

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Juniperus communis*

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------------|-------------------|---------|----------|---------------------|--|
| 176 | QUERCETIN | Leaf | | | | -- |
| 112 | ASCORBIC-ACID | Leaf | | 600.0 | -0.3882477425426218 | -- |
| 112 | ASCORBIC-ACID | Fruit | | | | -- |
| 102 | CAFFEIC-ACID | Fruit | | | | -- |
| 102 | CAFFEIC-ACID | Leaf | | | | -- |
| 101 | APIGENIN | 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. |
| 87 | RUTIN | Fruit | | | | -- |
| 87 | RUTIN | Leaf | | | | -- |
| 77 | CHLOROGENIC-ACID | Leaf | | | | -- |
| 77 | ZINC | Fruit | | | | -- |
| 65 | MAGNESIUM | Fruit | 9.0 | 30.0 | -0.9723001521392451 | -- |
| 63 | MENTHOL | Fruit Essent. Oil | | | | -- |
| 63 | MENTHOL | Fruit | | 22.0 | | -- |
| 62 | GALLIC-ACID | Leaf | | | | -- |
| 61 | FERULIC-ACID | Leaf | | | | -- |
| 60 | LIMONENE | Fruit Essent. Oil | | | | -- |
| 60 | SELENIUM | Fruit | 0.1 | 0.2 | -0.3365919582076448 | -- |
| 60 | LIMONENE | Essential Oil | | 31000.0 | -0.5586333216571333 | -- |
| 60 | LIMONENE | Fruit | 76.0 | 910.0 | -0.6196944860922323 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 53 | BETA-CAROTENE | Fruit | 4.0 | 12.2 | -0.1272182489407809 | -- |
| 53 | LINALOOL | Plant | | | | -- |
| 47 | BETA-SITOSTEROL | Fruit | | | | -- |
| 43 | PROTOCATECHUIC-ACID | Leaf | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-----------------|-------------------|---------|----------|----------------------|--|
| 41 | CAMPHOR | Essential Oil | | | | -- |
| 41 | CAMPHOR | Fruit | 1.0 | 7.0 | -0.8917009005689489 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 40 | EPICATECHIN | Fruit | | | | -- |
| 39 | NIACIN | Fruit | 4.0 | 12.0 | -0.6510092608917062 | -- |
| 38 | (-)-EPICATECHIN | Fruit | | | | -- |
| 35 | TANNIN | Fruit | | 50000.0 | -0.42929897796396493 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 35 | BORNEOL | Essential Oil | | | | -- |
| 35 | BORNEOL | 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. |
| 31 | THIAMIN | Fruit | | 1.2 | -0.5290087074554676 | -- |
| 31 | CARYOPHYLLENE | Fruit | 12.0 | 120.0 | -0.39246549266153086 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 30 | (+)-CATECHIN | Leaf | | | | -- |
| 30 | (+)-CATECHIN | Fruit | | | | -- |
| 28 | ALPHA-PINENE | Leaf Essent. Oil | | | | -- |
| 28 | ALPHA-PINENE | Essential Oil | | 336000.0 | 2.3965523753346103 | -- |
| 28 | CALCIUM | Fruit | 2632.0 | 8490.0 | 1.0692774780691343 | -- |
| 28 | ALPHA-PINENE | Fruit Essent. Oil | | | | -- |
| 28 | ALPHA-PINENE | Fruit | 530.0 | 9200.0 | 1.683156636347073 | -- |
| 27 | LINOLEIC-ACID | Plant | | | | -- |
| 27 | LINOLEIC-ACID | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 25 | P-COUMARIC-ACID | Leaf | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-----------------|-------------------|---------|----------|----------------------|--|
| 24 | CHROMIUM | Fruit | 1.0 | 3.2 | -0.0581672201980405 | -- |
| 24 | VANILLIC-ACID | Leaf | | | | -- |
