

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Verbascum thapsus*

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|------------|---------|----------|--------|--|
| 0 | VERBASCUM-LIGNAN-GLYCOSIDE-13 | Plant | | 1.0 | | -- |
| 0 | DEHYDRO-DICONIFERYL-GLUCOSIDE-G | Plant | | 2.4 | | -- |
| 0 | 6-O-(ALPHA-L-(4-CAFFEOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 9.0 | | -- |
| 12 | STIGMASTEROL | Leaf | | | | -- |
| 9 | BETA-AMYRIN | Root | | | | -- |
| 0 | 6-O-(ALPHA-L-(2"-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 22.0 | | -- |
| 0 | LATERIOSIDE | Plant | | 5390.0 | | -- |
| 9 | BETA-AMYRIN | Seed | | | | -- |
| 20 | AUCUBIN | Shoot | 25.0 | 13900.0 | | -- |
| 0 | VERBASCOSAPONIN | Flower | | | | -- |
| 0 | DEHYDRO-DICONIFERYL-GLUCOSIDE-F | Plant | | 2.0 | | -- |
| 31 | HESPERIDIN | Plant | | | | 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 | 6-O-(ALPHA-L-(4"-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 45.0 | | -- |
| 0 | 6-O-(ALPHA-L-(2"-O-CAFFEOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 6.0 | | -- |
| 11 | ISORHAMNETIN | Flower | | | | -- |
| 9 | BETA-AMYRIN | Stem | | | | -- |
| 2 | ARENARIOSIDE | Plant | | 22.0 | | -- |
| 0 | VERBACOSIDE | Plant | | 333.0 | | -- |
| 0 | DEHYDRO-DICONIFERYL-GLUCOSIDE-E | Plant | | 1.5 | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|--|------------|---------|----------|--------|--------------------|
| 0 | AJUGOL | Plant | | 75.0 | | -- |
| 0 | HEPTAOSE | Root | | | | -- |
| 0 | 6-O-(ALPHA-L-(4"-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 17.0 | | -- |
| 0 | SAIKOGENIN-A | Fruit | | | | -- |
| 0 | 6-O-(ALPHA-L-(2"-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 69.0 | | -- |
| 0 | HYDROXYTHAPSUINE-B | Fruit | | | | -- |
| 9 | BETA-AMYRIN | Leaf | | | | -- |
| 47 | BETA-SITOSTEROL | Seed | | | | -- |
| 0 | OCTAOSE | Root | | | | -- |
| 0 | VERATRIC-ACID | Fruit | | | | -- |
| 0 | DEHYDRO-DICONIFERYL-GLUCOSIDE-D | Plant | | 0.6 | | -- |
| 0 | 6-O-(ALPHA-L-(4"-FERULOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 8.0 | | -- |
| 0 | 6-O-(ALPHA-L-(2"-FERULOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 10.0 | | -- |
| 0 | HYDROXYTHAPSUINE-A | Fruit | | | | -- |
| 9 | BENZYL-ALCOHOL | Seed | | | | -- |
| 6 | ARABINOGALACTAN | Flower | | | | -- |
| 0 | NONAOSE | Root | | | | -- |
| 0 | 28-NOR-OLEANA-12,17-DIEN-3-BETA-23-DIOL | Fruit | | | | -- |
| 0 | THAPSUINE-B | Fruit | | | | -- |
| 3 | CATALPOL | Shoot | | | | -- |
| 0 | 6-O-(ALPHA-L-(3,3,4-DIEMTHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 9.0 | | -- |

| Activities Count | Chemical | Plant Part | Low PPM | High PPM | StdDev | Reference Citation |
|------------------|---|------------|---------|----------|--------|--|
| 64 | OLEANOLIC-ACID | Flower | | | | -- |
| 0 | 6-O-BETA-XYLOXYL-AUCUBIN | Plant | | | | -- |
| 6 | HARPAGOSIDE | Plant | | 89.0 | | -- |
| 5 | SAPONINS | Plant | | | | -- |
| 20 | AUCUBIN | Root | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 2 | ALPHA-SPINASTEROL | Fruit | | | | -- |
| 0 | 5-ETHOXY-METHYL-FURFURAL | Fruit | | | | -- |
| 0 | THAPSUINE-A | Fruit | | | | -- |
| 2 | CAMPESTEROL | Stem | | | | -- |
| 0 | 6-O-(ALPHA-L-(3"-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 56.0 | | -- |
| 0 | OLEANA-11,13(18)-DIEN-3-BETA-23,28-TRIOL | Fruit | | | | -- |
| 0 | VERBASTEROL | Plant | | | | -- |
| 0 | HARPAGIDE-ACETATE | Plant | | | | -- |
| 1 | BEHENIC-ACID | Flower | | | | -- |
| 13 | ROTENONE | Leaf | | | | -- |
| 0 | 6-O-VANILLOYL-AJUGOL | Plant | | 19.0 | | -- |
| 10 | ALPHA-AMYRIN | Root | | | | -- |
| 0 | 3,5-DIHYDROXY-6,7-DIMETHOXY-FLAVONE | Plant | | 80.0 | | -- |
| 2 | TARAXASTEROL | Seed | | | | -- |
| 47 | BETA-SITOSTEROL | Root | | | | -- |
| 10 | CROCETIN | Flower | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |

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|------------------|---|------------|---------|----------|--------|--|
| 0 | 6-O-(ALPHA-L-(3"-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 37.0 | | -- |
| 3 | MUCILAGE | Flower | | | | -- |
| 20 | VERBASCOSIDE | Plant | | | | 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. |
| 6 | HARPAGIDE | Plant | | 70.0 | | -- |
| 0 | AUCUBIN-6-XYLOSIDE | Plant | | | | -- |
| 0 | 6-O-SYRINGOYL-AJUGOL | Plant | | 0.8 | | -- |
| 10 | ALPHA-AMYRIN | Stem | | | | -- |
| 0 | 3-ALPHA-HYDROXYDRIMMANYL-8-METHANOATE | Plant | | | | -- |
| 14 | SUCROSE | Seed Oil | | | | -- |
| 47 | BETA-SITOSTEROL | Stem | | | | -- |
| 57 | COUMARIN | Leaf | | | | ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes. |
| 0 | 6-O-(ALPHA-L-(3"-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 39.0 | | -- |
| 21 | LUPEOL | Root | | | | -- |
| 1 | VERBASCOSIDE | Root | | | | -- |
| 0 | FUNGISTEROL | Seed Oil | | | | -- |
| 0 | AUCUBIN-6-GLUCOSIDE | Plant | | | | -- |
| 0 | 6-O-(P-HYDROXY-BENZOYL)-AJUGOL | Plant | | 4.8 | | -- |
| 10 | ALPHA-AMYRIN | Leaf | | | | -- |
| 0 | CATALPOL-6-O-(ALPHA-L-(3"-O-CAFFEOYL)-RHAMNOPYRANOSYL) | Plant | | 21.0 | | -- |

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|------------------|---|------------|---------|----------|--------|---|
| 12 | STIGMASTEROL | Root | | | | -- |
| 47 | BETA-SITOSTEROL | Leaf | | | | -- |
| 0 | 6-O-(ALPHA-L-(2"-P-METHOXY-CINNAMOYL-3"-O-ACETYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 20.0 | | -- |
| 21 | LUPEOL | Stem | | | | -- |
| 2 | FORSYTHOSIDE-B | Plant | | 4.0 | | -- |
| 20 | AUCUBIN | Stem | | 600.0 | | -- |
| 1 | XYLOGLUCAN | Flower | | | | -- |
| 0 | AJUGOL-ACETATE | Plant | | | | -- |
| 0 | 6-O-(ALPHA-L-(2,3,4-DIMETHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 5.0 | | -- |
| 12 | STIGMASTEROL | Seed | | | | -- |
| 47 | BETA-SITOSTEROL | Seed Oil | | | | -- |
| 0 | 6-O-(ALPHA-L-(2"-O-P-METHOXY-CINNAMOYL-4"-O-ACETYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 9.0 | | -- |
| 21 | LUPEOL | Leaf | | | | -- |
| 31 | THIAMIN | Leaf | | | | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 0 | ERGOSTEROL-PEROXIDE | Flower | | | | -- |
| 0 | VERBASCUM-PHENYLETHANOID-GLYCOSIDE | Plant | | 1.0 | | -- |
| 0 | THIAMINE | Leaf | | | | -- |
| 0 | 6-O-(ALPHA-L-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 19.0 | | -- |
| 12 | STIGMASTEROL | Stem | | | | -- |
| 47 | BETA-SITOSTEROL | Flower | | | | -- |

