

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Crocus sativus*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINOLENIC-ACID	Silk Stigma Style				--
0	CIS-CROCIN	Silk Stigma Style				--
7	ASTRAGALIN	Flower				--
16	LYCOPENE	Silk Stigma Style				--
0	CROCETIN-(BETA-D-GENTIOBIOSYL)-(BETA-D-GLUCOSYL)-ESTER	Silk Stigma Style		61000.0		--
0	TETRAHYDROLYCOPENE	Silk Stigma Style				--
0	CROCOSE	Silk Stigma Style				Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
13	ALPHA-TERPINENE	Silk Stigma Style				--
7	GLUCOSE	Bulb				--
0	TRANS-ZEAXANTHIN	Silk Stigma Style				--
0	PHYTOENE	Silk Stigma Style				--
12	COPPER	Silk Stigma Style		3.0		USDA's Ag Handbook 8 and sequelae)
5	BETA-PHENYLETHANOL	Silk Stigma Style				--
0	4-HYDROXY-2,6,6-TRIMETHYL-CYCLOHEX-1-ENE-CARBOXALDEHYDE	Silk Stigma Style				--
27	LINOLEIC-ACID	Silk Stigma Style				--
0	ALPHA-CROCIN	Silk Stigma Style				--
3	ASPARTIC-ACID	Bulb				--
7	LAURIC-ACID	Silk Stigma Style				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CROCETIN-(2,3,4,8,9,10,12-HEPTA-O-ACETYL-BETA-D-GENTIOBIOSYL)-(2,3,4,6-TETRA-O-ACETYL-BETA-D-GLUCOSYL)-ESTER	Silk Stigma Style				--
8	STEARIC-ACID	Silk Stigma Style				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CROCIN-4	Silk Stigma Style				--
23	TERPINEN-4-OL	Silk Stigma Style		265000.0		--
35	GERANIOL	Silk Stigma Style				--
0	CIS-ZEAXANTHIN	Silk Stigma Style				--
3	PETUNIDIN	Flower				Abstract (See species file)
0	CIS-DIMETHYLCROCETIN	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	2-PHENETHANOL	Silk Stigma Style				--
7	CYANIDIN	Flower				--
0	LINALOOL-ACETATE	Silk Stigma Style				--
0	13-CIS-CROCIN	Silk Stigma Style		400.0		--
14	ARGININE	Bulb				--
75	KAEMPFEROL	Flower				--
0	CROCIN-3	Silk Stigma Style				--
1	SERINE	Bulb				--
8	FRUCTOSE	Silk Stigma Style				--
0	GAMMA-CROCETIN	Silk Stigma Style				--
13	PALMITIC-ACID	Silk Stigma Style				--
0	CINEOLE	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	OLEANOLIC-ACID-GLYCOSIDE	Bulb				--
0	CROCUS-SATIVUS-STERIOD-SAPONIN	Bulb				--
0	DIMETHYL-CROCETIN	Silk Stigma Style				--
2	LEUCINE	Bulb				--
4	CROCIN	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3,8-DIHYDROXY-1-METHYLANTHRAQUINONE-2-CARBOXYLIC-ACID	Tissue Culture		40.0		--
0	ISOPHORONE	Silk Stigma Style				--
0	SAFRANAL	Silk Stigma Style		405000.0		--
0	CROCIN-2	Silk Stigma Style				--
0	SATIVOL	Essential Oil				--
6	FENCHONE	Silk Stigma Style				--
0	OXYSAFRANAL	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
3	METHYL-NONYL-KETONE	Silk Stigma Style				--
0	CROCUS-SATIVUS-OLEANOLIC-ACID-SAPONIN	Bulb				--
0	BETA-CROCETIN	Silk Stigma Style		300.0		--
0	KAEMPFEROL-3-O-BETA-D-SOPHOROSIDE	Petiole				--
4	CROCIN	Flower				--
7	PHENYLALANINE	Bulb				--
0	HENTRIACONTANE	Silk Stigma Style				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CROCIN-1	Silk Stigma Style		20000.0		--
5	SABINENE	Silk Stigma Style				--
2	CYSTINE	Bulb				--
18	OLEIC-ACID	Silk Stigma Style				--
53	BETA-CAROTENE	Silk Stigma Style				--
0	NONAN-1-OL	Silk Stigma Style				--
0	CROCUS-SATIVUS-LECTIN-IV	Bulb				--
0	ALPHA-CROCETIN	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	VALINE	Bulb				--
0	KAEMPFEROL-3-O-BETA-D-GLUCOPYRANOSYL-(1,2)-BETA-D-GLUCOPYRANOSIDE	Flower				--
3	ALANINE	Bulb				--
0	GENTIOBIOSE	Silk Stigma Style				--
53	LINALOOL	Silk Stigma Style				--
176	QUERCETIN	Flower				Abstract (See species file)
4	CROCIN	Plant				--
0	PROLINE	Bulb				--
16	P-CYMENE	Silk Stigma Style				--
2	BETA-MYRCENE	Silk Stigma Style				--
0	CROCUS-SATIVUS-LECTIN-III	Bulb				--
0	BETA-CITRONELLOL	Silk Stigma Style				--
8	TYROSINE	Bulb				--
0	KAEMPFEROL-3-O-BETA-D-GLUCOPYRANOSYL-(1,2)-BETA-D-6-ACETYL-GLUCOPYRANOSIDE	Flower				--
0	CROCETIN-MONO-(BETA-D-GLUCOSYL)-ESTER	Silk Stigma Style				--
5	ZEAXANTHIN	Silk Stigma Style				--
2	GAMMA-CAROTENE	Silk Stigma Style				--
0	TRICYCLENE	Silk Stigma Style				--
60	LIMONENE	Silk Stigma Style				--
0	PROTOCROCIN	Silk Stigma Style				--
0	CROCETIN-DI-BETA-GLUCOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
13	BETA-PINENE	Silk Stigma Style				--
