

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Ribes nigrum

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|----------------------|------------------|----------|----------|----------------------|--|
| 0 | CARBOHYDRATES | Fruit | 153800.0 | 852050.0 | 0.3698785649141745 | USDA's Ag Handbook 8 and sequelae) |
| 0 | WATER | Fruit | 815220.0 | 824000.0 | 0.23229369814712902 | USDA's Ag Handbook 8 and sequelae) |
| 27 | LINOLEIC-ACID | Seed Essent. Oil | | 450000.0 | -0.38185378196002584 | -- |
| 0 | FAT | Seed | 250000.0 | 305000.0 | 0.20865272626089487 | -- |
| 20 | GAMMA-LINOLENIC-ACID | Seed Essent. Oil | | 170000.0 | 0.4877131100041326 | -- |
| 0 | PROTEIN | Leaf | | 141700.0 | -0.6997646435396685 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | FIBER | Fruit | 24000.0 | 133000.0 | -0.08187450385949027 | USDA's Ag Handbook 8 and sequelae) |
| 13 | BETA-PINENE | Fruit | | 130000.0 | 3.8670699671319455 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | ALPHA-LINOLENIC-ACID | Seed Essent. Oil | | 120000.0 | | -- |
| 18 | OLEIC-ACID | Seed Essent. Oil | | 120000.0 | -0.7071067811865472 | -- |
| 31 | CARYOPHYLLENE | Fruit | | 119000.0 | 3.1497138144144925 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | SUGARS | Fruit | 15800.0 | 106400.0 | -0.4450056891324181 | -- |
| 0 | PROTEIN | Fruit | 12000.0 | 88640.0 | -0.2796177988591396 | USDA's Ag Handbook 8 and sequelae) |
| 0 | TANNINS | Leaf | | 85000.0 | -0.12203041771161947 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | INVERT-SUGARS | Fruit | 60000.0 | 80000.0 | -1.049209219859784 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | ASH | Fruit | 8050.0 | 61100.0 | 0.11487797078072934 | -- |
| 20 | GAMMA-LINOLENIC-ACID | Seed | 47500.0 | 57950.0 | 0.32865774651972557 | -- |
| 30 | ANTHOCYANINS | Fruit | 10000.0 | 40000.0 | 1.0 | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|----------------------|------------------|---------|----------|----------------------|--|
| 8 | FRUCTOSE | Fruit | | 36700.0 | -0.34464105992956867 | -- |
| 23 | CITRIC-ACID | Fruit | | 35000.0 | -0.07872984738636099 | -- |
| 0 | STEARIDONIC ACID | Seed Essent. Oil | | 30000.0 | | -- |
| 0 | FAT | Fruit | 3150.0 | 27977.0 | -0.42756601418508344 | USDA's Ag Handbook 8 and sequelae) |
| 7 | GLUCOSE | Fruit | | 23500.0 | -0.6456924807905674 | -- |
| 14 | POTASSIUM | Fruit | 3100.0 | 21110.0 | 0.2825398898770841 | -- |
| 0 | CALCIUM-PECTATE | Fruit | 9000.0 | 17000.0 | -0.4368211543046611 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 30 | (+)-CATECHIN | Fruit | 5500.0 | 13800.0 | 1.0 | -- |
| 0 | NITROGEN | Fruit | 1800.0 | 12775.0 | -0.12952772042220517 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 112 | ASCORBIC-ACID | Fruit | 150.0 | 10030.0 | 0.3391462316019611 | -- |
| 0 | EO | Bulb | | 7500.0 | -0.3719457894724333 | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 14 | SUCROSE | Fruit | | 6200.0 | -0.7028560356117206 | -- |
| 27 | LINOLEIC-ACID | Fruit | 1070.0 | 5928.0 | -0.27176478274180926 | USDA's Ag Handbook 8 and sequelae) |
| 28 | CALCIUM | Fruit | 502.0 | 4720.0 | 0.1993108709232679 | -- |
| 0 | FLAVONOIDS | Leaf | | 4600.0 | -0.7749897228740793 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | ALPHA-LINOLENIC-ACID | Fruit | 720.0 | 3988.0 | 0.6535435807651567 | USDA's Ag Handbook 8 and sequelae) |
| 4 | PHOSPHORUS | Fruit | 490.0 | 3500.0 | 0.08626372418040051 | -- |
| 18 | OLEIC-ACID | Fruit | 560.0 | 3102.0 | -0.45683700824558143 | USDA's Ag Handbook 8 and sequelae) |
| 0 | ANTHOCYANOSIDES | Fruit | | 3000.0 | -1.0 | 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. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------|-------------|---------|----------|----------------------|--|
| 65 | MAGNESIUM | Fruit | 220.0 | 1720.0 | -0.18973196351432575 | -- |
