Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Cichorium intybus

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	SUGARS	Root		585000.0	4.656820199809224	--
19	INULIN	Root	80000.0	850000.0	2.568442619517879	--
8	FRUCTOSE	Root	45000.0	220000.0	1.999334825861607	--
2	PALMITOLEIC-ACID	Root	750.0	3750.0	1.9212861697652845	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Leaf	1.0	14.0	1.1869303740705777	USDA's Ag Handbook 8 and sequelae)
0	ASH	Leaf	6000.0	180000.0	1.0773581121700988	USDA's Ag Handbook 8 and sequelae)
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	SILICA	Leaf		27800.0	0.9413150747474829	--
0	WATER	Leaf	931000.0	951000.0	0.7152320256671255	USDA's Ag Handbook 8 and sequelae)
29	TRYPTOPHAN	Leaf	160.0	3672.0	0.6804048665688907	USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Root	500.0	2500.0	0.6512650124326103	--
0	CARBOHYDRATES	Root	175100.0	875500.0	0.5834772969600167	USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Leaf	10000.0	246000.0	0.34072863379732415	--
0	CARBOHYDRATES	Leaf	32000.0	654000.0	0.33520537705808534	--
14	POTASSIUM	Leaf	1820.0	37128.0	0.2995628765550062	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Root	750.0	3750.0	0.23419013142339878	--
15	FIBER	Root	19500.0	97500.0	0.20849392887813434	--
0	WATER	Root	240000.0	800000.0	0.2012998824504101	--
14	SUCROSE	Root		140000.0	0.1611945921135931	--
28	CALCIUM	Leaf	790.0	19900.0	0.09995100214309341	--
87	RUTIN	Seed		6400.0	0.07536225897017279	--
39	NIACIN	Leaf	5.0	102.0	0.05472679513303063	USDA's Ag Handbook 8 and sequelae)
3	ISOLEUCINE	Leaf	540.0	12240.0	0.045339706929741146	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Leaf	1.0	29.0	-0.04192444032714655	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
4	PHOSPHORUS	Root	610.0	3050.0	-0.0821867763972658	--
14	POTASSIUM	Root	2900.0	14500.0	-0.09363688811813217	--
27	LINOLEIC-ACID	Leaf	370.0	7548.0	-0.10687088053184475	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Leaf	210.0	4284.0	-0.12648268363942136	--
87	RUTIN	Leaf		14000.0	-0.1353936273578098	--
53	BETA-CAROTENE	Leaf	0.0	228.0	-0.14501134388228565	USDA's Ag Handbook 8 and sequelae)
4	BORON	Root		20.0	-0.14974023395860875	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages.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).
0	SFA	Root	480.0	2400.0	-0.20544019680514997	USDA's Ag Handbook 8 and sequelae)
0	FAT	Root	2000.0	16000.0	-0.2294322736898297	--
112	ASCORBIC-ACID	Leaf	100.0	2040.0	-0.254634091901897	--
6	IRON	Leaf	5.0	246.0	-0.29703270980762686	USDA's Ag Handbook 8 and sequelae)
14	ARGININE	Leaf	660.0	14892.0	-0.29705091845608234	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Root	410.0	2050.0	-0.30431334760427364	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Leaf	210.0	4284.0	-0.3076698789052898	USDA's Ag Handbook 8 and sequelae)
4	PUFA	Root	870.0	4350.0	-0.318698697794576	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)
7	SALICYLATES	Leaf	10.0	100.0	-0.3593779047496331	--
0	PROTEIN	Root	14000.0	86000.0	-0.3639841360982529	--
6	IRON	Root	8.0	40.0	-0.38354158556693424	--
1	SODIUM	Leaf	70.0	1428.0	-0.3936622771435691	USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Root	0.0	2.0	-0.41582954985618054	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
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.
