

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

**Chemicals Found in Euphrasia officinalis**

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	6-HYDROXYPHENYLPYRUVIC-ACID	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
5	ALUMINUM	Plant	15.3	99	-0.5601770011887169	
101	APIGENIN	Plant	--	--		
0	APIGENIN-7-RHAMNOGALACTOSIDE	Shoot	--	--		Jim Duke's personal files.
0	APIGENIN-GLYCOSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	ARABINOSE	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.
112	ASCORBIC-ACID	Plant	10	67	-0.5779568931624107	
0	ASH	Plant	19404	126000	0.09010263207242175	
20	AUCUBIN	Shoot	--	--		Jim Duke's personal files.
20	AUCUBIN	Plant	--	500	0.003044452405683529	
53	BETA-CAROTENE	Plant	11	73	-0.3318192937264815	
47	BETA-SITOSTEROL	Plant	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
102	CAFFEIC-ACID	Plant	--	11500	0.732750509786938	Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
102	CAFFEIC-ACID	Shoot	--	6000	1.7085918936663076	Jim Duke's personal files.
28	CALCIUM	Plant	1771	11500	-0.22349528673219693	
0	CARBOHYDRATES	Plant	113652	738000	0.4224033805107468	
3	CATALPOL	Plant	--	--		
0	CERYL-ALCOHOL	Plant	--	--		
20	CHOLINE	Plant	--	--		Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
24	CHROMIUM	Plant	0.1	0.7	-0.7978184456668914	
7	CHRYSOERIOLOL	Shoot	--	--		Jim Duke's personal files.
0	CHRYSOERIOLOL-7-RHAMNOGALACTOSIDE	Shoot	--	--		Jim Duke's personal files.
2	COBALT	Plant	2.3	14.7	0.002807034712339081	
0	DEHYDROCONIFERYL-ALCOHOL-4-BETA-D-GLYCOSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
13	DIOSMETIN	Plant	--	--		Jim Duke's personal files.
0	EO	Plant	1500	1700	-0.5881321355977028	
0	EUKOVOSIDE	Plant	--	263.6		
0	EUPHROSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FAT	Plant	1386	9000	-0.6239103544022774	
61	FERULIC-ACID	Plant	--	--		Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
15	FIBER	Plant	91000	91000	-0.9744928819249589	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	FIBER(CRUDE)	Plant	--	91000	-0.24161341330888036	
0	FIBER(DIETARY)	Plant	--	292000	-0.7783499512148322	
1	GALACTOSE	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.
62	GALLIC-ACID	Plant	--	--		
62	GALLIC-ACID	Shoot	--	--		Jim Duke's personal files.
0	GALLOTANNINS	Plant	30000	80000		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	GENIPOSIDE	Plant	--	--		
7	GLUCOSE	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.
6	IRON	Plant	5	31	-0.7017961103263061	
22	ISOQUERCITRIN	Plant	--	--		

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0	IXOROSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
75	KAEMPFEROL	Plant	--	--		Jim Duke's personal files.
0	KAEMPFEROL-3-0-RUTINOSIDE	Shoot	--	--		Jim Duke's personal files.
0	KILOCALORIES	Plant	2540	2540	-0.7009777360540221	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	LUPROSIDE	Plant	--	--		
78	LUTEOLIN	Shoot	--	--		Jim Duke's personal files.
0	LUTEOLIN-7-RHAMNOGALACTOSIDE	Shoot	--	--		Jim Duke's personal files.
65	MAGNESIUM	Plant	641	4160	0.029089809747304622	
14	MANGANESE	Plant	2	12.6	-0.6045983914604846	
39	NIACIN	Plant	52	337	3.647611827084371	
2	NONACOSANE	Plant	--	--		
0	PHENYLCARBOXYLIC-ACIDS	Plant	--	--		
4	PHOSPHORUS	Plant	323	2100	-0.7153547612101347	
14	POTASSIUM	Plant	2002	13000	-0.6135110993447295	
0	PROTEIN	Plant	19558	127000	-0.3807803570376024	
176	QUERCETIN	Plant	--	--		
0	QUERCETIN-DIGLUCOSIDE	Plant	--	--		Jim Duke's personal files.

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0	QUERCETIN-GLYCOSIDE	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
15	RIBOFLAVIN	Plant	3	18	0.45910751299395686	
87	RUTIN	Plant	--	--		
60	SELENIUM	Plant	0.1	0.5	-0.40520801615606183	
4	SILICON	Plant	5	30.3	-0.3634509523754327	
1	SODIUM	Plant	--	--		
12	STIGMASTEROL	Plant	--	--		
35	TANNIN	Shoot	--	--		Jim Duke's personal files.
0	TANNINS	Plant	124000	124000	0.01753827623374099	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
31	THIAMIN	Plant	4.3	4.3	-0.28049355339724585	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.
0	THIAMINE	Plant	0.7	4.3	-0.330333535595269	
4	TIN	Plant	1.2	8	-0.8729707962821696	
24	VANILLIC-ACID	Plant	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	WATER	Plant	--	846000	0.32137482975971443	
77	ZINC	Plant	0.5	3.5	-0.47976965929797716	