

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Cichorium intybus*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
176	QUERCETIN	Seed		1.0		--
176	QUERCETIN	Plant				--
112	ASCORBIC-ACID	Root	50.0	250.0	-0.5030624603012167	--
112	ASCORBIC-ACID	Leaf	100.0	2040.0	-0.254634091901897	--
102	CAFFEIC-ACID	Leaf		767.0	-0.6095210261436637	--
102	CAFFEIC-ACID	Shoot				--
101	APIGENIN	Shoot				--
87	RUTIN	Leaf		14000.0	-0.1353936273578098	--
87	RUTIN	Seed		6400.0	0.07536225897017279	--
77	CHLOROGENIC-ACID	Leaf				--
77	CHLOROGENIC-ACID	Shoot				--
77	CHLOROGENIC-ACID	Root				--
77	CHLOROGENIC-ACID	Plant				--
77	ZINC	Root				--
75	KAEMPFEROL	Seed		20.0		--
75	KAEMPFEROL	Plant				--
65	MAGNESIUM	Root	220.0	1100.0	-0.7776954016677178	--
65	MAGNESIUM	Leaf	130.0	2652.0	-0.5690626388509602	USDA's Ag Handbook 8 and sequelae)
61	FERULIC-ACID	Leaf		0.5	-1.0842680798316504	--
61	FERULIC-ACID	Plant				--
57	COUMARIN	Plant				--
53	BETA-CAROTENE	Leaf	0.0	228.0	-0.14501134388228565	USDA's Ag Handbook 8 and sequelae)
44	QUERCITRIN	Shoot				--
44	SCOPOLETIN	Flower				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
44	SCOPOLETIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
39	NIACIN	Root	4.0	20.0	-0.8763923978074498	USDA's Ag Handbook 8 and sequelae)
39	NIACIN	Leaf	5.0	102.0	0.05472679513303063	USDA's Ag Handbook 8 and sequelae)
35	TANNIN	Plant				--
33	AESCULIN	Leaf				--
33	AESCULIN	Plant				--
32	AESCULETIN	Plant				--
32	AESCULETIN	Leaf				--
31	THIAMIN	Root	0.0	2.0	-0.41582954985618054	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Leaf	1.0	14.0	1.1869303740705777	USDA's Ag Handbook 8 and sequelae)
30	HYPEROSIDE	Plant				--
30	ESCULETIN	Flower				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
30	HYPEROSIDE	Shoot				--
30	HYPEROSIDE	Leaf				--
29	ESCULIN	Flower				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
29	TRYPTOPHAN	Leaf	160.0	3672.0	0.6804048665688907	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Root	410.0	2050.0	-0.5862286623630208	--
28	CALCIUM	Leaf	790.0	19900.0	0.09995100214309341	--
27	LINOLEIC-ACID	Root	750.0	3750.0	0.23419013142339878	--
27	LINOLEIC-ACID	Seed				--
27	LINOLEIC-ACID	Leaf	370.0	7548.0	-0.10687088053184475	USDA's Ag Handbook 8 and sequelae)
24	VANILLIC-ACID	Leaf		0.5	-1.181981260366695	--
24	VITAMIN-B-1	Root		0.05		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	PECTIN	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	CITRIC-ACID	Plant				--
22	UMBELLIFERONE	Flower				Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
22	CATECHOL	Root				--
22	UMBELLIFERONE	Plant				--
20	CHOLINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
19	INULIN	Root	80000.0	850000.0	2.568442619517879	--
19	INULIN	Leaf				--
18	OLEIC-ACID	Leaf	20.0	408.0	-0.6177088987554278	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Seed				--
18	MANNITOL	Plant				--
18	OLEIC-ACID	Root	40.0	200.0	-0.6297846550737646	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Root	130.0	650.0	-0.32107850770475904	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Plant				--
15	ALPHA-LINOLENIC-ACID	Leaf	60.0	1224.0	-1.0636070799711819	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Root	0.0	2.0	-0.45399811156287	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Leaf	1.0	29.0	-0.04192444032714655	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Leaf	50.0	1224.0	-1.5483275310004487	USDA's Ag Handbook 8 and sequelae)
15	FIBER	Root	19500.0	97500.0	0.20849392887813434	--
15	FIBER	Plant	9000.0	153000.0	-0.5161042249299459	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	POTASSIUM	Leaf	1820.0	37128.0	0.2995628765550062	USDA's Ag Handbook 8 and sequelae)
