

# Dr. Duke's Phytochemical and Ethnobotanical Databases

## Chemicals found in Acorus calamus

| Activities Count | Chemical      | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation  |
|------------------|---------------|------------|---------|----------|----------------------|---|
| 112              | ASCORBIC-ACID | Plant      |         |          |                      | --  |
| 77               | ZINC          | Rhizome    |         |          |                      | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272. |
| 76               | EUGENOL       | Rhizome    | 30.0    | 300.0    | -0.7161913723160901  | --  |
| 67               | 1,8-CINEOLE   | Rhizome    | 0.0     | 100.0    | -0.7982890747494946  | --  |
| 65               | MAGNESIUM     | Rhizome    |         | 1100.0   | -0.5600893515913968  | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272. |
| 63               | MENTHOL       | Rhizome    |         |          |                      | Pakistan Encyclopedia Planta Medica. 1986.  |
| 60               | LIMONENE      | Rhizome    | 10.0    | 1400.0   | 1.2836558613056794   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 53               | LINALOOL      | Rhizome    | 30.0    | 6000.0   | 1.0                  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 41               | CAMPHOR       | Rhizome    |         |          |                      | Guenther, E., The Essential Oils, 6 volumes, D. van Nostrand, New York, 1948-1952.  |
| 35               | TANNIN        | Plant      |         |          |                      | --  |
| 35               | BORNEOL       | Plant      |         |          |                      | --  |
| 35               | TANNIN        | Rhizome    |         | 15000.0  |                      | --  |
| 30               | MENTHONE      | Rhizome    |         |          |                      | Pakistan Encyclopedia Planta Medica. 1986.  |
| 28               | ALPHA-PINENE  | Rhizome    |         | 280.0    | -1.3131983079178744  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 28               | CALCIUM       | Rhizome    |         | 7040.0   | 0.024896656626718316 | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272. |
| 26               | PHENOL        | Plant      |         |          |                      | --  |

| Activities Count | Chemical          | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation  |
|------------------|-------------------|------------|---------|----------|----------------------|---|
| 24               | ETHANOL           | Rhizome    |         |          |                      | --  |
| 23               | ALPHA-TERPINEOL   | Rhizome    |         | 1500.0   | 1.3367642396634478   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 23               | TERPINEN-4-OL     | Rhizome    | 10.0    | 500.0    |                      | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 22               | MYRCENE           | Plant      |         |          |                      | --  |
| 20               | CHOLINE           | Root       |         | 2600.0   | -0.10560488367164568 | --  |
| 20               | METHYL-EUGENOL    | Rhizome    |         | 1025.0   | 1.0                  | --  |
| 20               | CHOLINE           | Rhizome    |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.            |
| 18               | BETA-ASARONE      | Rhizome    | 2000.0  | 80000.0  |                      | --  |
| 16               | ISOEUGENOL        | Rhizome    | 228.0   | 12510.0  |                      | --  |
| 16               | ELEMICIN          | Rhizome    | 10.0    | 650.0    |                      | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 16               | P-CYMENE          | Rhizome    | 0.0     | 50.0     | -0.49356441935275247 | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.  |
| 15               | METHYL-ISOEUGENOL | Rhizome    | 110.0   | 3950.0   |                      | --  |
| 15               | ASARONE           | Rhizome    | 2100.0  | 48000.0  |                      | --  |
| 14               | POTASSIUM         | Rhizome    |         | 16000.0  | 0.33730143368752097  | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272. |
| 14               | MANGANESE         | Rhizome    |         | 309.0    | 1.2244334870971068   | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272. |

