

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

**Chemicals found in Centaurea cyanus**

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
24	VANILLIC-ACID	Flower				Jim Duke's personal files.
22	UMBELLIFERONE	Shoot				Jim Duke's personal files.
35	TANNIN	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	SYRINGIC-ACID	Flower				Jim Duke's personal files.
44	SCOPOLETIN	Shoot				Jim Duke's personal files.
34	SALICYLIC-ACID	Flower				Jim Duke's personal files.
4	RUTOSIDE	Plant				Wealth of India.
6	QUERCIMERITRIN	Shoot				Jim Duke's personal files.
1	QUERCETOL	Plant				Wealth of India.
176	QUERCETIN	Shoot				Jim Duke's personal files.
43	PROTocatechuic-ACID	Flower				Jim Duke's personal files.
1	PELARGONIN	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
13	P-HYDROXY-BENZOIC-ACID	Flower				Jim Duke's personal files.
25	P-COUMARIC-ACID	Flower				Jim Duke's personal files.
2	NEO-CHLOROGENIC-ACID	Shoot				Jim Duke's personal files.
2	NEO-CHLOROGENIC-ACID	Flower				Jim Duke's personal files.
1	N-NONACOSANE	Flower				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.
78	LUTEOLIN	Plant				Wealth of India.
78	LUTEOLIN	Shoot				Jim Duke's personal files.
75	KAEMPFEROL	Plant				Wealth of India.
75	KAEMPFEROL	Shoot				Jim Duke's personal files.
11	ISORHAMNETIN	Shoot				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	ISOCHLOROGENIC-ACID	Shoot				Jim Duke's personal files.
6	IRON	Plant				--
7	HISPIDULIN	Shoot				Jim Duke's personal files.
61	FERULIC-ACID	Flower				Jim Duke's personal files.
3	CYNAROSIDE	Shoot				Jim Duke's personal files.
5	CYANIN	Flower				--
10	CNICIN	Flower				Wealth of India.
3	CICHORIIN	Flower				--
77	CHLOROGENIC-ACID	Shoot				Jim Duke's personal files.
77	CHLOROGENIC-ACID	Flower				Jim Duke's personal files.
102	CAFFEIC-ACID	Shoot				Jim Duke's personal files.
102	CAFFEIC-ACID	Flower				Jim Duke's personal files.
47	BETA-SITOSTEROL	Flower				Jim Duke's personal files.
20	BENZOIC-ACID	Flower				Jim Duke's personal files.
1	ARNIDIOL	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.
4	APIIN	Shoot				Jim Duke's personal files.
101	APIGENIN	Shoot				Jim Duke's personal files.
5	ALUMINUM	Flower				--
16	ACETIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.