| 24 | PECTIN | Fruit | | 7000.0 | -0.5471395023787067 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 23 | ALPHA-TERPINEOL | Fruit | 3.0 | 40.0 | -0.37559632876532734 | -- |
| 23 | TERPINEN-4-OL | Fruit | 13.0 | 1050.0 | -0.19930126187699354 | -- |
| 23 | ALPHA-TERPINEOL | Essential Oil | | 2000.0 | -0.6844703056368032 | -- |
| 23 | TERPINEN-4-OL | Fruit Essent. Oil | | | | -- |
| 23 | CITRIC-ACID | Leaf | | | | -- |
| 23 | TERPINEN-4-OL | Essential Oil | | 21000.0 | -0.4130918835519973 | -- |
| 23 | TERPINEN-4-OL | Leaf Essent. Oil | | | | -- |
| 22 | MYRCENE | Fruit Essent. Oil | | | | -- |
| 22 | ISOQUERCITRIN | Fruit | | | | -- |
| 22 | MYRCENE | Fruit | 110.0 | 1800.0 | -0.10348815985421497 | -- |
| 22 | ISOQUERCITRIN | Leaf | | | | -- |
| 22 | UMBELLIFERONE | Fruit | | | | -- |
| 22 | MYRCENE | Leaf Essent. Oil | | | | -- |
| 22 | UMBELLIFERONE | Shoot | | | | -- |
| 22 | UMBELLIFERONE | Leaf | | | | -- |
| 21 | LUPEOL | Stem | | | | -- |
| 20 | BENZOIC-ACID | Leaf | | | | -- |
| 20 | CITRONELLAL | Fruit Essent. Oil | | | | -- |
| 20 | CITRONELLAL | Fruit | | 160.0 | 1.1325570680400574 | -- |
| 18 | AMENTOFLAVONE | Leaf | | | | -- |
| 18 | TERPINEOL | Fruit Essent. Oil | | | | -- |
| 18 | OLEIC-ACID | Plant | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------------|-------------------|---------|----------|----------------------|--|
| 18 | OLEIC-ACID | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 18 | AMENTOFLAVONE | 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. |
| 18 | CINNAMIC-ACID | Leaf | | | | -- |
| 17 | FARNESOL | Leaf | | | | -- |
| 16 | ACETIC-ACID | Fruit | | 9000.0 | 1.951794238179258 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 16 | P-CYMENE | Fruit | 48.0 | 480.0 | -0.516224768738665 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 16 | P-CYMENE | Fruit Essent. Oil | | | | -- |
| 15 | RIBOFLAVIN | Fruit | 0.2 | 0.6 | -0.9443248460470646 | -- |
| 15 | FIBER | Fruit | | 120000.0 | -0.20454875292033714 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 15 | CITRONELLOL | Leaf | | | | -- |
| 14 | SHIKIMIC-ACID | Leaf | | | | -- |
| 14 | MANGANESE | Fruit | 2.0 | 6.3 | -0.3619961117886394 | -- |
| 14 | POTASSIUM | Fruit | 2967.0 | 9570.0 | -0.7384457440468485 | -- |
| 14 | DEOXYPODOPHYLLOTOXIN | Fruit | | | | -- |
| 13 | PALMITIC-ACID | Plant | | | | -- |
| 13 | P-HYDROXY-BENZOIC-ACID | Plant | | 2500.0 | 1.0 | -- |
| 13 | ALPHA-TERPINENE | Fruit | 16.0 | 640.0 | 3.1220141023253 | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------------|-------------------|---------|----------|---------------------|---|
| 13 | PALMITIC-ACID | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 13 | BETULIN | Stem | | | | Jim Duke's personal files. |
| 13 | FORMIC-ACID | Fruit | 1550.0 | 5000.0 | 1.0 | -- |
| 13 | BETULIN | Leaf | | | | Jim Duke's personal files. |
| 13 | BETULIN | Fruit | | | | Jim Duke's personal files. |
| 13 | BETA-PINENE | Fruit | 22.0 | 580.0 | -0.2792614436195468 | -- |
| 13 | BETA-PINENE | Essential Oil | | 25000.0 | -0.1752769464817969 | -- |
