

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Helianthus tuberosus

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Tuber	40.0	306.0	-0.7242310715177989	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
77	ZINC	Tuber	16.0	64.0	1.8672816597577366	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
65	MAGNESIUM	Tuber	600.0	1800.0	0.18285907019650285	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
53	BETA-CAROTENE	Tuber	0.0	6.0	1.414212086777973	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
39	NIACIN	Tuber	1.0	64.0	0.5397578926492557	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	THIAMIN	Tuber	2.0	10.0	1.6248118455149858	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
29	TRYPTOPHAN	Tuber		1811.0	-0.8230428749556821	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
28	CALCIUM	Tuber	140.0	9600.0	1.686845136728985	--
20	CHOLINE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
19	INULIN	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	FIBER	Tuber	8000.0	59000.0	-0.21703768186054473	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	METHIONINE	Tuber		858.0	-0.921338732376355	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
15	RIBOFLAVIN	Tuber	0.5	3.0	-0.4172054143150914	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	POTASSIUM	Tuber	3820.0	39700.0	1.896677694990649	--
14	ARGININE	Tuber		11627.0	1.4137048510099204	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
14	BETAINE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	MANGANESE	Tuber	3.0	228.0	2.2128521901130793	--
12	COPPER	Plant	8.0	30.0	1.7700153652936705	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
12	GLYCINE	Tuber		2478.0	-0.9589643883137438	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
12	IODINE	Tuber		0.012		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
8	GLUTAMIC-ACID	Tuber		26493.0	0.992368582660606	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
8	TYROSINE	Tuber		1715.0	-0.8793170369065902	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
7	PHENYLALANINE	Tuber		2668.0	-0.8719715399187278	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
7	GLUCOSE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	HISTIDINE	Tuber		1906.0	-0.9223195022041148	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
6	IRON	Tuber	6.0	168.0	0.24468218049039905	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	STARCH	Tuber		262600.0	-0.8559350203790045	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
4	THREONINE	Tuber		3431.0	-0.64514832719124	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
4	PHOSPHORUS	Tuber	660.0	5200.0	1.3911427637816502	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
4	BORON	Root		3.0	-0.7782794876120274	--
4	LYSINE	Tuber		4288.0	-0.812095239335622	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
3	ALANINE	Tuber		2573.0	-1.0395005202506498	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ISOLEUCINE	Tuber		3145.0	-0.796664986919976	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
3	ASPARTIC-ACID	Tuber		16852.0	-1.326448129350463	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
3	VALINE	Tuber		4098.0	-0.7311563564093865	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
2	LEUCINE	Tuber		4384.0	-0.7698166425359898	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
1	LEVULOSE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	CATALASE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	SODIUM	Tuber	140.0	2400.0	1.7737778163191231	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68

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1	SERINE	Tuber		2954.0	-0.9611294548660699	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
0	HELIANTHIN	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	POLYPHENOLASE	Plant				--
0	HELIANGINE	Plant				--
0	KILOCALORIES	Tuber	70.0	3520.0	-1.790675713976659	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	2,7(14),9-BISABOLATRIEN-11-OL	Plant				--
0	SYNANTHRIN	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PHOSPHATASE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CARBOHYDRATES	Tuber	165000.0	847000.0	0.42719426616769435	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	SUGAR	Tuber		516500.0		Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
0	PHENOLASE	Tuber				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	FAT	Tuber	4550.0	5000.0	-1.5869188511895223	--
0	WATER	Tuber	370000.0	860000.0	0.7361766154103386	--
0	INULENIN	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ENT-12-ACETOXY-16-KAUREN-19-OIC-ACID	Plant				--
0	INULASE	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PROTEIN	Tuber	18000.0	132000.0	-0.04463634516171526	--
0	DILEVAN	Tuber				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ASH	Tuber	11000.0	115500.0	1.67848958729065	--
0	PROLINE	Tuber		2573.0	-0.9342964673469841	Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
0	CYSTINE-(HALF)	Tuber		1715.0		Izadoost, M. & Robinson, T., Synergism & antagonism in the pharmacology of alkaloidal plants, pp 137-58 in Craker, L. & Simon, J., eds., Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture & Pharmacology, v. 2, 1987, 255pp.
0	HEMICELLULOSE	Tuber		7000.0		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.