

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Arctium lappa*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	(-)-ARCTIGENIN	Fruit	--	--		
16	ACETIC-ACID	Plant	--	--		
3	ALANINE	Root	250	1250	-1.0791749981456504	USDA's Ag Handbook 8 and sequelae)
10	ALPHA-AMYRIN	Plant	--	--		Jim Duke's personal files.
10	ALPHA-AMYRIN	Leaf	--	--		
2	ALPHA-AMYRIN-ACETATE	Plant	--	--		Jim Duke's personal files.
5	ALUMINUM	Root	54	231	-0.18853557796129974	
22	ARCTIGENIN	Fruit	--	--		Jim Duke's personal files.
22	ARCTIGENIN	Plant	--	--		
22	ARCTIGENIN	Seed	165.5	166.6		Jim Duke's personal files.
4	ARCTIIN	Fruit	--	--		Jim Duke's personal files.
4	ARCTIIN	Plant	--	--		
4	ARCTIIN	Seed	11.7	30000		Jim Duke's personal files.
4	ARCTIOPICRIN	Leaf	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
14	ARGININE	Root	1050	5250	-0.2760103779139148	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Root	20	85	-0.5973838006253391	
3	ASPARTIC-ACID	Root	1770	8850	-0.1433959040036098	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
51	ATROPINE	Root	0.3	30	1	Jim Duke's personal files.
24	BENZALDEHYDE	Root	--	--		
9	BETA-AMYRIN	Plant	--	--		Jim Duke's personal files.
9	BETA-AMYRIN	Leaf	--	--		
4	BETA-AMYRIN-ACETATE	Plant	--	--		Jim Duke's personal files.
53	BETA-CAROTENE	Root	11	45	-0.148681458601344	
5	BETA-ELEMENE	Root	--	--		Jim Duke's personal files.
13	BETA-EUDESOL	Leaf	--	--		
47	BETA-SITOSTEROL	Plant	--	--		Jim Duke's personal files.
6	BUTYRIC-ACID	Plant	--	--		
102	CAFFEIC-ACID	Root	2500	2500	0.16650294770473825	
28	CALCIUM	Root	1723	7330	-0.00797338977234112	
31	CARYOPHYLLENE	Root	--	--		Jim Duke's personal files.
77	CHLOROGENIC-ACID	Root	--	--		
24	CHROMIUM	Root	0.5	2	-0.1613147228789458	
2	COBALT	Root	3	12	-0.28474799428518266	
12	COPPER	Root	29	29	1.9129739707626465	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
2	COSTIC-ACID	Root	--	--		
2	COSTIC-ACID	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	CYPERENE	Root	--	--		Jim Duke's personal files.
2	CYSTINE	Root	60	300	-1.2393365913901333	USDA's Ag Handbook 8 and sequelae)
5	DAUCOSTEROL	Seed	170.6	170.6	1.3994486472112773	Jim Duke's personal files.
1	DECAN-1-AL	Root	--	--		Jim Duke's personal files.
4	DEHYDROCOSTUS-LACTONE	Plant	--	--		
4	DEHYDROCOSTUS-LACTONE	Root	--	--		Jim Duke's personal files.
1	DESMUTAGENIC FACTOR	Root	146	146		Jim Duke's personal files.
15	FIBER	Leaf	20000	94700	-0.8264904309689535	Wealth of India.
15	FIBER	Root	19400	97000	0.19738976012277715	
8	FRUCTOSE	Root	--	--		Jim Duke's personal files.
22	GABA	Root	--	25	-0.7148251719310679	Wealth of India.
7	GLUCOSE	Root	--	--		Jim Duke's personal files.
8	GLUTAMIC-ACID	Root	1570	7850	-0.6250548944791179	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Root	310	1550	-0.9327345082827507	USDA's Ag Handbook 8 and sequelae)