| 12 | BORNYL-ACETATE | Fruit | 2.0 | 40.0 | -0.7015317621173582 | -- |
| 11 | ALPHA-PHELLANDRENE | Fruit | 26.0 | 300.0 | -0.4254028775207352 | -- |
| 11 | GAMMA-TERPINENE | Leaf Essent. Oil | | | | -- |
| 11 | NEROLIDOL | Leaf | | | | -- |
| 11 | ALPHA-PHELLANDRENE | Essential Oil | | | | -- |
| 11 | GAMMA-TERPINENE | Fruit | 19.0 | 600.0 | -0.540911166794079 | -- |
| 10 | NEROL | Fruit Essent. Oil | | | | -- |
| 10 | NEROL | Fruit | | | | -- |
| 10 | ALPHA-AMYRIN | Stem | | | | -- |
| 9 | TERPINOLENE | Essential Oil | | | | -- |
| 9 | TERPINOLENE | Fruit | 18.0 | 320.0 | 1.3982869520915144 | -- |
| 9 | TERPINOLENE | Fruit Essent. Oil | | | | -- |
| 9 | CAMPHENE | Essential Oil | | | | -- |
| 9 | CAMPHENE | Fruit Essent. Oil | | | | -- |
| 9 | OXALIC-ACID | Leaf | | | | -- |
| 9 | DELTA-CADINENE | Fruit | | | | -- |
| 9 | CAMPHENE | Fruit | 1.0 | 100.0 | -0.3103363418182056 | -- |
| 9 | BETA-AMYRIN | Stem | | | | -- |
| 8 | CARYOPHYLLENE-OXIDE | Fruit Essent. Oil | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-----------------------|------------|---------|----------|---------------------|--|
| 8 | FRUCTOSE | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 8 | DELTA-3-CARENE | Fruit | 2.0 | 20.0 | -0.5797379943407993 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 8 | DESOXYPODOPHYLLOTOXIN | Fruit | | | | -- |
| 8 | CARYOPHYLLENE-OXIDE | Fruit | | 15.0 | -0.895044555279303 | -- |
| 8 | STEARIC-ACID | Plant | | | | -- |
| 7 | FUMARIC-ACID | Leaf | | | | -- |
| 7 | (+)-GALLOCATECHIN | Fruit | | | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| 7 | FUMARIC-ACID | Fruit | 1550.0 | 5000.0 | -0.6004154140938881 | -- |
| 7 | HINOKIFLAVONE | Leaf | | | | -- |
| 7 | GLUCOSE | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 7 | LAURIC-ACID | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 7 | LINALYL-ACETATE | Plant | | | | -- |
| 7 | SUCCINIC-ACID | Leaf | | | | -- |
| 6 | IRON | Fruit | 5.0 | 15.0 | -0.4679872255679544 | -- |
| 6 | SYRINGIC-ACID | Leaf | | | | -- |
| 5 | MYRTENAL | Fruit | | | | -- |
| 5 | SABINENE | Fruit | 172.0 | 2700.0 | 0.3124331852362114 | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-----------------|-------------------|---------|----------|----------------------|--|
| 5 | BETA-ELEMENE | Fruit | 10.0 | 100.0 | -0.4297005513117395 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 5 | VERBENONE | Essential Oil | | 2000.0 | -1.0 | -- |
| 5 | NERYL-ACETATE | Fruit | 6.0 | 60.0 | -0.26098959388736837 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 5 | SABINENE | Leaf Essent. Oil | | | | -- |
| 5 | ALUMINUM | Fruit | 19.0 | 61.0 | -0.20577518900264186 | -- |
| 5 | GERANYL-ACETATE | Fruit | | | | -- |
| 5 | SABINENE | Essential Oil | | 76000.0 | -0.05757229883510122 | -- |
| 5 | MYRTENAL | Fruit Essent. Oil | | | | -- |
| 5 | SABINENE | Fruit Essent. Oil | | | | -- |
| 4 | CADINENE | Fruit | | | | -- |
| 4 | COSMOSIIN | Fruit | | | | -- |
| 4 | GLYCOLIC-ACID | Fruit | | | | -- |