15	RIBOFLAVIN	Root	0.0	2.0	-0.45399811156287	USDA's Ag Handbook 8 and sequelae)
0	SFA	Leaf	240.0	4380.0	-0.45748721001349424	USDA's Ag Handbook 8 and sequelae)
0	RUBBER	Root		420.0	-0.4734657197361741	--
8	STEARIC-ACID	Leaf	10.0	204.0	-0.48893321127321177	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Root	50.0	250.0	-0.5030624603012167	--
15	FIBER	Plant	9000.0	153000.0	-0.5161042249299459	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	MYRISTIC-ACID	Root	30.0	150.0	-0.5390201665235613	USDA's Ag Handbook 8 and sequelae)
0	FAT	Leaf	1000.0	29000.0	-0.5472316463900033	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	130.0	2652.0	-0.5690626388509602	USDA's Ag Handbook 8 and sequelae)
28	CALCIUM	Root	410.0	2050.0	-0.5862286623630208	--
6	MYRISTIC-ACID	Leaf	10.0	204.0	-0.6023075913949533	USDA's Ag Handbook 8 and sequelae)
102	CAFFEIC-ACID	Leaf		767.0	-0.6095210261436637	--
18	OLEIC-ACID	Leaf	20.0	408.0	-0.6177088987554278	USDA's Ag Handbook 8 and sequelae)
18	OLEIC-ACID	Root	40.0	200.0	-0.6297846550737646	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Root	20.0	100.0	-0.6446087280612671	USDA's Ag Handbook 8 and sequelae)
0	ASH	Root	8900.0	44500.0	-0.6584550332799385	--
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	--
65	MAGNESIUM	Root	220.0	1100.0	-0.7776954016677178	--
39	NIACIN	Root	4.0	20.0	-0.8763923978074498	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Root	40.0	200.0	-0.8770490931439714	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
7	HISTIDINE	Leaf	150.0	3468.0	-0.9576955368033032	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Leaf	410.0	9180.0	-0.9848461873827702	USDA's Ag Handbook 8 and sequelae)
9	SINAPIC-ACID	Plant		0.5	-1.0	--
1	CELLULOSE	Root		50000.0	-1.0	--
15	ALPHA-LINOLENIC-ACID	Leaf	60.0	1224.0	-1.0636070799711819	USDA's Ag Handbook 8 and sequelae)
61	FERULIC-ACID	Leaf		0.5	-1.0842680798316504	--
4	LYSINE	Leaf	350.0	7956.0	-1.1182801972380008	USDA's Ag Handbook 8 and sequelae)
2	LEUCINE	Leaf	390.0	8976.0	-1.160783880324028	USDA's Ag Handbook 8 and sequelae)
24	VANILLIC-ACID	Leaf		0.5	-1.181981260366695	--
4	THREONINE	Leaf	250.0	5712.0	-1.367011082098785	USDA's Ag Handbook 8 and sequelae)
7	PHENYLALANINE	Leaf	220.0	4896.0	-1.3885269608474589	USDA's Ag Handbook 8 and sequelae)
15	METHIONINE	Leaf	50.0	1224.0	-1.5483275310004487	USDA's Ag Handbook 8 and sequelae)
4	PUFA	Leaf	440.0	8030.0	-1.576432461803007	USDA's Ag Handbook 8 and sequelae)
4	LACTUCOPICRIN	Latex Exudate				--
6	LACTUCIN	Latex Exudate				--
33	AESCULIN	Plant				--
0	TRIDECA-1,5-DIEN-7,9,11-TRIYNE-3,4-DIOL	Root				--
2	TARAXASTEROL	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	CICHORIIN	Root				--
44	SCOPOLETIN	Plant				--
2	PROTOCATECHUIC-ALDEHYDE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
30	HYPEROSIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
18	MANNITOL	Plant				--
0	BETA-LACTUCEROL	Plant				--
0	3-GLUCURONIDE-ISORHAMNETIN	Plant				--
8	INOSITOL	Root				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				--
75	KAEMPFEROL	Plant				--
32	AESCULETIN	Plant				--
0	TITANIUM	Root				--
35	TANNIN	Plant				--
4	LACTUCOPICRIN	Fruit Juice				--
3	CICHORIIN	Plant				--
0	DICAFFEOYL-TARTARIC-ACID	Shoot				--
0	MANNAN	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	BETA-AMYRIN	Seed				--
0	3-GLUCURONIDE-ISORHAMNETIN	Leaf				--
2	NEO-CHLOROGENIC-ACID	Root				--
0	JACQUINELIN	Root				--
32	AESCULETIN	Leaf				--
6	TARTARIC-ACID	Plant				--
6	LACTUCIN	Root				--
0	CICHORALEXIN	Leaf		146.5		--
61	FERULIC-ACID	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
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)
0	DELPHINIDIN-3-(6''-MALONYLGLUCOSIDE)-5-MALONYLGLUCOSIDE	Inflorescence				--
7	ASTRAGALIN	Plant				--
0	3-O-P-COUMAROYL-QUINIC-ACID	Shoot				--
0	MONOCAFFEOYLTARTARIC-ACID	Leaf		1800.0		--
5	8-DEOXYLACTUCIN	Plant				--
6	LACTUCIN	Plant				--
0	CHRYSANTHEMIN	Leaf				--
30	HYPEROSIDE	Plant				--
0	CYANAROSIDE	Shoot				--
7	ASTRAGALIN	Leaf				--
0	3-O-FERULOYL-QUINIC-ACID	Shoot				--
15	MALIC-ACID	Plant				--
6	TARTARIC-ACID	Shoot				--
8	STEARIC-ACID	Plant				--
6	LACTUCIN	Fruit Juice				--
2	NORHARMAN	Root				--
77	CHLOROGENIC-ACID	Leaf				--
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)
44	QUERCITRIN	Shoot				--
0	CREPIDIASIDE-B	Root		100.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	(11S)-11,13-DIHYDROLACTUCOPICRIN	Root				--
0	LUTEOLIN-7-O-BETA-D-GLUCURONIDE	Plant				--
0	APIGENIN-7-O-ALPHA-L-ARABINOSIDE	Shoot				--
8	STEARIC-ACID	Seed				--
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.