| 14 | SULFUR | Fruit | 200.0 | 1385.0 | -0.02058118469316889 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 13 | PALMITIC-ACID | Fruit | 200.0 | 1108.0 | -0.34828639336044304 | USDA's Ag Handbook 8 and sequelae) |
| 2 | PALMITOLEIC-ACID | Fruit | 70.0 | 388.0 | -0.27451591357747396 | USDA's Ag Handbook 8 and sequelae) |
| 8 | STEARIC-ACID | Fruit | 70.0 | 388.0 | -0.2534900563026795 | USDA's Ag Handbook 8 and sequelae) |
| 5 | GLUTAMINE | Fruit Juice | | 290.0 | | -- |
| 4 | SILICON | Fruit | 10.0 | 220.0 | 0.1063310267247835 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 0 | ALPHA-ALANINE | Fruit Juice | | 210.0 | | -- |
| 8 | GLUTAMIC-ACID | Fruit Juice | | 210.0 | | -- |
| 0 | EO | Leaf | | 200.0 | -0.99702714807754 | -- |
| 9 | OXALIC-ACID | Fruit | | 200.0 | -0.29532056034744525 | -- |
| 3 | VALINE | Fruit Juice | | 170.0 | | -- |
| 32 | ALPHA-TOCOPHEROL | Fruit | 22.0 | 120.0 | 0.7254612491691786 | -- |
| 1 | SODIUM | Fruit | 20.0 | 111.0 | -0.17342478111859652 | USDA's Ag Handbook 8 and sequelae) |
| 6 | IRON | Fruit | 11.0 | 108.0 | -0.0990812909090042 | USDA's Ag Handbook 8 and sequelae) |
| 0 | PROLINE | Fruit Juice | | 98.0 | | -- |
| 2 | ASPARAGINE | Fruit Juice | | 87.0 | | -- |
| 5 | ALUMINUM | Fruit | 3.0 | 65.0 | -0.2046115023876262 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 4 | BORON | Fruit | 1.0 | 64.0 | 0.4846568688508411 | -- |
| 1 | SERINE | Fruit Juice | | 60.0 | | -- |
| 0 | CAREN-3 | Leaf | | 38.0 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 14 | ARGININE | Fruit Juice | | 35.0 | | -- |
| 31 | CARYOPHYLLENE | Leaf | | 34.0 | -0.6484758776339403 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------|-------------|---------|----------|----------------------|--|
| 7 | SALICYLATES | Fruit | 3.0 | 30.0 | -0.2507181157512923 | -- |
| 2 | LEUCINE | Fruit Juice | | 28.0 | | -- |
| 0 | RUBIDIUM | Fruit | 1.0 | 28.0 | 0.675517753106432 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 3 | ISOLEUCINE | Fruit Juice | | 28.0 | | -- |
| 14 | MANGANESE | Fruit | 0.5 | 27.0 | -0.22550301209784723 | -- |
| 3 | ASPARTIC-ACID | Fruit Juice | | 23.0 | | -- |
| 15 | LUTEIN | Fruit | 4.4 | 22.0 | 1.0661490848102466 | -- |
| 11 | PANTOTHENIC-ACID | Fruit | 4.0 | 22.0 | 0.24848336964903023 | USDA's Ag Handbook 8 and sequelae) |
| 77 | ZINC | Fruit | 2.0 | 21.0 | -0.27984522139310664 | -- |
| 0 | NORVALINE | Fruit Juice | | 17.0 | | -- |
| 39 | NIACIN | Fruit | 3.0 | 17.0 | -0.5841679380957736 | USDA's Ag Handbook 8 and sequelae) |
| 4 | THREONINE | Fruit Juice | | 17.0 | | -- |
| 0 | OCTEN-1-OL-(3) | Leaf | | 13.0 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | BETA-ALANINE | Fruit Juice | | 12.0 | | -- |
| 35 | GERANIOL | Leaf | | 12.0 | -0.22490199642499295 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | VITAMIN-K-1 | Fruit | | 10.1 | | -- |
| 53 | BETA-CAROTENE | Fruit | 1.0 | 8.0 | -0.1353367732684366 | USDA's Ag Handbook 8 and sequelae) |
| 12 | COPPER | Fruit | 0.6 | 7.0 | -0.45288591601748224 | -- |
| 0 | LINALOL | Leaf | | 7.0 | -0.43845318464692984 | -- |
| 53 | LINALOOL | Leaf | | 7.0 | -0.6425964378968151 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-------------------------|------------|---------|----------|----------------------|--|
| 60 | LIMONENE | Leaf | | 7.0 | -0.4404202146791783 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | HUMULENE | Leaf | | 4.0 | -0.45322095661158035 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | VIT-B-6 | Fruit | 1.0 | 4.0 | -0.7070236337221133 | USDA's Ag Handbook 8 and sequelae) |
| 0 | M-CYMOL | Leaf | | 3.0 | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | P-CYMOL | Leaf | | 3.0 | -0.542974500379653 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | RIBOFLAVIN | Fruit | 1.0 | 3.0 | -0.4303249009534089 | USDA's Ag Handbook 8 and sequelae) |