| 4 | GLUCURONIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 4 | SILICON | Fruit | 1.4 | 4.5 | -0.5938225414098025 | -- |
| 4 | PHOSPHORUS | Fruit | 279.0 | 900.0 | -0.7034597256399827 | -- |
| 4 | NEPETIN | Leaf | | | | -- |
| 4 | FERRUGINOL | Wood | | 10.0 | | -- |
| 4 | TIN | Fruit | 20.0 | 63.0 | -0.1301348957872833 | -- |
| 4 | CADINENE | Fruit Essent. Oil | | | | -- |
| 4 | PELLANDRENE | Fruit Essent. Oil | | | | -- |
| 4 | PHOSPHORIC-ACID | Leaf | | | | -- |
| 3 | BILOBETIN | Leaf | | | | -- |
| 3 | BETA-SELINENE | Fruit Essent. Oil | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-------------------|-------------------|---------|----------|----------------------|--|
| 3 | ALPHA-SELINENE | Fruit | 21.0 | 210.0 | -0.45885866517954543 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 3 | SCIADOPITYSIN | Leaf | | | | -- |
| 3 | ISOQUERCETIN | Fruit | | | | -- |
| 3 | CEDROL | Wood | | 200.0 | -1.0 | -- |
| 3 | AROMADENDRENE | Fruit Essent. Oil | | | | -- |
| 3 | BETA-PHELLANDRENE | Fruit Essent. Oil | | | | -- |
| 3 | CEDROL | Leaf | 450.0 | 2100.0 | | -- |
| 3 | BETA-PHELLANDRENE | Essential Oil | | | | -- |
| 3 | N-HENTRIACONTANE | Fruit | | | | -- |
| 3 | AROMADENDRENE | Fruit | | 2.0 | | -- |
| 3 | BETA-SELINENE | Fruit | | 32.0 | -1.0 | -- |
| 3 | BETA-PHELLANDRENE | Leaf Essent. Oil | | | | -- |
| 3 | GINNOL | Fruit | | | | -- |
| 3 | BETA-PHELLANDRENE | Fruit | 66.0 | 660.0 | -0.3586028887711514 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 3 | ALPHA-CADINOL | Fruit | | | | -- |
| 2 | CIS-COMMUNIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 2 | CAMPESTEROL | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 2 | PALMITOLEIC-ACID | Plant | | | | -- |
| 2 | L-LIMONENE | Bark | | | | Chemical Constituents of Oriental Herbs (3 diff. books) |
| 2 | PALMITOLEIC-ACID | Seed Oil | | | | -- |
| 2 | HUMULENE | Fruit | | 102.0 | -0.6157187427092596 | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------------|---------------|---------|----------|---------------------|--|
| 2 | GALLO-TANNIN | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 2 | TRANS-ACONITIC-ACID | Leaf | | | | -- |
| 2 | ALPHA-HUMULENE | Fruit | 19.0 | 192.0 | -0.5022919640544935 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 2 | GERMACRENE-D | Fruit | 3.0 | 32.0 | 1.0 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 2 | MANOOL | Leaf | | 87.5 | | -- |
| 2 | COBALT | Fruit | 4.0 | 12.3 | 0.9539136726283711 | -- |
| 2 | WIDDROL | Wood | | 100.0 | -1.0 | -- |
| 2 | ISOPIMARIC-ACID | Fruit | | | | -- |
| 2 | MYRTENOL | Plant | | | | -- |
| 2 | THUJOPSENE | Wood | | 3700.0 | -1.0 | -- |
| 2 | BETA-MYRCENE | Essential Oil | | 110000.0 | -0.2906195438526693 | -- |
| 1 | RHODOXANTHIN | Leaf | | | | -- |
| 1 | QUINIC-ACID | Leaf | | | | -- |
| 1 | ETHYL-PALMITATE | Fruit | 1.0 | 10.0 | -0.6891827096735466 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 1 | DELTA-CADINOL | Fruit | | 1.0 | -1.0 | -- |
| 1 | L-ASCORBIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 1 | SUGIOL | Wood | | | | -- |
| 1 | CIS-ACONITIC-ACID | Leaf | | | | -- |