| Activities Count | Chemical        | Plant Part | Low PPM | High PPM | StdDev              | Reference Citation   |
|------------------|-----------------|------------|---------|----------|---------------------|--|
| 13               | GALANGIN        | Rhizome    |         |          |                     | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.  |
| 13               | BETA-PINENE     | Rhizome    |         | 150.0    | 1.1206310514564426  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 13               | PALMITIC-ACID   | Rhizome    |         |          |                     | --   |
| 13               | ALPHA-TERPINENE | Plant      |         |          |                     | --   |
| 13               | PALMITIC-ACID   | Plant      |         |          |                     | --   |
| 12               | COPPER          | Rhizome    |         | 4.0      | -1.4642120454178038 | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.  |
| 11               | GAMMA-TERPINENE | Plant      |         |          |                     | --   |
| 10               | AZULENE         | Rhizome    |         |          |                     | 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. |
| 9                | OXALIC-ACID     | Plant      |         |          |                     | --   |
| 9                | ACORIC-ACID     | Plant      |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 9                | TERPINOLENE     | Rhizome    |         |          |                     | Pakistan Encyclopedia Planta Medica. 1986.   |
| 9                | DELTA-CADINENE  | Rhizome    | 5.0     | 1050.0   | 1.4135121224933511  | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 9                | CAMPHENE        | Rhizome    | 10.0    | 460.0    | -1.0                | --   |
| 9                | TERPINOLENE     | Plant      |         |          |                     | Pakistan Encyclopedia Planta Medica. 1986.   |
| 8                | TRANS-ANETHOLE  | Plant      |         |          |                     | --   |
| 6                | FURFURAL        | Rhizome    |         |          |                     | --   |

| Activities Count | Chemical             | Plant Part | Low PPM  | High PPM | StdDev               | Reference Citation   |
|------------------|----------------------|------------|----------|----------|----------------------|--|
| 6                | IRON                 | Rhizome    |          | 350.0    | -0.02674945738357939 | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.                        |
| 6                | METHYL-CHAVICOL      | Plant      |          |          |                      | --   |
| 6                | BUTYRIC-ACID         | Plant      |          |          |                      | --   |
| 5                | EUGENOL-METHYL-ETHER | Rhizome    |          |          |                      | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.  |
| 5                | BETA-ELEMENE         | Rhizome    | 60.0     | 750.0    | 1.0692741796807936   | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 5                | SABINENE             | Rhizome    |          |          |                      | Pakistan Encyclopedia Planta Medica. 1986.   |
| 5                | CIS-ISOASARONE       | Rhizome    |          |          |                      | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.  |
| 5                | STARCH               | Rhizome    | 250000.0 | 400000.0 | -0.21818381438712206 | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 3                | MUCILAGE             | Plant      |          | 8000.0   | -1.4692496950899154  | --   |
| 3                | ALPHA-ASARONE        | Rhizome    | 132.0    | 6500.0   |                      | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 3                | AR-CURCUMENE         | Plant      |          |          |                      | --   |
| 2                | OCIMENE              | Plant      |          |          |                      | --   |
| 2                | ALPHA-HUMULENE       | Rhizome    |          |          |                      | --   |
| 2                | ALPHA-HUMULENE       | Plant      |          |          |                      | --   |
| 2                | ARSENIC              | Rhizome    |          | 1.13     | 1.6025541922926834   | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.                        |

