

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Hibiscus sabdariffa

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	FIBER	Flower	10000.0	374600.0	2.971685757852178	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
23	CITRIC-ACID	Fruit	37400.0	170000.0	2.131164153919124	--
60	SELENIUM	Flower	1.6	14.3	1.7265796092320822	--
0	PENTOSANS	Seed		158000.0	1.6551977117399692	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
53	BETA-CAROTENE	Leaf	41.0	555.0	1.2790561648525607	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CARBOHYDRATES	Leaf	92000.0	765000.0	1.217945652424372	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
24	CHROMIUM	Flower	0.6	5.4	1.1789575691255427	--
15	MALIC-ACID	Flower	6233.0	56667.0	1.0	--
0	TOCOPHEROLS	Seed		2000.0	0.8822917687956566	--
32	ALPHA-TOCOPHEROL	Seed		500.0	0.8571112050632521	--
14	SULFUR	Seed		4000.0	0.8287417461896122	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CARBOHYDRATES	Flower	76000.0	804000.0	0.7751516195620832	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	THIAMIN	Leaf	0.0	12.0	0.7701228842235702	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	NITROGEN	Seed		32900.0	0.7317342785449883	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	CELLULOSE	Seed		168000.0	0.5783739206201094	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	WATER	Flower		890000.0	0.5075484737057864	--
5	ALUMINIUM	Flower	14.0	125.0	0.46945991962978617	--
39	NIACIN	Leaf	12.0	132.0	0.4196344734008024	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	GAMMA-TOCOPHEROL	Seed		1490.0	0.4109961537087907	--
28	CALCIUM	Seed	3200.0	6000.0	0.3404249554690761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	MALIC-ACID	Leaf		12500.0	0.2822875522116279	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	PHOSPHORUS	Leaf	480.0	6458.0	0.2735050043469738	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	WATER	Leaf		856000.0	0.2412787411612874	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	PHOSPHORUS	Seed		6000.0	0.17088218232138022	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CARBOHYDRATES	Seed		557000.0	0.13352409975853574	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	SUGARS	Flower	12100.0	110000.0	0.0	--
15	RIBOFLAVIN	Leaf	1.0	31.0	-0.0325494690927309	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
112	ASCORBIC-ACID	Fruit	540.0	3750.0	-0.05132528273853201	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	IRON	Leaf	15.0	333.0	-0.07651054521577247	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	FIBER	Seed		120000.0	-0.11669610810150641	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Leaf	10000.0	111000.0	-0.1383371792482167	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Seed	168000.0	223000.0	-0.2232706050728116	--
28	CALCIUM	Leaf	2130.0	14792.0	-0.24906661049521867	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	COBALT	Flower	0.6	5.0	-0.2767916858148855	--
14	MANGANESE	Flower	2.0	15.1	-0.3393278990760618	--
0	WATER	Seed	76000.0	129000.0	-0.3783965720128981	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Flower	42.0	382.0	-0.3952249147727747	--
4	SILICON	Flower	1.0	9.1	-0.45868138661471586	--
0	FAT	Leaf	3000.0	33000.0	-0.4675244951730983	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
53	BETA-CAROTENE	Flower	1.0	9.0	-0.4832859262086817	--
24	PECTIN	Fruit		10200.0	-0.5091471100383528	--
15	FIBER	Leaf	13000.0	114000.0	-0.5878237990866672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Flower	374.0	3400.0	-0.6558141831778627	--
31	THIAMIN	Flower	0.0	3.0	-0.6757315085489463	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Flower	1100.0	10000.0	-0.7523791209673999	--
112	ASCORBIC-ACID	Flower	22.0	200.0	-0.7732197962345587	--
5	STARCH	Seed		111000.0	-0.8064850823445846	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	TIN	Flower	1.0	10.0	-0.8082238591204874	--
39	NIACIN	Flower	1.3	12.0	-0.8122224292191794	--
0	PROTEIN	Flower	6600.0	60000.0	-0.960645369865758	--
4	DELTA-TOCOPHEROL	Seed		10.0	-1.0	--
14	POTASSIUM	Flower	1034.0	9400.0	-1.0124925447320965	--
6	IRON	Flower	0.7	6.0	-1.063209446177288	--
0	ASH	Flower	2200.0	20000.0	-1.1066700142226569	--
4	PHOSPHORUS	Flower	110.0	1000.0	-1.1392165553859557	--