| 1 | SODIUM | Fruit | | | | -- |
| 1 | N-NONACOSANE | Fruit | | | | -- |
| 1 | CUPARENE | Wood | | 300.0 | -1.0 | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------------------|------------|---------|----------|-----------------------|--|
| 1 | 3-ALPHA-HYDROXYMANOOL | Leaf | | 2350.0 | | -- |
| 1 | YLANGENE | Fruit | | | | -- |
| 1 | CEDRENE | Leaf | 12000.0 | 36000.0 | | -- |
| 1 | MALONIC-ACID | Leaf | | | | -- |
| 1 | ETHYL-MYRISTATE | Fruit | 1.0 | 6.0 | -1.0 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 1 | CHOLESTEROL | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 1 | ETHYL-LAURATE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 1 | LEUCOANTHOCYANIN | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | P-MENTHA-1,2,4-TRIOL | Plant | | | | -- |
| 0 | BETA-FENCHENE | Fruit | | | | -- |
| 0 | CATECHOL-TANNINS | Fruit | 30000.0 | 50000.0 | | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp. |
| 0 | 1,4-CINEOLE | Fruit | | 400.0 | -0.44111885007210994 | -- |
| 0 | ISOCUPRESSIC-ACID | Leaf | | 2637.5 | | -- |
| 0 | AMENTOFLAVONE-DIMETHYL-ETHER | Leaf | | | | -- |
| 0 | N-PENTATRIACONTANE | Fruit | | | | -- |
| 0 | EO | Fruit | 6200.0 | 40000.0 | -0.042481439666032995 | -- |
| 0 | JUNIPERAPRENOL-15 | Leaf | | | | -- |
| 0 | GAMMA-MUUROLENE | Fruit | | 128.0 | -1.0 | -- |
| 0 | LINOLENIC-ACID | Plant | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------------------|-------------------|---------|----------|--------------------|--|
| 0 | CAMPHOLENIC-ACETATE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | L-MALEIC-ACID | Fruit | | | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952. |
| 0 | ALPHA,BETA-DIMETHYLSTEROL | Fruit | 4.0 | 40.0 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | ETHYL-PALMITOLEATE | Fruit | 1.0 | 2.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | TRICYCLEN | Fruit | | | | -- |
| 0 | IMBRICATOLIC-ACID | Plant | | | | Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin. |
| 0 | (+)-JUNENOL | Plant | | | | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| 0 | DL-EPICUBENOL | Wood | | | | -- |
| 0 | JUNIONONE | Fruit Essent. Oil | | | | -- |
| 0 | EPIAFZELICHIN | Fruit | | | | -- |
| 0 | MYRCECOMMUNAL | Fruit | | | | -- |
| 0 | CIS-4-ETHOXY-THUJANE | Fruit | 3.0 | 30.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | MYRCEOCOMMUNIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 0 | P-CYMOL | Essential Oil | | | | -- |
| 0 | GAMMA-ELEMENE | Fruit | | 160.0 | 1.4137929367070103 | -- |
| 0 | BORNEOL-ACETATE | Fruit Essent. Oil | | | | -- |
| 0 | ALLO-BETULIN | Fruit | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|----------------------------|-------------------|---------|----------|---------------------|--|
| 0 | TRANS-VERBENOL | Fruit | 1.0 | 12.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | BETA-ELEMEN-7-ALPHA-OL | Fruit | | | | -- |
| 0 | BETA-CADINENE | Leaf | | | | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0 | HUMULENE-OXIDE | Fruit | | 9.0 | | -- |