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|------------------|---|------------|----------|----------|----------------------|--|
| 0 | 6-O-(ALPHA-L-(2"-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL | Plant | | 31.0 | | -- |
| 0 | LEUCOSCEPTOSIDE-B | Plant | | 4.0 | | -- |
| 0 | THAPSIC-ACID | Flower | | 2300.0 | | -- |
| 3 | CATALPOL | Plant | | 50.0 | | -- |
| 0 | WATER | Leaf | | 560000.0 | -1.2354599137200606 | -- |
| 1 | BEHENIC-ACID | Seed Oil | | 3000.0 | -1.2213893416546542 | -- |
| 3 | MUCILAGE | Seed | | 3700.0 | -1.2198632439349997 | -- |
| 20 | AUCUBIN | Leaf | | 100.0 | -1.1297063465489834 | -- |
| 0 | PROTEIN | Leaf | 47520.0 | 108000.0 | -1.035954705344622 | -- |
| 53 | BETA-CAROTENE | Leaf | 19.0 | 43.0 | -0.9506764482123975 | -- |
| 0 | FAT | Leaf | 5720.0 | 13000.0 | -0.8660602512576238 | -- |
| 14 | POTASSIUM | Leaf | 5808.0 | 13200.0 | -0.7570441086555757 | -- |
| 15 | FIBER | Leaf | | 111000.0 | -0.6249222392756235 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 0 | ASH | Leaf | 37840.0 | 86000.0 | -0.5788064877331136 | -- |
| 0 | KILOCALORIES | Leaf | | 2680.0 | -0.5449589251776649 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 24 | CHROMIUM | Leaf | 0.6 | 1.4 | -0.52714700936206 | -- |
| 77 | ZINC | Leaf | 0.2 | 0.4 | -0.524313284412666 | -- |
| 1 | SODIUM | Leaf | 334.0 | 760.0 | -0.5123036729552699 | -- |
| 0 | PROTEIN | Seed | 178000.0 | 183000.0 | -0.4518573267949109 | Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705. |
| 14 | MANGANESE | Leaf | 5.3 | 12.0 | -0.43993638289409226 | -- |
| 4 | TIN | Leaf | 5.3 | 12.0 | -0.4331991239429111 | -- |
| 0 | FIBER(CRUDE) | Leaf | | 111000.0 | -0.42761482826376923 | -- |

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|------------------|----------------|------------|----------|----------|-----------------------|--|
| 4 | SILICON | Leaf | 3.3 | 7.4 | -0.39118183776763965 | -- |
| 112 | ASCORBIC-ACID | Leaf | 341.0 | 776.0 | -0.3719171852420888 | -- |
| 28 | CALCIUM | Leaf | 5852.0 | 13300.0 | -0.3510114574130655 | -- |
| 65 | MAGNESIUM | Leaf | 1421.0 | 3230.0 | -0.34587713524983377 | -- |
| 60 | SELENIUM | Leaf | 0.2 | 0.5 | -0.34412954703445015 | -- |
| 6 | IRON | Leaf | 104.0 | 236.0 | -0.32238008504806986 | -- |
| 20 | AUCUBIN | Plant | | 150.0 | -0.3198520148637861 | -- |
| 0 | FIBER(DIETARY) | Leaf | | 350000.0 | -0.29464124786862994 | -- |
| 2 | COBALT | Leaf | 6.0 | 12.8 | -0.22280563230793393 | -- |
| 15 | RIBOFLAVIN | Leaf | 0.5 | 1.1 | -0.172705289047245 | -- |
| 39 | NIACIN | Leaf | 42.0 | 95.0 | -0.030418329796116125 | -- |
| 0 | FAT | Seed | 35000.0 | 271000.0 | 0.029562564488382438 | -- |
| 4 | PHOSPHORUS | Leaf | 2508.0 | 5700.0 | 0.13404287578502 | -- |
| 5 | ALUMINUM | Leaf | | 1090.0 | 0.3892201259242459 | Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp. |
| 0 | ARACHIDIC-ACID | Seed Oil | | 16000.0 | 1.1596625611969296 | -- |
| 18 | OLEIC-ACID | Seed | 292000.0 | 300000.0 | 1.4870759326450875 | -- |
| 0 | CARBOHYDRATES | Leaf | 353320.0 | 803000.0 | 1.5201450259731908 | -- |
| 8 | STEARIC-ACID | Seed Oil | | 325000.0 | 1.7217050423196145 | -- |
| 8 | STEARIC-ACID | Seed | | 164000.0 | 2.9928530647275444 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | PALMITIC-ACID | Seed Oil | | 656000.0 | 3.1527427453153964 | -- |
| 27 | LINOLEIC-ACID | Seed | 48000.0 | 613000.0 | 4.33441124200899 | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| 13 | PALMITIC-ACID | Seed | | 309600.0 | 5.688451515633364 | -- |