| 31 | THIAMIN | Fruit | 1.0 | 3.0 | -0.29859918253223444 | USDA's Ag Handbook 8 and sequelae) |
| 0 | FLUORINE | Fruit | 0.1 | 2.8 | 1.4296307542003595 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 0 | BROMINE | Fruit | | 1.0 | -0.42563543443835 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 2 | MOLYBDENUM | Fruit | 0.1 | 0.6 | -0.36498673733922654 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 0 | LEAD | Fruit | 0.04 | 0.6 | -0.4548229499765365 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 0 | DEHYDROXY-METHYL FLAZIN | Fruit | | 0.38 | | -- |
| 0 | FLAZIN METHYL ETHER | Fruit | | 0.34 | | -- |
| 24 | CHROMIUM | Fruit | 0.01 | 0.27 | -0.46970952066350025 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 3 | NICKEL | Fruit | | 0.101 | -0.7487450285711046 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 2 | ARSENIC | Fruit | 0.01 | 0.06 | -0.46003213545175 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 2 | COBALT | Fruit | 0.002 | 0.027 | -0.5318466177584126 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 1 | MERCURY | Fruit | | 0.01 | -0.3661474335745678 | ACTA AGRIC SCAND SUPPL 22: 1980 |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|-------------------------------|-------------|---------|----------|----------------------|--|
| 3 | CADMIUM | Fruit | 0.001 | 0.01 | -0.6142357150186111 | ACTA AGRIC SCAND SUPPL 22: 1980 |
| 60 | SELENIUM | Fruit | | 0.002 | -0.38569128420884563 | -- |
| 0 | STEARIDONIC ACID | Seed Oil | | | | -- |
| 0 | KAEMPFEROL-3-GLUCO-RHAMNOSIDE | Leaf | | | | -- |
| 9 | TERPINOLENE | Bud | | | | -- |
| 18 | CINNAMIC-ACID | Fruit | | | | -- |
| 23 | ALPHA-TERPINEOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 9 | CAMPHENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 176 | QUERCETIN | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | BUTYL-ACETATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 2-PENTANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 87 | RUTIN | Fruit Juice | | | | -- |
| 0 | TERPINENOL-(4) | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | CYANIDIN-3-DIGLUCOSIDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 24 | PECTIN | Fruit | | | | -- |
| 0 | P-MENTH-1,8-DIEN-4-OL | Bud | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|----------------------------------|-------------|---------|----------|--------|--|
| 35 | GERANIOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1 | DELPHINIDIN-3-O-BETA-D-GLUCOSIDE | Fruit | | | | -- |
| 5 | SABINENE | Bud | | | | -- |
| 0 | (+)-HARDWICKIIC ACID | Bud | | | | -- |
| 75 | KAEMPFEROL | Fruit Juice | | | | -- |
| 13 | ALPHA-TERPINENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 43 | PROTocatechuic-acid | Fruit | | | | -- |
| 0 | BUTANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 2-METHYL-PROPANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 22 | ISOQUERCITRIN | Leaf | | | | -- |
| 0 | OCT-1-EN-3-OL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1 | INDOLE-ACETIC-ACID | Seed | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | CYANIDIN | Plant | | | | -- |
| 21 | METHYL-SALICYLATE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 8 | GENTISIC-ACID | Fruit | | | | -- |
| 5 | CYANIN | Fruit | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------|---------|----------|--------|--|
| 0 | TERPINENOL-(4) | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 28 | PULEGONE | Bud | | | | -- |
| 1 | GALLOCATECHIN-(4ALPHA->8)- GALLOCATECHIN-(4ALPHA->8)- GALLOCATECHIN | Leaf | | | | -- |
| 1 | ETHYL-BUTYRATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 44 | QUERCITRIN | Fruit Juice | | | | -- |
| 77 | CHLOROGENIC-ACID | Fruit | | | | -- |
| 28 | ALPHA-PINENE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 2-METHYL-3-BUTEN-2-OL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | QUERCETIN-3-O-BETA-D-RUTOSIDE | Fruit Juice | | | | -- |
