

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Centaurea cyanus

| Activities Count | Chemical  | Plant Part | Low PPM  | High PPM | StdDev              | Reference Citation   |
|------------------|---|------------|----------|----------|---------------------|--|
| 0                | PROTEIN   | Plant      | 194000.0 | 254000.0 | 0.6599808093451381  | --   |
| 0                | FAT   | Seed       | 158000.0 | 181000.0 | -0.4444996284388564 | --   |
| 0                | CYANOCENTAURIN  | Flower     |          | 975.0    |                     | Jim Duke's personal files.   |
| 0                | PROTOCYANIN   | Flower     |          | 11.6     |                     | --   |
| 77               | CHLOROGENIC-ACID                                      | Shoot      |          |          |                     | Jim Duke's personal files.   |
| 3                | MUCILAGE  | Flower     |          |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 176              | QUERCETIN   | Shoot      |          |          |                     | Jim Duke's personal files.   |
| 102              | CAFFEIC-ACID  | Shoot      |          |          |                     | Jim Duke's personal files.   |
| 0                | APIGENIN-4'-O-BETA-D-GLUCOSIDE-7-O-BETA-D-GLUCURONIDE | Flower     |          |          |                     | --   |
| 0                | CENTAUR-Y   | Plant      |          |          |                     | Wealth of India.   |
| 61               | FERULIC-ACID  | Flower     |          |          |                     | Jim Duke's personal files.   |
| 77               | CHLOROGENIC-ACID                                      | Flower     |          |          |                     | Jim Duke's personal files.   |
| 6                | IRON  | Plant      |          |          |                     | --   |
| 43               | PROTOCATECHUIC-ACID                                   | Flower     |          |          |                     | Jim Duke's personal files.   |
| 102              | CAFFEIC-ACID  | Flower     |          |          |                     | Jim Duke's personal files.   |
| 5                | ALUMINUM  | Flower     |          |          |                     | --   |
| 0                | CENTAUR-X   | Plant      |          |          |                     | Wealth of India.   |
| 3                | CYNAROSIDE  | Shoot      |          |          |                     | Jim Duke's personal files.   |
| 0                | WAX   | Flower     |          |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CENTAUROCYANIN  | Flower     |          |          |                     | Jim Duke's personal files.   |
| 0                | FRAGARIN  | Flower     |          |          |                     | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 4                | RUTOSIDE  | Plant      |          |          |                     | Wealth of India.   |

| Activities Count | Chemical  | Plant Part    | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---|---------------|---------|----------|--------|--|
| 0                | POPULNIN  | Shoot         |         |          |        | Jim Duke's personal files.   |
| 13               | P-HYDROXY-BENZOIC-ACID  | Flower        |         |          |        | Jim Duke's personal files.   |
| 16               | ACETIC-ACID   | Flower        |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | C-GLYCOSYL-FLAVONE-7-O-METHYL-VITEXIN                           | Flower        |         |          |        | Wealth of India.   |
| 0                | SUCCINYLCYANIN  | Flower        |         |          |        | --   |
| 0                | TRIDECA-5,7,9-TRIIN-1,3,11-TRIEN                                | Root          |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CENTAUR-Y-2   | Shoot         |         |          |        | Jim Duke's personal files.   |
| 0                | QUERCIMERETRIN  | Plant         |         |          |        | Wealth of India.   |
| 0                | P-HYDROXYPHENYLACETIC-ACID                                      | Flower        |         |          |        | Jim Duke's personal files.   |
| 20               | BENZOIC-ACID  | Flower        |         |          |        | Jim Duke's personal files.   |
| 24               | VANILLIC-ACID   | Flower        |         |          |        | Jim Duke's personal files.   |
| 0                | CYANIDIN-5-O-BETA-D-GLUCOSIDE-3-O-BETA-D-(6-SUCCINYL-GLUCOSIDE) | Inflorescence |         |          |        | Jim Duke's personal files.   |
| 0                | TRIDECA-3,5,7,9-TETRAIN-1,11-DIEN                               | Root          |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CENTAUR-Y-1   | Shoot         |         |          |        | Jim Duke's personal files.   |
| 0                | CYANOCENTAUREIN   | Flower        |         |          |        | --   |
| 1                | QUERCETOL   | Plant         |         |          |        | Wealth of India.   |
| 0                | O-HYDROXYPHENYLACETIC-ACID                                      | Flower        |         |          |        | Jim Duke's personal files.   |
| 1                | ARNIDIOL  | Flower        |         |          |        | Jim Duke's personal files.   |
| 22               | UMBELLIFERONE   | Shoot         |         |          |        | Jim Duke's personal files.   |
| 0                | CYANIDIN-3-(6'-MALONYL-GLUCOSIDE)                               | Stem          |         |          |        | Jim Duke's personal files.   |