12	COPPER	Flower	5.6	6.2	-1.2821653170679421	--
15	RIBOFLAVIN	Flower	0.1	0.5	-1.3399966931295562	--
0	THIAMINE	Flower	0.1	0.5	-1.3840402025670708	--
65	MAGNESIUM	Flower	44.0	400.0	-1.7433560491071525	--
0	FIBER(CRUDE)	Flower		30000.0	-1.7666052469086984	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FIBER(DIETARY)	Flower		140000.0	-1.7977084105707757	--
0	CYANIDIN-3-SAMBUBIOSIDE	Calyx				--
30	ANTHOCYANINS	Calyx	10000.0	20000.0		--
0	2-HEXENOL	Calyx				--
2	METHANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
16	ACETIC-ACID	Calyx				--
0	3-METHYL-1-BUTANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	PROPIONIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	EXO-2-HYDROXYCINEOLE	Calyx				--
3	ISOAMYL-ALCOHOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	CYANIDIN-3-XYLOGUCOSIDE	Flower				--
0	HIBISCIC-ACID	Flower	153000.0	230000.0		--
5	CAPRYLIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	IBISCIC-ACID	Flower	27500.0	250000.0		--
21	METHYL-SALICYLATE	Calyx				--
13	PALMITIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CYANIDIN-3,5-DIGLUCOSIDE	Flower				=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
7	ANISALDEHYDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	(Z)-3-HEXENOL	Calyx				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-ALLOXYCITRONIC-ACID-LACTONE	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-TERPINYL-ACETATE	Calyx				--
76	EUGENOL	Calyx				--
0	HIBISCETIN	Flower				--
2	CAMPESTEROL	Seed				--
0	4-METHYL-1-(1-METHYLETHYL)-3-CYCLOHEXEN-1-OL-ACETATE	Calyx				--
9	OXALIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	ANISALDEHYDE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	SAPONIN	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	(E)-2-HEXENAL	Calyx				--
0	MALVALIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	XYLOSE	Calyx				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	2-ETHYL-FURAN	Calyx				--
0	GOSSYPETIN-3-GLUCOSIDE	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
4	CALCIUM-OXALATE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
23	ALPHA-TERPINEOL	Calyx				--
24	ETHANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	BENZYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	1-METHYL-4-(1-METHYLETHYL)-3-CYCLOHEXENOL	Calyx				--
18	OLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CLEOMISCOSIN-D	Root Bark				--
0	CIS-12,13-EPOXY-CIS-9-OCTADECENOIC-ACID	Seed				=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
0	SABDARITRIN	Flower				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	1-HEXANOL	Calyx				--
15	MALIC-ACID	Stem		6000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	RHAMNOGALACTURANS	Flower				--
0	2-ETHENYL-TETRAHYDRO-2,6,6-TRIMETHYL-2H-PYRAN	Calyx				--
0	GOSSIPETIN	Flower				--
23	CITRIC-ACID	Flower	6233.0	56667.0		--
0	TETRAHYDRO-2,2-DIMETHYL-5-(1-METHYLPROPYL)-FURAN	Calyx				--
24	ETHANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
9	BENZYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	TARTARIC-ACID	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	2-METHYL-6-METHYLENE-7-OCTEN-2-OL	Calyx				--
0	CLEROSTEROL	Seed				--
0	CYANIDIN-3-GLUCOSIDE	Calyx				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ALPHA-TERPINYL-ACETATE	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	SABDARETIN	Flower				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
5	HEXANAL	Calyx				--
2	PHYTOSTEROLS	Calyx				--
3	ISOAMYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	EPOXYOLEIC-ACID	Seed				=ICMR (Indian Council of Medical Research). 1976. Medicinal Plants of India. Vol. 1. Indian Council of Med. Res. Cambridge Printing Works, New Delhi. 487 pp; ICMR. 1987. Medicinal Plants of India. Vol. 2. Indian Council of Med. Res. Cambr. Printing Works, New Delhi. 600pp
4	GLYCOLIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
6	TARTARIC-ACID	Flower	6233.0	56667.0		--
44	SCOPOLETIN	Root Bark				--
24	ETHANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
24	BENZALDEHYDE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	5-METHYL-2-FURALDEHYDE	Calyx				--
2	CLEOMISCOSIN-C	Root Bark				--
1	CHOLESTEROL	Seed				--
0	ARABINOGLACTANS	Flower				--
0	ALPHA-TERPINYL-ACETATE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	(E)-2-HEPTENAL	Calyx				--