| 0 | ALPHA-COPAENE | Fruit Essent. Oil | | | | -- |
| 0 | AGATHOLAL | Fruit | | | | -- |
| 0 | JUNICEDRAL | Fruit | | | | -- |
| 0 | P-CYMOL | Plant | | 240.0 | -0.9534537245333127 | -- |
| 0 | GAMMA-MUUROLENE | Fruit Essent. Oil | | | | -- |
| 0 | CIS-3-ETHOXY-P-MENTH-1-ENE | Fruit | 1.0 | 3.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | EO | Leaf | | | | -- |
| 0 | GAMMA-CADINENE | Fruit | 16.0 | 164.0 | 1.8269938624979614 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | LIMONENE-PEROXIDE | Fruit Essent. Oil | | | | -- |
| 0 | CALAMENENE | Fruit | | 71.0 | -0.5933257121003137 | -- |
| 0 | 8-ETHOXY-P-CYMENE | Fruit | 4.0 | 45.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | SUGARS | Fruit | 24800.0 | 80000.0 | -0.5539776886973504 | -- |
| 0 | SELINAN-4(14)-7(11)-DIENE | Fruit Essent. Oil | | | | -- |
| 0 | ALLO-BETULIN | Leaf | | | | -- |
| 0 | TRANS-SABINENE-HYDRATE | Fruit | 1.0 | 6.0 | -0.5171765141826495 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------------|---------|----------|---------------------|--|
| 0 | 1,4-DIMETHYL-CYCLOHEX-1-YL-METHYL-KETONE | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 0 | (+)-EPIGALLOCATECHIN | Fruit | | | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| 0 | CIS-COMMUNOL | Fruit | | | | -- |
| 0 | AGATHADIOL | Fruit | | | | -- |
| 0 | HYPOLAETIN-7-O-BETA-D-GLUCOSIDE | Fruit | | | | -- |
| 0 | PROANTHOCYANINS | Fruit | | | | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 0 | ALPHA-MUUROLENE | Fruit Essent. Oil | | | | -- |
| 0 | CIS-1-ETHOXY-P-MENTH-2-ENE | Fruit | 3.0 | 30.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | GAMMA-ELEMENE | Fruit Essent. Oil | | | | -- |
| 0 | METHYL-CITRONELLOL | Plant | | | | -- |
| 0 | OPLOPANONE | Fruit | | | | -- |
| 0 | CAR-3-ENE | Fruit Essent. Oil | | | | -- |
| 0 | ISOPIMAROL | Fruit | | | | -- |
| 0 | 3-ALPHA-15-DIHYDROXY-LABDA-8(17)-TRANS-13-DIENE | Leaf | | 500.0 | | -- |
| 0 | RESIN | Fruit | 80000.0 | 100000.0 | 0.5011700816956098 | -- |
| 0 | KILOCALORIES | Fruit | | 3410.0 | -0.3805452107665679 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------------|---------|----------|---------------------|--|
| 0 | 5-ALPHA-HYDROXYABIETINIC-ACID | Plant | | | | Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin. |
| 0 | SCUTELLAREIN-7-O-BETA-D-GLUCOSIDE | Fruit | | | | -- |
| 0 | ALLO-BETULIN | Stem | | | | -- |
| 0 | TRANS-COMMUNIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 0 | CIS-COMMUNAL | Fruit | | | | -- |
| 0 | DELTA-3-VARENE | Leaf | | | | -- |
| 0 | HUMULENE-OXIDE | Fruit Essent. Oil | | | | -- |
| 0 | P-CYMEN-8-OL | Fruit | 1.0 | 4.0 | -1.0 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | ASH | Fruit | 9920.0 | 32000.0 | -0.6386766393183354 | -- |
| 0 | QUERCETIN-3-O-ALPHA-L-ARABINOSYL-GLUCOSIDE | Fruit | | | | -- |
| 0 | P-MENTHANE-1-2-4-TRIOL | Fruit Essent. Oil | | | | -- |
| 0 | (+)-BETA-ELEMEN-7-ALPHA-OL | Fruit | | | | -- |
| 0 | CAR-3-ENE | Essential Oil | | | | -- |
| 0 | 3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-13-DIEN-15-OIC-ACID | Leaf | | 75.0 | | -- |
