

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Verbascum thapsus***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	28-NOR-OLEANA-12,17-DIEN-3-BETA-23-DIOL	Fruit	--	--		
0	3,5-DIHYDROXY-6,7-DIMETHOXY-FLAVONE	Plant	--	80		
0	3-ALPHA-HYDROXYDRIMMANYL-8-METHANOATE	Plant	--	--		
0	5-ETHOXY-METHYL-FURFURAL	Fruit	--	--		
0	6-O-(ALPHA-L-(2''-FERULOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	10		
0	6-O-(ALPHA-L-(2''-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	69		
0	6-O-(ALPHA-L-(2''-O-CAFFEOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	6		
0	6-O-(ALPHA-L-(2''-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	22		
0	6-O-(ALPHA-L-(2''-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	31		
0	6-O-(ALPHA-L-(2''-O-P-METHOXY-CINNAMOYL-4''-O-ACETYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	9		
0	6-O-(ALPHA-L-(2''-P-METHOXY-CINNAMOYL-3''-O-ACETYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	20		
0	6-O-(ALPHA-L-(2,3,4-DIMETHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	5		
0	6-O-(ALPHA-L-(3''-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	39		
0	6-O-(ALPHA-L-(3''-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	37		
0	6-O-(ALPHA-L-(3''-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	56		
0	6-O-(ALPHA-L-(3,3,4-DIEMTHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	9		
0	6-O-(ALPHA-L-(4''-FERULOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	8		
0	6-O-(ALPHA-L-(4''-O-P-COUMAROYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	17		
0	6-O-(ALPHA-L-(4''-O-P-METHOXY-CINNAMOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	45		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	6-O-(ALPHA-L-(4-CAFFEOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	9		
0	6-O-(ALPHA-L-ISOFERULOYL)-RHAMNOPYRANOSYL)-CATALPOL	Plant	--	19		
0	6-O-(P-HYDROXY-BENZOYL)-AJUGOL	Plant	--	4.8		
0	6-O-BETA-XYLOXYL-AUCUBIN	Plant	--	--		
0	6-O-SYRINGOYL-AJUGOL	Plant	--	0.8		
0	6-O-VANILLOYL-AJUGOL	Plant	--	19		
0	AJUGOL	Plant	1090	75		
0	AJUGOL-ACETATE	Plant	--	--		
10	ALPHA-AMYRIN	Leaf	--	--		
10	ALPHA-AMYRIN	Stem	--	--		
10	ALPHA-AMYRIN	Root	--	--		
2	ALPHA-SPINASTEROL	Fruit	--	--		
5	ALUMINUM	Leaf	--	1090	0.3892201259242459	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
6	ARABINOGALACTAN	Flower	--	--		
0	ARACHIDIC-ACID	Seed Oil	--	16000	1.1596625611969296	
2	ARENARIOSIDE	Plant	--	22		
112	ASCORBIC-ACID	Leaf	341	776	-0.3719171852420888	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASH	Leaf	37840	86000	-0.5788064877331136	
20	AUCUBIN	Root	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
20	AUCUBIN	Shoot	25	13900		
20	AUCUBIN	Plant	--	150	-0.3198520148637861	
20	AUCUBIN	Leaf	--	100	-1.1297063465489834	
20	AUCUBIN	Stem	--	600		
0	AUCUBIN-6-GLUCOSIDE	Plant	--	--		
0	AUCUBIN-6-XYLOSIDE	Plant	--	--		
1	BEHENIC-ACID	Flower	--	--		
1	BEHENIC-ACID	Seed Oil	--	3000	-1.2213893416546542	
9	BENZYL-ALCOHOL	Seed	--	--		
9	BETA-AMYRIN	Leaf	--	--		
9	BETA-AMYRIN	Stem	--	--		
9	BETA-AMYRIN	Seed	--	--		
9	BETA-AMYRIN	Root	--	--		
53	BETA-CAROTENE	Leaf	19	43	-0.9506764482123975	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Leaf	--	--		
47	BETA-SITOSTEROL	Stem	--	--		
47	BETA-SITOSTEROL	Seed	--	--		
47	BETA-SITOSTEROL	Root	--	--		
47	BETA-SITOSTEROL	Flower	--	--		
47	BETA-SITOSTEROL	Seed Oil	--	--		
28	CALCIUM	Leaf	5852	13300	-0.3510114574130655	
2	CAMPESTEROL	Stem	--	--		
0	CARBOHYDRATES	Leaf	353320	803000	1.5201450259731908	
3	CATALPOL	Plant	--	50		
3	CATALPOL	Shoot	--	--		
0	CATALPOL-6-O-(ALPHA-L-(3''-O-CAFFEOYL)-RHAMNOPYRANOSYL	Plant	--	21		
24	CHROMIUM	Leaf	0.6	1.4	-0.52714700936206	