| 4 | O-COUMARIC-ACID | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 20 | GAMMA-LINOLENIC-ACID | Seed Oil | | | | -- |
| 21 | METHYL-SALICYLATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | CYANIDIN-3-O-RHAMNOSIDE | Fruit | | | | -- |
| 0 | TERPINENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--|-------------|---------|----------|--------|--|
| 1 | GALLOCATECHIN-(4ALPHA->8)-GALLOCATECHIN | Leaf | | | | -- |
| 1 | ETHYL-BENZOATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3 | BETA-PHELLANDRENE | Bud | | | | -- |
| 28 | ALPHA-PINENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3 | ISOMENTHONE | Bud | | | | -- |
| 0 | DELPHINIDIN-3-RUTINOSIDE | Fruit | | | | -- |
| 0 | 2-HEXENAL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | QUERCETIN-3-GLUCOXYLOSIDE | Leaf | | | | -- |
| 2 | HUMULENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | METHYL-N-HEXENOATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | CYANIDIN-3-O-BETA-D-SOPHOROSIDE | Fruit Juice | | | | -- |
| 0 | P-METHYLISOPROPENYLBE NZOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1 | GALLOCATECHIN-(4ALPHA->8)-EPIGALLOCATECHIN | Leaf | | | | -- |
| 6 | ETHYL-ACETATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--------------------------|-------------|---------|----------|--------|--|
| 34 | MYRICETIN | Fruit Juice | | | | -- |
| 87 | RUTIN | Leaf | | | | -- |
| 0 | GALLOCATECHIN | Leaf | | | | -- |
| 1 | DELPHINIDIN-3-GLUCOSIDE | Fruit | | | | -- |
| 0 | PROPANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 2-BUTANONE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | PROANTHOCYANIDIN-POLYMER | Leaf | | | | -- |
| 3 | HEXANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 15 | ALPHA-LINOLENIC-ACID | Seed Oil | | | | -- |
| 2 | METHYL-BUTYRATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | FORMIC-ACID | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 1 | CELLULOSE | Fruit | | | | -- |
| 6 | SYRINGIC-ACID | Fruit | | | | -- |
| 2 | CITRONELLYL-ACETATE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 24 | ETHANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 22 | ISOQUERCITRIN | Fruit Juice | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---------------------------|------------|---------|----------|--------|--|
| 87 | RUTIN | Fruit | | | | -- |
| 6 | EPIGALLOCATECHIN | Leaf | | | | -- |
| 0 | TRANS-HEX-2-EN-1-OL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | DELPHINIDIN-3-DIGLUCOSIDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3 | BETA-PHELLANDRENE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 2-BUTANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | PROANTHOCYANIDIN-POLYMER | Fruit | | | | -- |
| 4 | HARDWICKIC-ACID | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | LINOLENIC-ACID | Seed Oil | | | | -- |
| 4 | METHYL-BENZOATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 12 | FORMALDEHYDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | CAR-3-ENE | Bud | | | | -- |
| 2 | CITRONELLYL-ACETATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------------------------|-------------|---------|----------|--------|--|
| 75 | KAEMPFEROL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | ISOAMYL-BUTYRATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 3 | ACETONE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | P-CYMENOL-(4) | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | EUCARVONE | Bud | | | | -- |
| 0 | TRANS-CHLOROGENIC-ACID | Fruit | | | | -- |
| 9 | DELPHINIDIN | Plant | | | | -- |
| 3 | BETA-PHELLANDRENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 1-PENTEN-3-OL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | PELARGONIDIN-3-O-BETA-D-RUTINOSIDE | Fruit Juice | | | | -- |