14	SUCROSE	Root		140000.0	0.1611945921135931	--
14	BETAINE	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	CICHORIC-ACID	Leaf				--
14	ARGININE	Leaf	660.0	14892.0	-0.29705091845608234	USDA's Ag Handbook 8 and sequelae)
14	POTASSIUM	Root	2900.0	14500.0	-0.09363688811813217	--
13	PALMITIC-ACID	Seed				--
13	PALMITIC-ACID	Root	410.0	2050.0	-0.30431334760427364	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Root	40.0	200.0	-0.8770490931439714	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Leaf	210.0	4284.0	-0.3076698789052898	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Leaf	20.0	365.0	-0.692331152044028	USDA's Ag Handbook 8 and sequelae)
13	P-HYDROXY-BENZOIC-ACID	Leaf		11.0	-0.7729405090241419	--
12	COPPER	Root				--
10	CHICORIC-ACID	Plant				--
10	CHICORIC-ACID	Leaf		1100.0		--
10	ALPHA-AMYRIN	Seed				--
9	SINAPIC-ACID	Plant		0.5	-1.0	--
9	BETA-AMYRIN	Seed				--
8	STEARIC-ACID	Plant				--
8	STEARIC-ACID	Seed				--
8	FRUCTOSE	Root	45000.0	220000.0	1.999334825861607	--
8	INOSITOL	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	STEARIC-ACID	Root	20.0	100.0	-0.6446087280612671	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Leaf	10.0	204.0	-0.48893321127321177	USDA's Ag Handbook 8 and sequelae)
7	ASTRAGALIN	Leaf				--
7	PHENYLALANINE	Leaf	220.0	4896.0	-1.3885269608474589	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Leaf	150.0	3468.0	-0.9576955368033032	USDA's Ag Handbook 8 and sequelae)
7	SALICYLATES	Leaf	10.0	100.0	-0.3593779047496331	--
7	HARMAN	Root				--
7	GLUCOSE	Root		11000.0	-0.4327088902399002	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	ASTRAGALIN	Plant				--
6	LACTUCIN	Fruit Juice				--
6	TARTARIC-ACID	Shoot				--
6	IRON	Root	8.0	40.0	-0.38354158556693424	--
6	IRON	Leaf	5.0	246.0	-0.29703270980762686	USDA's Ag Handbook 8 and sequelae)
6	ACETOPHENONE	Root				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
6	MYRISTIC-ACID	Root	30.0	150.0	-0.5390201665235613	USDA's Ag Handbook 8 and sequelae)
6	MYRISTIC-ACID	Leaf	10.0	204.0	-0.6023075913949533	USDA's Ag Handbook 8 and sequelae)
6	LACTUCIN	Latex Exudate				--
6	LACTUCIN	Root				--
6	TARTARIC-ACID	Plant				--
6	LACTUCIN	Plant				--
5	ALUMINUM	Root				--
5	8-DEOXYLACTUCIN	Root		17.0		--
5	8-DEOXYLACTUCIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PHOSPHORUS	Root	610.0	3050.0	-0.0821867763972658	--
4	LYSINE	Leaf	350.0	7956.0	-1.1182801972380008	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Leaf	210.0	4284.0	-0.12648268363942136	--
4	BORON	Root		20.0	-0.14974023395860875	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).
4	THREONINE	Leaf	250.0	5712.0	-1.367011082098785	USDA's Ag Handbook 8 and sequelae)
4	ISOCHLOROGENIC-ACID	Root				--
4	PUFA	Root	870.0	4350.0	-0.318698697794576	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Root				--
4	LACTUCOPICRIN	Root				--
4	PUFA	Leaf	440.0	8030.0	-1.576432461803007	USDA's Ag Handbook 8 and sequelae)
4	LACTUCOPICRIN	Latex Exudate				--
4	LACTUCOPICRIN	Fruit Juice				--
4	ISOCHLOROGENIC-ACID	Plant				Gruenwald, J. et al. 1998. PDR for Herbal Medicine. 1st ed. Medical Economics Co., Montvale, NJ. 1244 pp. (abbreviated as PHR or Physicians Herbal Reference in my mind)
3	ISOLEUCINE	Leaf	540.0	12240.0	0.045339706929741146	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Leaf	410.0	9180.0	-0.9848461873827702	USDA's Ag Handbook 8 and sequelae)
3	CICHORIIN	Flower	1000.0	2000.0		--
3	SILVER	Root				--
3	PONTICAEPOXIDE	Root				--
3	CICHORIIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	MANNOSE	Root				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
3	CICHORIIN	Root				--
3	CICHORIIN	Plant				--