| Activities Count | Chemical                     | Plant Part | Low PPM | High PPM | StdDev               | Reference Citation  |
|------------------|------------------------------|------------|---------|----------|----------------------|---|
| 2                | DIMETHYL-AMINE               | 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.                      |
| 2                | P-METHOXYCINNAMALDEHYDE      | Plant      |         |          |                      | Wolf, R.B. Effects Of p-Methoxycinnamaldehyde From Star Anise And Related Cinnamic Acid Derivatives On Velvetleaf Germination. Journal of Natural Products, 49(1): 156-158, 1986. |
| 1                | ANEURINE                     | Plant      |         |          |                      | --  |
| 1                | SODIUM                       | Rhizome    |         | 459.0    | -0.10043590174501253 | Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.   |
| 1                | METHYL-AMINE                 | Rhizome    |         |          |                      | --  |
| 1                | TRIMETHYLAMINE               | Plant      |         |          |                      | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.  |
| 1                | SELINENE                     | Plant      |         |          |                      | Pakistan Encyclopedia Planta Medica. 1986.  |
| 1                | GAMMA-ASARONE                | Plant      |         |          |                      | --  |
| 1                | DEXTROSE                     | Rhizome    |         |          |                      | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 0                | CALARENE                     | Plant      |         |          |                      | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | TROPONE                      | Plant      |         |          |                      | --  |
| 0                | ACORIN                       | Plant      |         | 2000.0   |                      | --  |
| 0                | TRANS-ISOELEMICINE           | Rhizome    |         |          |                      | --  |
| 0                | 2,4,5-TRIMETHOXYBENZALDEHYDE | Plant      |         |          |                      | --  |
| 0                | LINALOL                      | Rhizome    | 30.0    | 6000.0   | 1.0                  | --  |
| 0                | SEKISHONE                    | Rhizome    |         | 650.0    |                      | 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                | DEXTRIN            | Rhizome    |         |          |                     | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | (-)-BETA-CURCUMENE | Plant      |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | CALAMOL            | Rhizome    | 320.0   | 3885.0   |                     | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | EO                 | Shoot      |         | 1200.0   | -0.8419644356923442 | --   |
| 0                | ISOSHYOBUNONE      | Rhizome    | 134.0   | 670.0    |                     | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | ALPHA-YLANGENE     | Rhizome    |         | 500.0    |                     | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | SAPONIN            | Plant      |         |          |                     | Pakistan Encyclopedia Planta Medica. 1986.   |
| 0                | DELTA-GUAZULENE    | Plant      |         |          |                     | --   |
| 0                | SITOSTEROL         | Rhizome    |         |          |                     | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.                                    |
| 0                | CALAMEONE          | Rhizome    |         | 280.0    |                     | Abstract (See species file)  |
| 0                | ACORENONE          | Rhizome    |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | N-HEPTYLIC-ACID    | Rhizome    |         |          |                     | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses  |
| 0                | EO                 | Leaf       |         | 2000.0   | -0.8386994921548646 | --   |
| 0                | (+)-CALAMUSENONE   | Plant      |         |          |                     | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.   |
| 0                | DELTA-CARENE       | Rhizome    |         |          |                     | Pakistan Encyclopedia Planta Medica. 1986.   |
| 0                | RESIN              | Rhizome    |         | 25000.0  | -1.3821894809301767 | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| 0                | CALAMENONE         | Plant      |         |          |                     | --   |

| Activities Count | Chemical                 | Plant Part | Low PPM | High PPM | StdDev             | Reference Citation  |
|------------------|--------------------------|------------|---------|----------|--------------------|---|
| 0                | ACORENOL                 | Plant      |         |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | DELTA-CARENE             | Plant      |         |          |                    | Pakistan Encyclopedia Planta Medica. 1986.  |
| 0                | TERPINIC-ALCOHOL         | Plant      |         |          |                    | --  |
| 0                | ISOCALAMUSENONE          | Plant      |         |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | RESIN                    | Plant      |         |          |                    | --  |
| 0                | CALAMENOL                | Rhizome    | 500.0   | 5000.0   |                    | --  |
| 0                | ACORAMONE                | Rhizome    |         |          |                    | Chemical Constituents of Oriental Herbs (3 diff. books)   |
| 0                | EPOXYISOACORAGERMAC RONE | Rhizome    |         |          |                    | Chemical Constituents of Oriental Herbs (3 diff. books)   |
| 0                | ISOCALAMINEDIOL          | Plant      |         |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | PREISOCALAMENDIOL        | Rhizome    |         |          |                    | --  |
| 0                | CRYPTOACORONE            | Plant      |         |          |                    | --  |
| 0                | ACOLAMONE                | Rhizome    |         |          |                    | --  |
| 0                | CALAMENENE               | Rhizome    | 10.0    | 4000.0   | 1.0                | --  |
| 0                | ACORAGERMACRONE          | Plant      |         |          |                    | --  |
| 0                | EPISHYOBUNONE            | Rhizome    | 402.0   | 2010.0   |                    | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                  |
| 0                | ASARYLALDEHYDE           | Rhizome    |         |          |                    | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 0                | ISOCAESPITOL             | Plant      |         |          |                    | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | ISOACOLAMONE             | Rhizome    |         |          |                    | --  |
| 0                | CALAMENE                 | Rhizome    | 40.0    | 1920.0   |                    | --  |
| 0                | ACORADIN                 | Rhizome    |         |          |                    | Chemical Constituents of Oriental Herbs (3 diff. books)   |
| 0                | EO                       | Rhizome    | 10000.0 | 100000.0 | 0.7957851377946111 | --  |