| 0 | GLYCOLLIC-ACID | Fruit | | | | -- |
| 2 | METHANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | ASTRAGALIN | Fruit Juice | | | | -- |
| 15 | CITRONELLOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|----------------------------|------------|---------|----------|--------|--|
| 22 | ISOQUERCITRIN | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 102 | CAFFEIC-ACID | Fruit | | | | -- |
| 16 | ACETIC-ACID | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 16 | P-CYMENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | TRANS-BETA-OCIMENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | DACTYLIFRIC-ACID | Fruit | | | | -- |
| 0 | BETA-OCIMENE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 1-METHYL-4-ISOPROPYLBENZOL | Plant | | | | -- |
| 2 | NEO-CHLOROGENIC-ACID | Fruit | | | | -- |
| 0 | ISODIOSPHENOL | Bud | | | | -- |
| 27 | LINOLEIC-ACID | Seed Oil | | | | -- |
| 7 | ASTRAGALIN | Leaf | | | | -- |
| 0 | EMULSIN | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 60 | LIMONENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--------------------------------|-------------|---------|----------|--------|--|
| 1 | QUINIC-ACID | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 6 | ACETALDEHYDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 25 | P-COUMARIC-ACID | Fruit | | | | -- |
| 0 | CYANIDIN-MONOGLUCOSIDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | PENTANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 67 | 1,8-CINEOLE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 18 | OLEIC-ACID | Seed Oil | | | | -- |
| 34 | MYRICETIN | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 4 | DIOSPHENOL | Bud | | | | -- |
| 0 | KAEMPFEROL-3-O-BETA-D-RUTOSIDE | Fruit Juice | | | | -- |
| 112 | ASCORBIC-ACID | Leaf | | | | -- |
| 0 | STYROL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | CIS-HEX-3-EN-1-OL | Plant | | | | -- |
| 0 | ISO-AMYBUTYRATE | Fruit | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|-------------|---------|----------|--------|--|
| 8 | DELTA-3-CARENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 44 | QUERCITRIN | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | BUTYRALDEHYDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 3-METHYL-BUTANOL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | (+)-SPATHULENOL | Bud | | | | -- |
| 1 | CYANIDIN-3-RUTINOSIDE | Fruit | | | | -- |
| 0 | PENTANAL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7 | (+)-GALLOCATECHIN | Fruit | | | | -- |
| 0 | MYRICETIN-3-O-BETA-D-GLUCOSIDE | Fruit Juice | | | | -- |
| 22 | MYRCENE | Leaf | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | DELPHINIDIN-3-O-RHAMNOSIDE | Fruit | | | | -- |
| 0 | GALLOCATECHIN-(4-ALPHA-8)- GALLOCATECHIN-(4-ALPHA-8)- GALLOCATECHIN- GENTISIC-ACID | Fruit | | | | -- |
| 0 | KAEMPFEROL-3-GLUCOXYLOSIDE | Leaf | | | | -- |
| 61 | FERULIC-ACID | Fruit | | | | -- |
| 176 | QUERCETIN | Fruit Juice | | | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|------------------------------------|-------------|---------|----------|--------|--|
| 0 | CIS-BETA-OCIMENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 2 | QUERCETIN-3'-GLUCOSIDE | Fruit | | | | -- |
| 0 | BUTYL-FORMIATE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | 3-METHYL-2-BUTEN-1-OL | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 4 | SAKURANETIN | Leaf | | | | -- |
| 9 | TERPINOLENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | CYANIDIN-3-GLUCOSIDE | Fruit | | | | -- |
| 0 | PECTINESTERASE | Fruit | | | | -- |
| 24 | BENZALDEHYDE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | MYRICETIN-3-GLUCOSIDE | Leaf | | | | -- |
| 22 | MYRCENE | Fruit | | | | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0 | DELPHINIDIN-3-O-BETA-D-SOPHOROSIDE | Fruit Juice | | | | -- |