| Activities Count | Chemical  | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|---|------------|---------|----------|--------|--|
| 35               | TANNIN  | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | CENTAUR-Y   | Shoot      |         |          |        | Jim Duke's personal files.   |
| 5                | CYANIN  | Flower     |         |          |        | --   |
| 0                | POLYYNES  | Plant      |         |          |        | Wealth of India.   |
| 0                | APIGENIN-4'-O-BETA-D-GLUCOSIDE                                      | Shoot      |         |          |        | Jim Duke's personal files.   |
| 6                | SYRINGIC-ACID   | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | PELARGONIDIN-3-(6'-SUCCINYL-GLUCOSIDE)-5-GLUCOSIDE                  | Flower     |         |          |        | --   |
| 25               | P-COUMARIC-ACID   | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | QUERCIMERETRIN  | Flower     |         |          |        | --   |
| 0                | TRANS-SINAPIC-ACID  | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | CENTAUR-X-3   | Shoot      |         |          |        | Jim Duke's personal files.   |
| 0                | CYANIDIN-3,5-DIGLUCOSIDE  | Flower     |         |          |        | --   |
| 0                | POLYENES  | Plant      |         |          |        | Wealth of India.   |
| 0                | APIGENIN-4'-O-(6-O-MALONYL-BETA-D-GLUCOSIDE)-7-O-BETA-D-GLUCURONIDE | Flower     |         |          |        | --   |
| 47               | BETA-SITOSTEROL   | Flower     |         |          |        | Jim Duke's personal files.   |
| 1                | N-NONACOSANE  | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | COSMOSSIIN  | Shoot      |         |          |        | Jim Duke's personal files.   |
| 0                | CIS-SINAPIC-ACID  | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | CENTAUR-X-1   | Shoot      |         |          |        | Jim Duke's personal files.   |
| 10               | CNICIN  | Flower     |         |          |        | Wealth of India.   |
| 0                | PELARGONIDIN-3,5-DIGLUCOSIDE  | Flower     |         |          |        | Wealth of India.   |
| 101              | APIGENIN  | Shoot      |         |          |        | Jim Duke's personal files.   |
| 78               | LUTEOLIN  | Shoot      |         |          |        | Jim Duke's personal files.   |

| Activities Count | Chemical                 | Plant Part | Low PPM | High PPM | StdDev | Reference Citation   |
|------------------|--------------------------|------------|---------|----------|--------|--|
| 2                | NEO-CHLOROGENIC-ACID     | Shoot      |         |          |        | Jim Duke's personal files.   |
| 44               | SCOPOLETIN               | Shoot      |         |          |        | Jim Duke's personal files.   |
| 0                | CENTAUR-X                | Shoot      |         |          |        | Jim Duke's personal files.   |
| 3                | CICHORIIN                | Flower     |         |          |        | --   |
| 78               | LUTEOLIN                 | Plant      |         |          |        | Wealth of India.   |
| 4                | APIIN                    | Shoot      |         |          |        | Jim Duke's personal files.   |
| 75               | KAEMPFEROL               | Shoot      |         |          |        | Jim Duke's personal files.   |
| 2                | NEO-CHLOROGENIC-ACID     | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | POLYGALACTURONIC-ACIDS   | Flower     |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 34               | SALICYLIC-ACID           | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | TRANS-CAFFEIC-ACID       | Flower     |         |          |        | Jim Duke's personal files.   |
| 4                | APIIN                    | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 0                | KAEMPFEROL-3-O-GLUCOSIDE | Plant      |         |          |        | Wealth of India.   |
| 0                | WAX                      | Hull Husk  |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 7                | HISPIDULIN               | Shoot      |         |          |        | Jim Duke's personal files.   |
| 4                | ISOCHLOROGENIC-ACID      | Shoot      |         |          |        | Jim Duke's personal files.   |
| 1                | PELARGONIN               | Flower     |         |          |        | Chemical Constituents of Oriental Herbs (3 diff. books)  |
| 11               | ISORHAMNETIN             | Shoot      |         |          |        | Jim Duke's personal files.   |
| 0                | CIS-CAFFEIC-ACID         | Flower     |         |          |        | Jim Duke's personal files.   |
| 0                | APIGENIN-7-GLUCOSIDE     | Leaf       |         |          |        | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

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|------------------|----------------|------------|---------|----------|--------|----------------------------|
| 75               | KAEMPFEROL     | Plant      |         |          |        | Wealth of India.           |
| 0                | GRAVEOBIOSIDE  | Shoot      |         |          |        | Jim Duke's personal files. |
| 6                | QUERCIMERITRIN | Shoot      |         |          |        | Jim Duke's personal files. |