OXIDE    | Leaf Essent. Oil |         | 1000.0   | -1.3372802814560105  | --   |
| 35               | BORNEOL                | Leaf Essent. Oil |         | 1000.0   | -0.6717160378288602  | --   |
| 23               | TERPINEN-4-OL          | Leaf Essent. Oil |         | 1000.0   | -0.5406868834711872  | --   |
| 0                | SPATHULENOL            | Leaf Essent. Oil |         | 1000.0   | -1.0161711671763012  | --   |
| 11               | ALPHA-PHELLANDRENE     | Leaf Essent. Oil |         | 1000.0   | -0.8574494059207024  | --   |
| 31               | CARYOPHYLLENE          | Leaf             | 15.0    | 780.0    | -0.23243507090347945 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | NEO-ISOPULEGOL         | Leaf             | 20.0    | 680.0    | -1.0                 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | 7-O-METHYLAROMADENDRIN | Root             |         | 668.0    |                      | --   |
| 28               | ALPHA-PINENE           | Leaf             | 5.0     | 380.0    | -0.19987319533034933 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 13               | BETA-PINENE            | Leaf             | 20.0    | 300.0    | 0.01336781361822673  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 3                | AROMADENDRIN           | Root             |         | 267.0    |                      | --   |

| Activities Count | Chemical               | Plant Part | Low PPM | High PPM | StdDev                | Reference Citation   |
|------------------|------------------------|------------|---------|----------|-----------------------|--|
| 0                | ALPHA-TERPINYL-ACETATE | Shoot      |         | 190.0    | -0.21603522466678812  | 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. |
| 53               | LINALOOL               | Leaf       | 15.0    | 180.0    | -0.5227959969828526   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | TERPINENE              | Leaf       | 1.0     | 180.0    | -1.0                  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 16               | P-CYMENE               | Leaf       | 10.0    | 180.0    | -0.25057006213421     | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | LINALOL                | Leaf       | 15.0    | 180.0    | -0.3359821288942315   | --   |
| 22               | BETULINIC-ACID         | Root       |         | 167.0    | -0.32723020242894685  | --   |
| 9                | TERPINOLENE            | Leaf       | 5.0     | 160.0    | -0.028274777061727256 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 2                | CITRONELLYL-ACETATE    | Leaf       | 20.0    | 130.0    | 1.0                   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 22               | MYRCENE                | Leaf       | 1.0     | 120.0    | -0.1293732386473364   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 2                | TRANS-PINOCARVEOL      | Shoot      |         | 85.0     | -0.17436574151237388  | 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. |
| 5                | FUSTIN                 | Root       |         | 83.0     |                       | --   |
| 89               | URSOLIC-ACID           | Root       |         | 67.0     | 1.0                   | --   |
| 9                | CAMPHENE               | Leaf       | 1.0     | 20.0     | -0.18513314196035818  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 47               | BETA-SITOSTEROL        | Root       |         | 17.0     | -0.2754484120940801   | --   |

| Activities Count | Chemical                 | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|--------------------------|------------|---------|----------|----------------------|--|
| 0                | BETA-CARYOPHYLLENE       | Shoot      |         | 0.1      | -0.40976853829945986 | 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. |
| 0                | SPATHULENOL              | Shoot      |         | 0.1      | -0.4442085626228723  | 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. |
| 5                | BETA-ELEMENE             | Shoot      |         | 0.1      | -0.3396749847658091  | 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. |
| 0                | CAMPHOLENIC-ALDEHYDE     | Shoot      |         | 0.1      | -0.3149715595301656  | 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. |
| 0                | ALPHA-P-DIMETHYL-STYRENE | Shoot      |         | 0.1      | -1.0210518370793162  | 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. |
| 9                | CAMPHENE                 | Shoot      |         | 0.1      | -0.1342670938252942  | 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. |
| 24               | BENZALDEHYDE             | Shoot      |         | 0.1      | -0.2247983186195243  | 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. |

| Activities Count | Chemical           | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|--------------------|------------|---------|----------|----------------------|--|
| 0                | P-CYMEN-8-OL       | Shoot      |         | 0.1      | -0.17247239346667684 | 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. |
| 35               | BORNEOL            | Shoot      |         | 0.1      | -0.39869489976509587 | 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. |
| 3                | AROMADENDRENE      | Shoot      |         | 0.1      | -0.18132233610427648 | 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. |
| 11               | ALPHA-PHELLANDRENE | Shoot      |         | 0.1      | -0.3090941644151568  | 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. |
| 5                | VERBENONE          | Shoot      |         | 0.1      | -0.2571527321307905  | 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. |
| 0                | ALLO-AROMADENDRENE | Shoot      |         | 0.1      | -0.1869954495858901  | 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. |
| 2                | MYRTENOL           | Shoot      |         | 0.1      | -0.2513799778000483  | 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. |

| Activities Count | Chemical            | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation   |
|------------------|---------------------|------------|---------|----------|----------------------|--|
| 10               | CUMINALDEHYDE       | Shoot      |         | 0.1      | -0.32518936983709645 | 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. |
| 0                | ALPHA-THUJENE       | Shoot      |         | 0.1      | -0.5551253545718478  | 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. |
| 22               | MYRCENE             | Shoot      |         | 0.1      | -0.34222464567492455 | 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. |
| 0                | LEDOL               | Shoot      |         | 0.1      | -0.21993254021380645 | 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. |
| 0                | ISOAMYL-ISOVALERATE | Shoot      |         | 0.1      | -0.4765294039940469  | 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. |
| 0                | GLOBULOL            | Shoot      |         | 0.1      | -0.2230980831244183  | 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. |
| 13               | ALPHA-TERPINENE     | Shoot      |         | 0.1      | -0.48093760228289717 | 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. |