2	COBALT	Leaf	6	12.8	-0.22280563230793393	
57	COUMARIN	Leaf	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	CROCETIN	Flower	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DEHYDRO-DICONIFERYL-GLUCOSIDE-D	Plant	--	0.6		
0	DEHYDRO-DICONIFERYL-GLUCOSIDE-E	Plant	--	1.5		
0	DEHYDRO-DICONIFERYL-GLUCOSIDE-F	Plant	--	2		
0	DEHYDRO-DICONIFERYL-GLUCOSIDE-G	Plant	--	2.4		
0	ERGOSTEROL-PEROXIDE	Flower	--	--		
0	FAT	Leaf	5720	13000	-0.8660602512576238	
0	FAT	Seed	35000	271000	0.029562564488382438	
15	FIBER	Leaf	111000	111000	-0.6249222392756235	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Leaf	--	111000	-0.42761482826376923	
0	FIBER(DIETARY)	Leaf	--	350000	-0.29464124786862994	
2	FORSYTHOSIDE-B	Plant	--	4		
0	FUNGISTEROL	Seed Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	HARPAGIDE	Plant	--	70		
0	HARPAGIDE-ACETATE	Plant	--	--		
6	HARPAGOSIDE	Plant	--	89		
0	HEPTAOSE	Root	--	--		
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	HYDROXYTHAPSUINE-A	Fruit	--	--		
0	HYDROXYTHAPSUINE-B	Fruit	--	--		
6	IRON	Leaf	104	236	-0.32238008504806986	
11	ISORHAMNETIN	Flower	--	--		
0	KILOCALORIES	Leaf	2680	2680	-0.5449589251776649	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LATERIOSIDE	Plant	--	5390		
0	LEUCOSCEPTOSIDE-B	Plant	--	4		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
27	LINOLEIC-ACID	Seed	48000	613000	4.33441124200899	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
21	LUPEOL	Stem	--	--		
21	LUPEOL	Root	--	--		
21	LUPEOL	Leaf	--	--		
65	MAGNESIUM	Leaf	1421	3230	-0.34587713524983377	
14	MANGANESE	Leaf	5.3	12	-0.43993638289409226	
3	MUCILAGE	Seed	3700	3700	-1.2198632439349997	
3	MUCILAGE	Flower	--	--		
39	NIACIN	Leaf	42	95	-0.030418329796116125	
0	NONAOSE	Root	--	--		
0	OCTAOSE	Root	--	--		
0	OLEANA-11,13(18)-DIEN-3-BETA-23,28-TRIOL	Fruit	--	--		
64	OLEANOLIC-ACID	Flower	--	--		
18	OLEIC-ACID	Seed	292000	300000	1.4870759326450875	
13	PALMITIC-ACID	Seed Oil	--	656000	3.1527427453153964	
13	PALMITIC-ACID	Seed	--	309600	5.688451515633364	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Leaf	2508	5700	0.13404287578502	
14	POTASSIUM	Leaf	5808	13200	-0.7570441086555757	
0	PROTEIN	Seed	178000	183000	-0.4518573267949109	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	PROTEIN	Leaf	47520	108000	-1.035954705344622	
15	RIBOFLAVIN	Leaf	0.5	1.1	-0.172705289047245	
13	ROTENONE	Leaf	--	--		
0	SAIKOGENIN-A	Fruit	--	--		
5	SAPONINS	Plant	--	--		
60	SELENIUM	Leaf	0.2	0.5	-0.34412954703445015	
4	SILICON	Leaf	3.3	7.4	-0.39118183776763965	
1	SODIUM	Leaf	334	760	-0.5123036729552699	
8	STEARIC-ACID	Seed Oil	--	325000	1.7217050423196145	



Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Seed	--	164000	2.9928530647275444	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	STIGMASTEROL	Seed	--	--		
12	STIGMASTEROL	Root	--	--		
12	STIGMASTEROL	Leaf	--	--		
12	STIGMASTEROL	Stem	--	--		
14	SUCROSE	Seed Oil	--	--		
2	TARAXASTEROL	Seed	--	--		
0	THAPSIC-ACID	Flower	2300	2300		
0	THAPSUINE-A	Fruit	--	--		
0	THAPSUINE-B	Fruit	--	--		
31	THIAMIN	Leaf	--	--		Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Leaf	--	--		
4	TIN	Leaf	5.3	12	-0.4331991239429111	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	VERATRIC-ACID	Fruit	--	--		
0	VERBACOSIDE	Plant	--	333		
0	VERBASCOSAPONIN	Flower	--	--		
1	VERBASCOSE	Root	--	--		
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.
0	VERBASCUM-LIGNAN-GLYCOSIDE-13	Plant	--	1		
0	VERBASCUM-PHENYLETHANOID-GLYCOSIDE	Plant	--	1		
0	VERBASTEROL	Plant	--	--		
0	WATER	Leaf	--	560000	-1.2354599137200606	
1	XYLOGLUCAN	Flower	--	--		
77	ZINC	Leaf	0.2	0.4	-0.524313284412666	