

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Pinus palustris*

| Activities Count | Chemical          | Plant Part          | Low PPM  | High PPM | StdDev              | Reference Citation   |
|------------------|-------------------|---------------------|----------|----------|---------------------|--|
| 0                | EO                | Resin, Exudate, Sap | 200000.0 | 250000.0 | 1.2282400385323775  | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.   |
| 28               | ALPHA-PINENE      | Resin, Exudate, Sap | 128600.0 | 160750.0 | -0.7753819335709035 | --   |
| 13               | BETA-PINENE       | Resin, Exudate, Sap | 63600.0  | 79500.0  | -0.8291953080638984 | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.   |
| 0                | PIMARIC-ACID      | Plant               |          |          |                     | --   |
| 0                | PALUSTRIC-ACID    | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 3                | BETA-PHELLANDRENE | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 16               | P-CYMENE          | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 2                | BETA-MYRCENE      | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 4                | NEOABIETIC-ACID   | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 0                | LAEVOPIMARIC-ACID | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 3                | ABIETIC-ACID      | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |
| 2                | ISOPIMARIC-ACID   | Resin, Exudate, Sap |          |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980. |

| Activities Count | Chemical              | Plant Part          | Low PPM | High PPM | StdDev              | Reference Citation   |
|------------------|-----------------------|---------------------|---------|----------|---------------------|--|
| 0                | 3-CARENE              | Resin, Exudate, Sap |         |          |                     | --   |
| 0                | (-)-NORTRACHEOGENIN   | Stem                |         |          |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 0                | ISODEXTROPIMARINAL    | Plant               |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | NORTRACHEOGENIN       | Stem                |         |          |                     | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| 9                | CAMPHENE              | Resin, Exudate, Sap |         |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                         |
| 0                | EO                    | Leaf                |         | 4000.0   | -0.6627798744630032 | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | SITOSTEROL            | Resin, Exudate, Sap |         |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                         |
| 7                | DIPENTENE             | Resin, Exudate, Sap |         |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                         |
| 2                | SANDARACOPIMARIC-ACID | Resin, Exudate, Sap |         |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                         |
| 5                | DEHYDROABIETIC-ACID   | Resin, Exudate, Sap |         |          |                     | Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.                         |