3	MANNOSE	Calyx				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	ISOAMYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	2,6-DIMETHYL-5,7-OCTADIEN-2-OL	Calyx				--
13	FORMIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
7	GOSSYPETIN	Flower				--
0	SAMBUBIOSIDE	Flower				--
5	ERGOSTEROL	Seed				--
3	ASPARTIC-ACID	Plant				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	SUCROSE	Calyx		2400.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINALOOL-OXIDE	Calyx				--
4	CLEOMISCOSIN-A	Root Bark				--
0	ARABINANS	Flower				--
93	TOCOPHEROL	Seed				--
0	ALPHA-TERPINYL-ACETATE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	HEPTANAL	Calyx				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MALEIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	2,2-DIMETHYL-HEXANAL	Calyx				--
13	FORMIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	BUTYRIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
77	ZINC	Flower				--
0	RHAMNOSE	Flower				--
0	PELARGONIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	DELPHININ	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
4	STERCULIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
53	LINALOOL	Calyx				--
6	MYRISTIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
67	1,8-CINEOLE	Calyx				--
0	ALLOHYDROXYCITRIC-ACID	Flower		230000.0		--
0	6,10,14-TRIMETHYL-2-PENTADECANONE	Calyx				--
16	ACETIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	RESIN	Calyx				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	GALACTURONIC-ACID	Flower				--
27	LINOLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	HIBISCUS-ACID	Flower		230000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-SITOSTERYL-BENZOATE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
34	PROANTHOCYANIDINS	Flower				--
0	PELARGONIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ALPHA-4-DIMETHYL-3-CYCLOHEXYL-1-ACETALDEHYDE	Calyx				--
0	DELPHINIDIN-3-SAMBUBIOSIDE	Calyx				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
8	STEARIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
60	LIMONENE	Calyx				--
3	MUCILAGE	Calyx	15000.0	650000.0		--
0	1,4-CINEOLE	Calyx				--
0	ACIDS	Flower	150000.0	300000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
16	ACETIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
43	PROTocatechuic-ACID	Flower				--
1	GALACTOSE	Flower				--
2	ISOPROPYL-ALCOHOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	HIBISCITRIN	Flower				--
0	HIBISCRETIN	Flower				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	BETA-SITOSTEROL-BETA-D-GALACTOSIDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	2-PENTYL-FURAN	Calyx				--
0	2,3-DIMETHYLBUTANE	Calyx				--
1	DELPHINIDIN-3-GLUCOSIDE	Calyx				--
0	HYDROXYCINNAMIC-ACIDS	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	METHANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
31	CARYOPHYLLENE	Calyx				--
0	3-METHYL-1-BUTANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
6	FURFURAL	Calyx				--
2	ISOPROPYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	FRUIT-ACIDS	Calyx	150000.0	350000.0		--
2	HIBISCIN-CHLORIDE	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	BETA-SITOSTEROL-BETA-D-GALACTOPYRANOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	OCTANAL	Calyx				--
24	PECTIN	Calyx		31900.0		--
0	CYANIDIN-3-SAMBUBIOSIDE	Flower				--
9	DELPHINIDIN	Calyx				--
0	HYDROXYBENZOIC-ACIDS	Flower				--
2	METHANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
1	DELTA-5-AVENASTEROL	Seed				--
0	3-METHYL-1-BUTANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
6	PROPIONIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ALPHA-FARNESENE	Calyx				--
2	ISOPROPYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	DELPHINIDIN-3-XYLOGLUCOSIDE	Flower				--
0	HIBISCIN	Flower				--
5	CAPRYLIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
47	BETA-SITOSTEROL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	UTALONIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	NONANAL	Calyx				--
2	PALMITOLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CYANIDIN-3-D(2-GLUCOSYL)-RUTINOSIDE	Flower				=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp