

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in Helianthus tuberosus

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,7(14),9-BISABOLATRIEN-11-OL	Plant	--	--		
3	ALANINE	Tuber	2573	2573	-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.
14	ARGININE	Tuber	11627	11627	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.
112	ASCORBIC-ACID	Tuber	40	306	-0.7242310715177989	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Tuber	11000	115500	1.67848958729065	
3	ASPARTIC-ACID	Tuber	16852	16852	-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.
53	BETA-CAROTENE	Tuber	--	6	1.414212086777973	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	BETAINE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	BORON	Root	3	3	-0.7782794876120274	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	CALCIUM	Tuber	140	9600	1.686845136728985	
0	CARBOHYDRATES	Tuber	165000	847000	0.42719426616769435	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	CATALASE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
20	CHOLINE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	COPPER	Plant	8	30	1.7700153652936705	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
0	CYSTINE-(HALF)	Tuber	1715	1715		Izadost, 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	DILEVAN	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	FAT	Tuber	4550	5000	-1.5869188511895223	
15	FIBER	Tuber	8000	59000	-0.21703768186054473	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	GLUCOSE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	GLUTAMIC-ACID	Tuber	26493	26493	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.
12	GLYCINE	Tuber	2478	2478	-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.
0	HELIANGINE	Plant	--	--		
0	HELIANTHIN	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	HEMICELLULOSE	Tuber	7000	7000		Laferriere, J.E., 1988, Nutricomp Program, Nutricomp Database; reviewed in J. Ethnobiology 9(1):27-29.
7	HISTIDINE	Tuber	1906	1906	-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.
0	INULASE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	INULENIN	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

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19	INULIN	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
12	IODINE	Tuber	0.012	0.012		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	IRON	Tuber	6	168	0.24468218049039905	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	ISOLEUCINE	Tuber	3145	3145	-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.
0	KILOCALORIES	Tuber	70	3520	-1.790675713976659	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	LEUCINE	Tuber	4384	4384	-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.
4	LYSINE	Tuber	4288	4288	-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.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
65	MAGNESIUM	Tuber	600	1800	0.18285907019650285	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
14	MANGANESE	Tuber	3	228	2.2128521901130793	
15	METHIONINE	Tuber	858	858	-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.
39	NIACIN	Tuber	1	64	0.5397578926492557	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PHENOLASE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	PHENYLALANINE	Tuber	2668	2668	-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.
0	PHOSPHATASE	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	PHOSPHORUS	Tuber	660	5200	1.3911427637816502	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
0	POLYPHENOLASE	Plant	--	--		
14	POTASSIUM	Tuber	3820	39700	1.896677694990649	

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0	PROLINE	Tuber	2573	2573	-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	PROTEIN	Tuber	18000	132000	-0.04463634516171526	
15	RIBOFLAVIN	Tuber	0.5	3	-0.4172054143150914	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	SERINE	Tuber	2954	2954	-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.
1	SODIUM	Tuber	140	2400	1.7737778163191231	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68
5	STARCH	Tuber	262600	262600	-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.
0	SUGAR	Tuber	516500	516500		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	SYNANTHRIN	Tuber	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	THIAMIN	Tuber	2	10	1.6248118455149858	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	THREONINE	Tuber	3431	3431	-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.
29	TRYPTOPHAN	Tuber	1811	1811	-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.
8	TYROSINE	Tuber	1715	1715	-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.
3	VALINE	Tuber	4098	4098	-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.
0	WATER	Tuber	370000	860000	0.7361766154103386	
77	ZINC	Tuber	16	64	1.8672816597577366	Bonness, M. S., Promising new drugs from plants: poisons that heal, Herbarist, #56, 1990, 59-68