0	4-HYDROXY-3,5,5-TRIMETHYLCYCLOHEXAN-1-ON-2-ENE	Silk Stigma Style				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-CROCETIN	Silk Stigma Style		17500.0		--
15	METHIONINE	Bulb				--
0	CROCUS-SATIVUS-LECTIN-II	Bulb				--
67	1,8-CINEOLE	Silk Stigma Style				--
1	NAPHTHALENE	Silk Stigma Style				--
7	HISTIDINE	Bulb				--
0	CROCETIN-MONO-(BETA-D-GENTIOBIOSYL)-ESTER	Silk Stigma Style				--
3	XANTHOPHYLL	Silk Stigma Style				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ALPHA-THUJENE	Silk Stigma Style				--
41	CAMPHOR	Silk Stigma Style				--
0	CROCETIN-BETA-D-GLUCOSIDE-D-GENTIOBIOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
28	ALPHA-PINENE	Silk Stigma Style				--
0	6-HYDROXY-3-FORMYL-2,4,4-TRIMETHYLCYCLOHEXA-2,5-DIEN-1-ONE	Silk Stigma Style				--
0	3,5,5-TRIMETHYL-4-HYDROXY-1-CYCLOHEXANONE-2-ENE	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	MANGICROCIN	Silk Stigma Style		10800.0		--
0	CROCUS-SATIVUS-LECTIN-I	Bulb				--
0	CAR-3-ENE	Silk Stigma Style				--
34	MYRICETIN	Flower				Abstract (See species file)
0	CROCETIN-DI-(BETA-D-GLUCOSYL)-ESTER	Silk Stigma Style		8000.0		--
4	THREONINE	Bulb				--
0	HELICHRYSOSIDE	Flower				--
35	BORNEOL	Silk Stigma Style				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	PINENE	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	CROCETIN-BETA-D-GLUCOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	PICROCROCIN	Essential Oil				--
0	3,5,5-TRIMETHYLCYCLOHEXA-1,4-DIONE	Silk Stigma Style				--
0	2-PHENYLETHANOL	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
6	MALVIDIN	Flower				--
0	CROCUS-SATIVUS-GLUCOSIDE	Pollen Or Spore				--
0	BUT-2-ENOIC-ACID-LACTONE	Silk Stigma Style				--
0	METHYLCROCETIN	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	CROCETIN-DI-(2,3,4,8,9,10,12-HEPTA-O-ACETYL-BETA-D-GENTIOBIOSYL)-ESTER	Silk Stigma Style				--
0	TRANS-DIMETHYLCROCETIN	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
9	TERPINOLENE	Silk Stigma Style				--
12	GLYCINE	Bulb				--
7	SALICYLATES	Silk Stigma Style		0.0		--
0	CROCETIN-BETA-D-GENTIOBIOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	PICROCROCIN	Tissue Culture				--
0	3,5,5-TRIMETHYLCYCLOHEXA-1,4-DION-2-ENE	Silk Stigma Style				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-BUTENOIC-ACID-LACTONE	Silk Stigma Style				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
4	LYSINE	Bulb				--
0	TRANS-CROCIN	Silk Stigma Style				--
0	BORNEOL-ACETATE	Silk Stigma Style				--
14	MANGANESE	Silk Stigma Style		284.0	1.0	USDA's Ag Handbook 8 and sequelae)
0	CROCETIN-DI-(2,3,4,6-TETRA-O-ACETYL-BETA-D-GLUCOSYL)-ESTER	Silk Stigma Style				--
9	DELPHINIDIN	Flower				Abstract (See species file)
11	GAMMA-TERPINENE	Silk Stigma Style				--
8	GLUTAMIC-ACID	Bulb				--
64	OLEANOLIC-ACID	Silk Stigma Style				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	PHYTOFLUENE	Silk Stigma Style				--
10	CROCETIN	Silk Stigma Style				--
0	PICROCROCIN	Flower				--
0	2-HYDROXY-3,5,5-TRIMETHYLCYCLOHEXA-1,4-DION-2-ENE	Silk Stigma Style				--
24	VITAMIN-B-1	Silk Stigma Style	0.53	4.0		--
31	THIAMIN	Silk Stigma Style	0.7	4.0	1.0000000000000009	--
15	RIBOFLAVIN	Silk Stigma Style	56.0	138.0	1.0	--
0	VITAMIN-B-2	Silk Stigma Style	56.4	136.0		--
0	EO	Silk Stigma Style	3700.0	13700.0	1.0	--
4	CROCIN	Silk Stigma Style	6500.0	145000.0		--
0	PICROCROCIN	Silk Stigma Style	20000.0	36000.0		--

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0	NITROGEN	Silk Stigma Style	22200.0	24300.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ASH	Silk Stigma Style	42700.0	133000.0	1.0	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	FIBER	Silk Stigma Style	43800.0	48800.0	-1.0	--
0	FAT	Silk Stigma Style	56300.0	134000.0	1.0	--
0	WATER	Silk Stigma Style	85000.0	156000.0	-1.0	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
5	STARCH	Silk Stigma Style	119900.0	130300.0		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	PROTEIN	Silk Stigma Style	125700.0	135800.0	1.0	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	CARBOHYDRATES	Silk Stigma Style	436400.0	573000.0	-1.0	--