| Activities Count | Chemical                     | Plant Part | Low PPM | High PPM | StdDev | Reference Citation  |
|------------------|------------------------------|------------|---------|----------|--------|---|
| 0                | CALAMONE                     | Rhizome    | 100.0   | 1000.0   |        | --  |
| 0                | ASARONALDEHYDE               | Rhizome    |         | 2830.0   |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                  |
| 0                | ISOACORONE                   | Rhizome    |         |          |        | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 0                | CIS-ISOELEMICIN              | Rhizome    |         | 50.0     |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                  |
| 0                | 2,4,5-TRIMETHOXYBENZALDEHYDE | Rhizome    |         |          |        | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| 0                | CALACONE                     | Plant      |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | BETA-CURCUMENE               | Plant      |         |          |        | --  |
| 0                | ACOLAMONE                    | Plant      |         |          |        | --  |
| 0                | ENANTHYLIC-ACID              | Plant      |         |          |        | --  |
| 0                | BETA-GURJUNENE               | Rhizome    | 20.0    | 1700.0   | 1.0    | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                  |
| 0                | ASARALDEHYDE                 | Plant      |         |          |        | --  |
| 0                | SITOSTEROL                   | Plant      |         |          |        | --  |
| 0                | ACOROXIDE                    | Rhizome    |         |          |        | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 0                | PARASARONE                   | Rhizome    |         |          |        | CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses   |
| 0                | GUAIENE                      | Rhizome    |         |          |        | J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.  |
| 0                | CALACOLENE                   | Rhizome    |         | 100.0    |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.                                  |
| 0                | ACETEUGENOL                  | Rhizome    |         |          |        | --  |



| Activities Count | Chemical                      | Plant Part    | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|-------------------------------|---------------|---------|----------|--------|--|
| 0                | SHYOBUNONE                    | Rhizome       |         | 1850.0   |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | CARYOPHYLLINE                 | Rhizome       |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | ACORONE                       | Plant         |         |          |        | --   |
| 0                | CADALO-1,4,9-TRIENE           | Rhizome       | 410.0   | 2050.0   |        | Chemical Constituents of Oriental Herbs (3 diff. books)  |
| 0                | 2,6-DIEPISHYOBUNONE           | Rhizome       |         |          |        | 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                | 2,5-DIMETHOXYBENZOQUINONE     | Rhizome       |         |          |        | Chemical Constituents of Oriental Herbs (3 diff. books)  |
| 0                | ARISTOLENE                    | Rhizome       |         |          |        | Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.   |
| 0                | PHENYLPROPANES                | Rhizome       |         |          |        | Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.  |
| 0                | CALAMENONE                    | Rhizome       | 100.0   | 500.0    |        | --   |
| 0                | ACORINE                       | Plant         |         |          |        | --   |
| 0                | LUTEOLIN-6,8-C-DIGLUCOSIDE    | Plant         |         |          |        | --   |
| 0                | TRANS-ISOEUGENOL-METHYL-ETHER | Plant         |         |          |        | --   |
| 0                | 2,5-DIMETHOXYQUINONE          | Rhizome       |         |          |        | Chemical Constituents of Oriental Herbs (3 diff. books)  |
| 0                | (-)-TROPONE                   | Plant         |         |          |        | --   |
| 0                | SELINA-3,7(11)-DIENE          | Essential Oil |         |          |        | --   |