0	KAEMPFEROL-3-O-BETA-D-GLUCURONIDE	Plant				--
77	CHLOROGENIC-ACID	Shoot				--
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.
0	CREPIDIASIDE-B	Plant				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Plant				--
57	COUMARIN	Plant				--
0	(11S)-11,13-DIHYDROLACTUCIN	Root				--
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.
0	LUTEOLIN-7-O-BETA-D-GLUCURONIDE	Leaf				--
101	APIGENIN	Shoot				--
23	CITRIC-ACID	Plant				--
0	SONCHUSIDE-C	Root		2.0		--
5	8-DEOXYLACTUCIN	Root		17.0		--
0	KAEMPFEROL-3-O-BETA-D-GLUCURONIDE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
77	CHLOROGENIC-ACID	Root				--
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.
0	CICHORIOSIDE-B	Plant				--
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Leaf				--
12	COPPER	Root				--
14	BETAINE	Root				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
27	LINOLEIC-ACID	Seed				--
5	ALUMINUM	Root				--
24	VITAMIN-B-1	Root		0.05		--
0	CICHORIOSIDE-C	Root		8.0		--
0	SONCHUSIDE-A	Root		7.0		--
1	11(S),13-DIHYDROLACTUCOPICRIN	Root				--
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.
75	KAEMPFEROL	Seed		20.0		--
10	CHICORIC-ACID	Plant				--
3	CICHORIIN	Flower	1000.0	2000.0		--
77	CHLOROGENIC-ACID	Plant				--
176	QUERCETIN	Seed		1.0		--
1	LEVULOSE	Fruit Juice				--
0	ALPHA-LACTUCEROL	Plant				--
0	VITAMIN-A	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
24	PECTIN	Root				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		--
7	HARMAN	Root				--
3	SILVER	Root				--
1	11(S),13-DIHYDROLACTUCIN	Root				--
4	ISOCHLOROGENIC-ACID	Root				--
10	CHICORIC-ACID	Leaf		1100.0		--
77	ZINC	Root				--
14	CICHORIC-ACID	Leaf				--
0	CATECHOL-TANNINS	Root				--
3	PONTICAEPOXIDE	Root				--
0	LACTUPICRIN-METHYL-ESTER	Plant				--
4	LACTUCOPICRIN	Root				--
10	ALPHA-AMYRIN	Seed				--
0	URIDINE-5'-DIPHOSPHOGLUCOSE	Root				--
0	CICHORIOLIDE-A	Root		2.0		--
4	SILICON	Root				--
1	11(S),13-DIHYDRO-8-DEOXYLACTUCIN	Root				--
19	INULIN	Leaf				--
0	CERYL-ALCOHOL	Plant				--
0	VITAMIN-B-2	Root		0.7		--
20	CHOLINE	Root				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	CATECHOL	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
13	PALMITIC-ACID	Seed				--
2	LACTUPICRIN	Plant				--
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.
33	AESCULIN	Leaf				--
22	UMBELLIFERONE	Plant				--
3	CICHORIIN	Leaf				--
176	QUERCETIN	Plant				--
30	HYPEROSIDE	Shoot				--
3	MANNOSE	Root				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
102	CAFFEIC-ACID	Shoot				--
0	TRANS-ZEATIN	Root				--
18	OLEIC-ACID	Seed				--