| Activities Count | Chemical                | Plant Part          | Low PPM | High PPM | StdDev               | Reference Citation  |
|------------------|-------------------------|---------------------|---------|----------|----------------------|---|
| 0                | ALPHA-FENCHYL-ALCOHOL   | Shoot               |         | 0.1      | -0.4903066233071515  | Zrira, S. S., Benjlali, 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. |
| 23               | TERPINEN-4-OL           | Shoot               |         | 0.1      | -0.16713897346436285 | Zrira, S. S., Benjlali, 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. |
| 7                | PIPERITONE              | Shoot               |         | 0.1      | -0.22638062620684046 | Zrira, S. S., Benjlali, 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. |
| 0                | EUCALYPTIN-ACETATE      | Leaf                |         |          |                      | --  |
| 47               | BETA-SITOSTEROL         | Plant               |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | CITRIODORIN             | Leaf                |         |          |                      | --  |
| 76               | EUGENOL                 | Leaf                |         |          |                      | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 0                | BETA-HYDROXYCITRONELLAL | Essential Oil       |         |          |                      | --  |
| 0                | EUCALYPTIN              | Leaf                |         |          |                      | --  |
| 0                | EUDESMOL                | Leaf                |         |          |                      | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 0                | EO                      | Plant               |         |          |                      | --  |
| 3                | AROMADENDRIN            | Plant               |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | 7-METHOXYAROMADENDRIN   | Resin, Exudate, Sap |         |          |                      | --  |
| 28               | ALPHA-PINENE            | Shoot               |         |          |                      | --  |
| 0                | P-METHANE-CIS-3,8-DIOL  | Leaf                |         |          |                      | --  |
| 60               | LIMONENE                | Essential Oil       |         |          |                      | --  |



| Activities Count | Chemical                                     | Plant Part          | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--|---------------------|---------|----------|--------|--|
| 3                | AROMADENDRENE                                | Leaf                |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                     |
| 0                | 5-HYDROXY-4',7-DIMETHOXY-6,8-DIMETHYLFLAVONE | Leaf                |         |          |        | --   |
| 51               | ELLAGIC-ACID                                 | Bark                |         |          |        | Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813 |
| 0                | P-MENTHANE-CIS-3,8-DIOL                      | Leaf                |         |          |        | --   |
| 9                | CAMPHENE                                     | Leaf Essent. Oil    |         |          |        | --   |
| 9                | BENZYL-ACETATE                               | Leaf Essent. Oil    |         |          |        | --   |
| 0                | 3,3'-DI-O-METHYL-ELLAGIC-ACID                | Bark                |         |          |        | Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813 |
| 89               | URSOLIC-ACID                                 | Leaf                |         |          |        | --   |
| 0                | ECALYPTIN                                    | Leaf                |         |          |        | --   |
| 0                | 3-O-METHYL-ELLAGIC-ACID                      | Bark                |         |          |        | Lowry, J. B. 1968. The Distribution and Potential Taxonomic Value of Alkylated Ellagic Acids. Phytochemistry 7 10: 1803-1813 |
| 0                | TRITRIACONTAN-16,18-DIONE                    | Leaf Wax            |         |          |        | --   |
| 0                | 7-O-METHYLAROMADENDRIN                       | Plant               |         |          |        | J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.  |
| 9                | OXALIC-ACID                                  | Bark                |         |          |        | --   |
| 0                | 3-METHOXYAROMADENDRIN                        | Resin, Exudate, Sap |         |          |        | --   |
| 0                | O-METHYLEUCALYPTIN                           | Leaf                |         |          |        | --   |
| 47               | BETA-SITOSTEROL                              | Leaf                |         |          |        | --   |
| 53               | CITRAL                                       | Leaf                |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                     |
| 67               | 1,8-CINEOLE                                  | Essential Oil       |         |          |        | --   |

| Activities Count | Chemical           | Plant Part          | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--------------------|---------------------|---------|----------|--------|--|
| 19               | CARVONE            | Leaf                |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                   |
| 22               | MYRCENE            | Leaf Essent. Oil    |         |          |        | --   |
| 1                | HYDROXYCITRONELLAL | Leaf                |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                   |
| 28               | ALPHA-PINENE       | Essential Oil       |         |          |        | --   |
| 63               | MENTHOL            | Leaf Essent. Oil    |         |          |        | --   |
| 3                | GUAIOL             | Leaf                |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                   |
| 13               | BETA-PINENE        | Essential Oil       |         |          |        | --   |
| 61               | FERULIC-ACID       | Leaf                |         |          |        | --   |
| 22               | BETULINIC-ACID     | Plant               |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 89               | URSOLIC-ACID       | Plant               |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 20               | CITRONELLAL        | Essential Oil       |         |          |        | --   |
| 18               | GUAIACOL           | Leaf                |         |          |        | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 76               | EUGENOL            | Essential Oil       |         |          |        | --   |
| 22               | BETULINIC-ACID     | Leaf                |         |          |        | --   |
| 4                | SAKURANETIN        | Resin, Exudate, Sap |         |          |        | --   |