

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Hibiscus sabdariffa

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CYANIDIN-3-SAMBUBIOSIDE	Flower				--
0	SAPONIN	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	MALVALIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	OCTANAL	Calyx				--
0	FIBER(CRUDE)	Flower		30000.0	-1.7666052469086984	--
0	HYDROXYBENZOIC-ACIDS	Flower				--
0	ALPHA-FARNESENE	Calyx				--
0	DELPHINIDIN-3-XYLOGLUCOSIDE	Flower				--
0	ALPHA-TERPINYL-ACETATE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
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
0	SABDARITRIN	Flower				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	NONANAL	Calyx				--
0	2-HEXENOL	Calyx				--
0	DELPHININ	Flower				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ASH	Leaf	10000.0	111000.0	-0.1383371792482167	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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TOCOPHEROLS	Seed		2000.0	0.8822917687956566	--
0	EXO-2-HYDROXYCINEOLE	Calyx				--
0	CYANIDIN-3-XYLOGUCOSIDE	Flower				--
0	CARBOHYDRATES	Seed		557000.0	0.13352409975853574	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
0	BETA-SITOSTERYL-BENZOATE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
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	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.
0	(Z)-3-HEXENOL	Calyx				--
0	(+)-ALLOOXYCITRONIC-ACID-LACTONE	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
0	ASH	Flower	2200.0	20000.0	-1.1066700142226569	--
0	ALPHA-TERPINYL-ACETATE	Calyx				--
0	HIBISCRETIN	Flower				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARBOHYDRATES	Leaf	92000.0	765000.0	1.217945652424372	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	ARABINOGLACTANS	Flower				--
0	4-METHYL-1-(1-METHYLETHYL)-3-CYCLOHEXEN-1-OL-ACETATE	Calyx				--
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.
0	2-ETHYL-FURAN	Calyx				--
0	CARBOHYDRATES	Flower	76000.0	804000.0	0.7751516195620832	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	3-METHYL-1-BUTANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	BETA-SITOSTEROL-BETA-D-GALACTOPYRANOSIDE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	ARABINANS	Flower				--
0	1-METHYL-4-(1-METHYLETHYL)-3-CYCLOHEXENOL	Calyx				--
0	CLEOMISCOSIN-D	Root Bark				--
0	PELARGONIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	1-HEXANOL	Calyx				--
0	RHAMNOGLACTURANS	Flower				--
0	TETRAHYDRO-2,2-DIMETHYL-5-(1-METHYLPROPYL)-FURAN	Calyx				--
0	2-ETHENYL TETRAHYDRO-2,6,6-TRIMETHYL-2H-PYRAN	Calyx				--
0	HIBISCIN	Flower				--
0	3-METHYL-1-BUTANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	FAT	Seed	168000.0	223000.0	-0.2232706050728116	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALLOHYDROXYCITRIC-ACID	Flower		230000.0		--
0	RESIN	Calyx				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	2-METHYL-6-METHYLENE-7-OCTEN-2-OL	Calyx				--
0	CLEROSTEROL	Seed				--
0	WATER	Seed	76000.0	129000.0	-0.3783965720128981	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PELARGONIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	CYANIDIN-3-SAMBUBIOSIDE	Calyx				--
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
0	HIBISCIC-ACID	Flower	153000.0	230000.0		--
0	3-METHYL-1-BUTANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ACIDS	Flower	150000.0	300000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	5-METHYL-2-FURALDEHYDE	Calyx				--
0	FAT	Leaf	3000.0	33000.0	-0.4675244951730983	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
0	(E)-2-HEPTENAL	Calyx				--
0	SAMBUBIOSIDE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,6-DIMETHYL-5,7-OCTADIEN-2-OL	Calyx				--
0	HIBISCETIN	Flower				--
0	THIAMINE	Flower	0.1	0.5	-1.3840402025670708	--
0	PROTEIN	Flower	6600.0	60000.0	-0.960645369865758	--
0	LINALOOL-OXIDE	Calyx				--
0	FAT	Flower	1100.0	10000.0	-0.7523791209673999	--
0	HEPTANAL	Calyx				--
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	WATER	Flower		890000.0	0.5075484737057864	--
0	RHAMNOSE	Flower				--
0	2,2-DIMETHYL-HEXANAL	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.
0	SUGARS	Flower	12100.0	110000.0	0.0	--
0	6,10,14-TRIMETHYL-2-PENTADECANONE	Calyx				--
0	GALACTURONIC-ACID	Flower				--
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	UTALONIC-ACID	Flower				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	ALPHA-4-DIMETHYL-3-CYCLOHEXYL-1-ACETALDEHYDE	Calyx				--
0	GOSSIPETIN	Flower				--
0	IBISCIC-ACID	Flower	27500.0	250000.0		--
0	1,4-CINEOLE	Calyx				--
0	HIBISCITRIN	Flower				--
0	ALPHA-TERPINYL-ACETATE	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
0	2,3-DIMETHYLBUTANE	Calyx				--
0	2-PENTYL-FURAN	Calyx				--
0	FIBER(DIETARY)	Flower		140000.0	-1.7977084105707757	--
0	HYDROXYCINNAMIC-ACIDS	Flower				--
0	FRUIT-ACIDS	Calyx	150000.0	350000.0		--
0	ALPHA-TERPINYL-ACETATE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
1	DELTA-5-AVENASTEROL	Seed				--
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.
1	DELPHINIDIN-3-GLUCOSIDE	Calyx				--
1	SODIUM	Flower	42.0	382.0	-0.3952249147727747	--
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.
1	GALACTOSE	Flower				--
1	CHOLESTEROL	Seed				--
2	(E)-2-HEXENAL	Calyx				--
2	HIBISCIN-CHLORIDE	Plant				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PHYTOSTEROLS	Calyx				--
2	ISOPROPYL-ALCOHOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
2	CLEOMISCOSIN-C	Root Bark				--
2	COBALT	Flower	0.6	5.0	-0.2767916858148855	--
2	CAMPESTEROL	Seed				--
2	METHANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
2	ISOPROPYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
2	METHANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
2	ISOPROPYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
2	PALMITOLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	METHANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
3	ASPARTIC-ACID	Plant				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.
3	MUCILAGE	Calyx	15000.0	650000.0		--
3	MANNOSE	Calyx				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	ISOAMYL-ALCOHOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
3	ISOAMYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
3	ISOAMYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
4	PHOSPHORUS	Seed		6000.0	0.17088218232138022	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	PHOSPHORUS	Leaf	480.0	6458.0	0.2735050043469738	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Flower	110.0	1000.0	-1.1392165553859557	--
4	STERCULIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	CLEOMISCOSIN-A	Root Bark				--
4	CALCIUM-OXALATE	Fruit				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	SILICON	Flower	1.0	9.1	-0.45868138661471586	--
4	DELTA-TOCOPHEROL	Seed		10.0	-1.0	--
4	TIN	Flower	1.0	10.0	-0.8082238591204874	--
4	GLYCOLIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	ERGOSTEROL	Seed				--
5	CAPRYLIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
5	HEXANAL	Calyx				--
5	CAPRYLIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
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.
5	ALUMINUM	Flower	14.0	125.0	0.46945991962978617	--
6	IRON	Leaf	15.0	333.0	-0.07651054521577247	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	BUTYRIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	IRON	Flower	0.7	6.0	-1.063209446177288	--
6	TARTARIC-ACID	Root				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	TARTARIC-ACID	Flower	6233.0	56667.0		--
6	MYRISTIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses



Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	PROPIONIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
6	PROPIONIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
6	FURFURAL	Calyx				--
7	GOSSYPETIN	Flower				--
7	ANISALDEHYDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
7	ANISALDEHYDE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
8	STEARIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
9	DELPHINIDIN	Calyx				--
9	BENZYL-ALCOHOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
9	BENZYL-ALCOHOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
9	OXALIC-ACID	Flower				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	COPPER	Flower	5.6	6.2	-1.2821653170679421	--
13	FORMIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
13	FORMIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
13	PALMITIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	SULFUR	Seed		4000.0	0.8287417461896122	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.
14	MANGANESE	Flower	2.0	15.1	-0.3393278990760618	--
14	POTASSIUM	Flower	1034.0	9400.0	-1.0124925447320965	--
14	GAMMA-TOCOPHEROL	Seed		1490.0	0.4109961537087907	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	MALIC-ACID	Stem		6000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	FIBER	Seed		120000.0	-0.11669610810150641	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.
15	FIBER	Leaf	13000.0	114000.0	-0.5878237990866672	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Leaf	1.0	31.0	-0.0325494690927309	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	MALIC-ACID	Flower	6233.0	56667.0	1.0	--
15	FIBER	Flower	10000.0	374600.0	2.971685757852178	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
15	RIBOFLAVIN	Flower	0.1	0.5	-1.3399966931295562	--
16	ACETIC-ACID	Calyx				--
16	ACETIC-ACID	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
16	ACETIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
18	OLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
21	METHYL-SALICYLATE	Calyx				--
23	CITRIC-ACID	Flower	6233.0	56667.0		--
23	ALPHA-TERPINEOL	Calyx				--
23	CITRIC-ACID	Fruit	37400.0	170000.0	2.131164153919124	--
24	PECTIN	Fruit		10200.0	-0.5091471100383528	--
24	PECTIN	Calyx		31900.0		--
24	ETHANOL	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
24	ETHANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	CHROMIUM	Flower	0.6	5.4	1.1789575691255427	--
24	BENZALDEHYDE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
24	ETHANOL	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
27	LINOLEIC-ACID	Seed				CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Flower	374.0	3400.0	-0.6558141831778627	--
28	CALCIUM	Seed	3200.0	6000.0	0.3404249554690761	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Leaf	2130.0	14792.0	-0.24906661049521867	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
30	ANTHOCYANINS	Calyx	10000.0	20000.0		--
31	THIAMIN	Flower	0.0	3.0	-0.6757315085489463	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	CARYOPHYLLENE	Calyx				--
31	THIAMIN	Leaf	0.0	12.0	0.7701228842235702	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
32	ALPHA-TOCOPHEROL	Seed		500.0	0.8571112050632521	--
34	PROANTHOCYANIDINS	Flower				--
39	NIACIN	Leaf	12.0	132.0	0.4196344734008024	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
39	NIACIN	Flower	1.3	12.0	-0.8122224292191794	--
43	PROTocatechuic-ACID	Flower				--
44	SCOPOLETIN	Root Bark				--
47	BETA-SITOSTEROL	Seed				--
53	BETA-CAROTENE	Leaf	41.0	555.0	1.2790561648525607	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
53	BETA-CAROTENE	Flower	1.0	9.0	-0.4832859262086817	--
53	LINALOOL	Calyx				--
60	LIMONENE	Calyx				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
60	SELENIUM	Flower	1.6	14.3	1.7265796092320822	--
65	MAGNESIUM	Flower	44.0	400.0	-1.7433560491071525	--
67	1,8-CINEOLE	Calyx				--
76	EUGENOL	Calyx				--
77	ZINC	Flower				--
93	TOCOPHEROL	Seed				--
112	ASCORBIC-ACID	Fruit	540.0	3750.0	-0.05132528273853201	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
112	ASCORBIC-ACID	Flower	22.0	200.0	-0.7732197962345587	--