| 0 | PROTEIN | Fruit | 56420.0 | 182000.0 | 0.9719135979447259 | -- |
| 0 | JUNIPEROL | Wood | | | | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| 0 | 4-ETHOXY-P-MENTHEN-1-ENE | Flower | 8.0 | 78.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | FIBER(DIETARY) | Fruit | | 320000.0 | -0.9715942860730087 | -- |
| 0 | TRANS-4-ETHOXY-THUJANE | Fruit | 3.0 | 30.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------------|---------|----------|----------------------|--|
| 0 | ISOPIMARAL | Fruit | | | | -- |
| 0 | (+)-AFZELICHIN | Fruit | | | | -- |
| 0 | SUGAR | Fruit | | 300000.0 | 0.7577686224738679 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | NONACOSAN-5-10-DIOL | Fruit | | | | -- |
| 0 | P-MENTHANE | Fruit Essent. Oil | | | | -- |
| 0 | P-CYMOL | Leaf Essent. Oil | | | | -- |
| 0 | ALPHA-MUUROLENE | Fruit | 54.0 | 542.0 | -0.13060058780802927 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | CAMPHOLENE-ALDEHYDE | Essential Oil | | 2000.0 | | -- |
| 0 | 3-ALPHA-HYDROXY-LABDA-8(17)-TRANS-12-14-TRIEN-19-OIC-ACID | Leaf | | 75.0 | | -- |
| 0 | JUNIONONE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | 4-ACETYL-1,4-DIMETHYL-1-CYCLOHEXENE | Plant | | | | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| 0 | FIBER(CRUDE) | Fruit | | 120000.0 | -0.26860285043394083 | -- |
| 0 | SANDARACOPIMAROL | Fruit | | | | -- |
| 0 | TRANS-4-ETHOXY-PIN-2-ENE | Fruit | 7.0 | 66.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | DEHYDROABIETOL | Fruit | | | | -- |
| 0 | NEPITRIN | Leaf | | | | -- |
| 0 | N-HEPTACOSANE | Fruit | | | | -- |
| 0 | P-CYMENOL | Fruit Essent. Oil | | | | -- |
| 0 | LONGIFOLENE | Plant | | | | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991. |
| 0 | L-TARTARIC-ACID | Leaf | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------------|---------|----------|--------|---|
| 0 | TRANS-CALAMANENE | Fruit Essent. Oil | | | | -- |
| 0 | JUNIPERAPRENOL-20 | Leaf | | | | -- |
| 0 | JUNICEDROL | Plant | | | | J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991. |
| 0 | 15-HYDROXY- PENTADECANOIC | Fruit | | | | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948- 1952. |
| 0 | SANDARACOPIMARAL | Fruit | | | | -- |
| 0 | ANTICOPALOL | Fruit | | | | -- |
| 0 | TRANS-3-ETHOXY-P- MENTH-1-ENE | Fruit | 1.0 | 10.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | COMMUNIC-ACID | Fruit | | | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| 0 | THUJAN-4-OL | Essential Oil | | 9000.0 | | -- |
| 0 | PHENYL-PYRUVIC-ACID | Leaf | | | | -- |
| 0 | SELINA-4(14),7(11)-DIENE | Fruit | | 2.0 | | -- |
| 0 | ALPHA-HIMACHALINE | Plant | | | | -- |
| 0 | JUNIPERAPRENOL-18 | Leaf | | | | -- |
| 0 | JUNIPERAPRENOL-19 | Leaf | | | | -- |
| 0 | PENTOSAN | Fruit | | 60000.0 | 1.0 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | JUNENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 14,15-DIHYDROXY-LABDA- 8(17),13(16)-DIEN-19-ACID | Plant | | | | Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--------------------------------|-------------------|---------|----------|---------------------|--|
| 0 | (-)-EPIAFZELICHIN | Fruit | | | | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| 0 | TORULOSIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 0 | N-TRITRIACONTANE | Fruit | | | | -- |
| 0 | 1-4-CINEOL | Leaf Essent. Oil | | | | -- |
| 0 | THIAMINE | Fruit | 0.4 | 1.2 | -1.081392271586632 | -- |
| 0 | MYRTENOL-ACETATE | Fruit Essent. Oil | | | | -- |
| 0 | ALPHA-KETO-GLUTARIC-ACID | Leaf | | | | -- |
| 0 | CYCLOPOLY(D-GALACTURONIC-ACID) | Fruit | | | | -- |
| 0 | LINALOL | Plant | | | | -- |
| 0 | ALPHA-CUBEBENE | Fruit | 4.0 | 45.0 | -0.6188885832567323 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | JUNIPERAPRENOL-14 | Leaf | | | | -- |
| 0 | FAT | Seed | | 539000.0 | 1.441214427871716 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses |
| 0 | JUNIPERAPRENOL-17 | Leaf | | | | -- |
| 0 | DESOXYPICROPODOPHYL LOTOXIN | Fruit | | | | -- |
| 0 | 13,14-EPOXY-IMBRICATOLIC-ACID | Plant | | | | Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin. |
| 0 | CUPRESSUFLAVONE | Leaf | | | | -- |
| 0 | TORULOSOL | Fruit | | | | -- |
| 0 | 1-4-CINEOL | Fruit Essent. Oil | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--|---------------|----------|----------|----------------------|--|
| 0 | ALPHA-THUJENE | Fruit | 24.0 | 240.0 | -0.37432106883112565 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | GEIJERONE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | (DL)-MALIC-ACID | Leaf | | | | -- |
| 0 | SANTENE | Fruit | | | | -- |
| 0 | CARBOHYDRATES | Fruit | 226300.0 | 730000.0 | -0.2827855072710454 | -- |
| 0 | LIMONENE-PEROXIDE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | ALPHA-COPAENE | Fruit | 3.0 | 33.0 | -0.6445927707079909 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | ISOCRYPTOMERIN | Leaf | | | | -- |
| 0 | FAT | Fruit | 17360.0 | 56000.0 | -0.21352859426457804 | -- |
| 0 | WATER | Fruit | | 690000.0 | -0.35035084474250255 | -- |
| 0 | P-MENTHANE | Fruit | 2.0 | 20.0 | | -- |
| 0 | ISOCUPRESSINIC-ACID | Plant | | | | Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin. |
| 0 | 1,4-DIMETHYL-CYCLOHEX-3-ENYL-METHYL-KETONE | Fruit | | | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | 3-ALPHA-ACETOXY-ISOCUPRESSIC-ACID | Leaf | | 712.5 | | -- |
| 0 | AMENTOFLAVONE-TRIMETHYL-ETHER | Leaf | | | | -- |
| 0 | JUNIPERAPRENOL-16 | Leaf | | | | -- |
| 0 | TORULOSAL | Fruit | | | | -- |
| 0 | CINEOL | Essential Oil | | | | -- |
| 0 | MYRTENAL-ACETATE | Fruit | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------------|-------------------|---------|----------|---------------------|--|
| 0 | ALPHA-TERPINYL-ACETATE | Fruit | | | | -- |
| 0 | SANDAROPIMARIC-ACID | Fruit | | | | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 0 | CAMPHOLENIC-ALDEHYDE | Fruit | 1.0 | 7.0 | | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980. |
| 0 | CIS-CALAMANENE | Fruit Essent. Oil | | | | -- |
| 0 | BORNEOL-ACETATE | Essential Oil | | 4000.0 | -0.7241445887911021 | -- |