2	NORHARMAN	Root				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Plant				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Leaf				--
2	LEUCINE	Leaf	390.0	8976.0	-1.160783880324028	USDA's Ag Handbook 8 and sequelae)
2	LACTUPICRIN	Plant				--
2	PALMITOLEIC-ACID	Root	750.0	3750.0	1.9212861697652845	USDA's Ag Handbook 8 and sequelae)
2	TARAXASTEROL	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	PROTocatechuic-ALDEHYDE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	NEO-CHLOROGENIC-ACID	Shoot				--
2	NEO-CHLOROGENIC-ACID	Root				--
1	SODIUM	Root	500.0	2500.0	0.6512650124326103	--
1	SODIUM	Leaf	70.0	1428.0	-0.3936622771435691	USDA's Ag Handbook 8 and sequelae)
1	11(S),13-DIHYDROLACTUCOPICRIN	Root				--
1	LEVULOSE	Fruit Juice				--
1	11(S),13-DIHYDROLACTUCIN	Root				--
1	11(S),13-DIHYDRO-8-DEOXYLACTUCIN	Root				--
1	CELLULOSE	Root		50000.0	-1.0	--
0	CHRYSANTHEMIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	RUBBER	Root		420.0	-0.4734657197361741	--
0	CYANAROSIDE	Shoot				--
0	3-O-FERULOYL-QUINIC-ACID	Shoot				--
0	FAT	Root	2000.0	16000.0	-0.2294322736898297	--
0	DICAFFEOYL-TARTARIC-ACID	Plant				Gruenwald, J. et al. 1998. PDR for Herbal Medicine. 1st ed. Medical Economics Co., Montvale, NJ. 1244 pp. (abbreviated as PHR or Physicians Herbal Reference in my mind)
0	CREPIDIASIDE-B	Root		100.0		--
0	APIGENIN-7-O-ALPHA-L-ARABINOSIDE	Shoot				--
0	(11S)-11,13-DIHYDROLACTUCOPICRIN	Root				--
0	LUTEOLIN-7-O-BETA-D-GLUCURONIDE	Plant				--
0	FAT	Leaf	1000.0	29000.0	-0.5472316463900033	USDA's Ag Handbook 8 and sequelae)
0	KAEMPFEROL-3-O-BETA-D-GLUCURONIDE	Plant				--
0	CREPIDIASIDE-B	Plant				--
0	(11S)-11,13-DIHYDROLACTUCIN	Root				--
0	LUTEOLIN-7-O-BETA-D-GLUCURONIDE	Leaf				--
0	SFA	Root	480.0	2400.0	-0.20544019680514997	USDA's Ag Handbook 8 and sequelae)
0	SONCHUSIDE-C	Root		2.0		--
0	KAEMPFEROL-3-O-BETA-D-GLUCURONIDE	Leaf				--
0	CICHORIOSIDE-B	Plant				--
0	CICHORIOSIDE-C	Root		8.0		--
0	SFA	Leaf	240.0	4380.0	-0.45748721001349424	USDA's Ag Handbook 8 and sequelae)
0	SONCHUSIDE-A	Root		7.0		--
0	ALPHA-LACTUCEROL	Plant				--
0	VITAMIN-A	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTOSANE	Root	47000.0	65000.0	1.0	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CICHORIOSIDE-B	Root		6.0		--
0	CATECHOL-TANNINS	Root				--
0	URIDINE-5'-DIPHOSPHOGLUCOSE	Root				--
0	LACTUPICRIN-METHYL-ESTER	Plant				--
0	CICHORIOLIDE-A	Root		2.0		--
0	CERYL-ALCOHOL	Plant				--
0	VITAMIN-B-2	Root		0.7		--
0	ASH	Root	8900.0	44500.0	-0.6584550332799385	--
0	SILICA	Leaf		27800.0	0.9413150747474829	--
0	LACTUCIN-P-OXYPHENYLACETICACID-ESTER	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TRANS-ZEATIN	Root				--
0	ASH	Leaf	6000.0	180000.0	1.0773581121700988	USDA's Ag Handbook 8 and sequelae)
0	TRIDECA-1,5-DIEN-7,9,11-TRIYNE-3,4-DIOL	Root				--
0	BETA-LACTUCEROL	Plant				--
0	3-GLUCURONIDE-ISORHAMNETIN	Plant				--
0	TITANIUM	Root				--
0	CARBOHYDRATES	Root	175100.0	875500.0	0.5834772969600167	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Root	14000.0	86000.0	-0.3639841360982529	--
0	DICAFFEOYL-TARTARIC-ACID	Shoot				--
0	3-GLUCURONIDE-ISORHAMNETIN	Leaf				--
0	WATER	Root	240000.0	800000.0	0.2012998824504101	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MANNAN	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CICHORALEXIN	Leaf		146.5		--
0	CARBOHYDRATES	Leaf	32000.0	654000.0	0.33520537705808534	--
0	PROTEIN	Leaf	10000.0	246000.0	0.34072863379732415	--
0	DELPHINIDIN-3-(6"-MALONYLGLUCOSIDE)-5-MALONYLGLUCOSIDE	Inflorescence				--
0	JACQUINELIN	Root				--
0	3-O-P-COUMAROYL-QUINIC-ACID	Shoot				--
0	WATER	Leaf	931000.0	951000.0	0.7152320256671255	USDA's Ag Handbook 8 and sequelae)
0	MONOCAFFEYOYL-TARTARIC-ACID	Leaf		1800.0		--
0	SUGARS	Root		585000.0	4.656820199809224	--