7	HISTIDINE	Root	310	1550	-0.235775973025123	USDA's Ag Handbook 8 and sequelae)
19	INULIN	Root	94000	500000	0.9709459983314757	
6	IRON	Root	35	147	-0.22809300347724715	
4	ISOCHLOROGENIC-ACID	Leaf	--	--		Wealth of India.
3	ISOLEUCINE	Root	300	1500	-1.026448865036451	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	ISOVALERIC-ACID	Plant	--	--		
7	LAURIC-ACID	Plant	--	--		
7	LAURIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
2	LEUCINE	Root	320	1600	-1.5972475612886774	USDA's Ag Handbook 8 and sequelae)
13	LIGNIN	Plant	--	--		
27	LINOLEIC-ACID	Fruit	103500	124200	1.3968737201405899	Wealth of India.
21	LUPEOL	Leaf	--	--		
21	LUPEOL	Plant	--	--		Jim Duke's personal files.
2	LUPEOL-ACETATE	Plant	--	--		Jim Duke's personal files.
4	LYSINE	Root	670	3350	-0.3553603353392198	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Root	1262	5370	1.4943915864476263	
14	MANGANESE	Root	1.4	6	-0.47422778363505214	
4	MATAIRESINOL	Seed	170.6	170.6		Jim Duke's personal files.
4	MATAIRESINOL	Fruit	60	350		Jim Duke's personal files.
4	MATAIRESINOL	Plant	--	--		
1	MERCURY	Root	1.27	1.27	4.056631483285861	Chen, H.C. and Lin, S.M. 1988. Determination of Mineral Elements in Certain Crude Drugs (Part 1), Kaohsiung J. Med. Sci., 4: 259-272.
15	METHIONINE	Root	90	450	-1.0886471756957197	USDA's Ag Handbook 8 and sequelae)
3	MUCILAGE	Plant	50000	120000	-0.25051722911671365	Pedersen, M. 1987. Nutritional Herbology. Pederson Publishing. Bountiful, Utah. 377 pp.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	MUCILAGE	Root	11750	120000	-0.2513892222400114	
6	MYRISTIC-ACID	Plant	--	--		
39	NIACIN	Root	3	13	-1.079268462705004	
18	OLEIC-ACID	Fruit	30000	36000	-0.20328110195358376	Wealth of India.
13	PALMITIC-ACID	Root	--	--		Jim Duke's personal files.
13	PALMITIC-ACID	Fruit	10500	12600	-0.16938025724372155	Wealth of India.
2	PHENYL-ACETALDEHYDE	Root	--	--		
7	PHENYLALANINE	Root	330	1650	-1.1170286109180518	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Root	1027	4370	0.14974951763203476	
1	PHYTOL	Leaf	--	--		
2	PHYTOSTEROLS	Root	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
30	POLYPHENOLS	Root	19000	36500	1	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
14	POTASSIUM	Root	3948	16800	0.07477700255119245	
6	PROPIONIC-ACID	Plant	--	--		
15	RIBOFLAVIN	Root	0.8	3.4	-0.14761901787013534	
60	SELENIUM	Root	0.3	1.4	-0.26286169402261483	
1	SERINE	Root	250	1250	-1.1895044313950447	USDA's Ag Handbook 8 and sequelae)
4	SILICON	Root	5.3	22.5	-0.23954668838760487	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Root	357	1520	0.1949623126900184	
5	STARCH	Root	28200	120000	-0.818804895582863	
8	STEARIC-ACID	Plant	--	--		
8	STEARIC-ACID	Root	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
12	STIGMASTEROL	Plant	--	--		Jim Duke's personal files.
12	STIGMASTEROL	Root	--	--		Wealth of India.
2	TARAXASTEROL	Plant	--	--		Jim Duke's personal files.
2	TARAXASTEROL	Leaf	--	--		Wealth of India.
2	TARAXASTEROL-ACETATE	Plant	--	--		Jim Duke's personal files.
2	TARAXASTEROL-ACETATE	Leaf	--	--		Wealth of India.
31	THIAMIN	Root	1	11	0.384789019052169	
4	THREONINE	Root	260	1300	-0.7216409513599528	USDA's Ag Handbook 8 and sequelae)
1	TIGLIC-ACID	Plant	--	--		
4	TIN	Root	5	21	0.4588256824495934	
12	TRACHELOGENIN	Fruit	--	--		Jim Duke's personal files.
12	TRACHELOGENIN	Plant	--	--		
29	TRYPTOPHAN	Root	60	300	-1.7641966493136618	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Root	180	900	-1.7927983636148572	USDA's Ag Handbook 8 and sequelae)
3	VALINE	Root	330	1650	-1.4093638383718028	USDA's Ag Handbook 8 and sequelae)

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
77	ZINC	Root	0.5	2.2	-0.9625912271962561	