

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Nelumbo nucifera*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1-(P-HYDROXYBENZYL)-6,7-DIHYDROXY-1,2,3,4-TETRAHYDROISOQU...	Plant	--	--		
0	2-HYDROXY-1-METHOXYAPORPHINE	Plant	--	--		
0	4'METHYL-N-METHYLCOCLAURINE	Leaf	--	--		
3	ALANINE	Seed	2390	7242	-0.6195055861544037	
3	ALANINE	Rhizome	540	2585	1	
10	ANONAININE	Leaf	--	--		
14	ARGININE	Rhizome	880	4210	1	
14	ARGININE	Seed	3380	10242	-0.609680847263205	
2	ARSENIC	Seed	0.11	0.11	0.4218036673294472	
112	ASCORBIC-ACID	Seed	--	--		
112	ASCORBIC-ACID	Rhizome	15	15	-0.760152513800441	
0	ASH	Rhizome	9700	68000	-0.7453615056459485	
0	ASH	Seed	9000	52000	0.12391641754028537	
2	ASPARAGINE	Rhizome	20000	20000	1.413855910886902	
3	ASPARTIC-ACID	Seed	5050	15303	-0.6468161986586874	
3	ASPARTIC-ACID	Rhizome	3690	17655	1	
53	BETA-CAROTENE	Rhizome	--	--		
53	BETA-CAROTENE	Seed	0.06	0.18	-0.41805691248749494	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	CALCIUM	Rhizome	450	3704	-0.7013828256307767	
28	CALCIUM	Seed	590	13333	1.6871886879486702	
28	CALCIUM	Fruit	1360	1511	-0.5411991668303356	
0	CARBOHYDRATES	Rhizome	120000	824880	0.6878082293275205	
0	CARBOHYDRATES	Seed	139000	762000	0.9482355149444796	
0	CARBOHYDRATES	Fruit	666000	740000	-0.2293103682144932	
0	CERYL-ALCOHOL	Leaf	--	--		
0	CETYL-ALCOHOL	Leaf	--	--		
12	COPPER	Seed	17	17	0.19823790075523398	
2	CYSTINE	Rhizome	220	1055	1	
2	CYSTINE	Seed	540	1636	-1.0532357485975676	
4	D-CATECHIN	Root	--	--		
0	D-GALLOCATECHIN	Root	--	--		
0	D-PRONUCIFERINE	Leaf	--	--		
0	DEHYDROANONAININE	Leaf	--	--		
0	DEHYDRONUCIFERINE	Leaf	--	--		
0	DEHYDROROEMERINE	Leaf	--	--		
0	DEMETHYLCOCLAURINE	Seed	--	--		
0	DL-ARMEPAVINE	Leaf	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DL-N-NORARMEPAVINE	Stem	--	--		
2	ERUCIC-ACID	Seed	310	939	-0.8054355202873063	
0	FAT	Rhizome	1000	6790	-0.8553236515091139	
0	FAT	Seed	2000	27000	-1.255672714114354	
0	FAT	Fruit	24000	26667	-0.4375716888129199	
15	FIBER	Seed	10700	131000	-0.02983822939187279	
15	FIBER	Fruit	26000	28889	-1.0643159457036309	
15	FIBER	Rhizome	8000	49383	-1.416178848985394	
0	GADOLEIC-ACID	Rhizome	20	95	-1	
0	GADOLEIC-ACID	Seed	120	364	-0.6782820193733493	
0	GLUCOLUTEOLIN	Leaf	--	--		
8	GLUTAMIC-ACID	Seed	9570	29000	-0.5363817172881947	
8	GLUTAMIC-ACID	Rhizome	1390	6650	-1	
7	GLUTATHIONE	Seed	--	--		
12	GLYCINE	Rhizome	1560	7464	1	
12	GLYCINE	Seed	2210	6697	-0.6152261192530225	
5	HIGENAMINE	Plant	--	--		
7	HISTIDINE	Rhizome	380	1820	1	
7	HISTIDINE	Seed	1150	3485	-0.7015941536729161	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
30	HYPEROSIDE	Flower	--	--		
6	IRON	Seed	9.5	71	-0.3707432045286709	
6	IRON	Rhizome	7	70	-0.8723774649935054	
3	ISOLEUCINE	Rhizome	540	2585	-1	
3	ISOLEUCINE	Seed	2050	6212	-0.5460777275645406	
0	ISOLIENSINE	Plant	--	--		
2	ISOLIENSININE	Seed	--	--		
3	ISOQUERCETIN	Flower	--	--		
75	KAEMPFEROL	Plant	--	--		
0	KAEMPFEROL-3-GLUCURONIDE	Flower	--	--		
0	KILOCALORIES	Rhizome	560	2680	-1	
0	KILOCALORIES	Seed	630	3900	-0.7503835294536415	
2	LEUCINE	Rhizome	690	3300	-1	
2	LEUCINE	Seed	3260	9879	-0.6894100288005248	
1	LEUCOCYANIDIN	Leaf	--	--		
2	LEUCODELPHINIDIN	Leaf	--	--		
4	LIENSININE	Seed	--	--		
27	LINOLEIC-ACID	Rhizome	140	670	-1	
27	LINOLEIC-ACID	Seed	2850	8636	-0.8438395102690177	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINOLENIC-ACID	Rhizome	60	285		
0	LINOLENIC-ACID	Seed	270	818	-0.5655819009930871	
11	LIRIODENINE	Leaf	--	--		
11	LIRIODENINE	Stem	--	--		
0	LOTUSINE	Seed	--	--		
0	LOTUSINE-CHLORIDE	Embryo	--	--		
78	LUTEOLIN	Flower	--	--		
7	LUTEOLIN-7-GLUCOSIDE	Embryo	--	--		
4	LYSINE	Rhizome	940	4500	1	
4	LYSINE	Seed	2640	8000	-0.5551787308352996	
65	MAGNESIUM	Rhizome	200	1215	-0.4416127218596474	
65	MAGNESIUM	Seed	560	2650	-0.1169887078856715	
14	MANGANESE	Seed	125	125	0.8903919851861474	
0	MERATINE	Flower	--	--		
15	METHIONINE	Rhizome	220	1050	1	
15	METHIONINE	Seed	720	2182	-0.5507291236968568	
13	MUFA	Rhizome	200	955	-1	
13	MUFA	Seed	1040	3152	-0.7688061139304148	
6	MYRISTIC-ACID	Rhizome	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	MYRISTIC-ACID	Seed	10	30	-0.2956104916529291	
2	N-METHYLCOCLAURINE	Leaf	--	--		
0	N-METHYLISOCOCLAURINE	Leaf	--	--		
0	N-NOR-ARMEPAVINE	Seed	--	--		
0	N-NORNUCIFERINE	Seed	--	--		
0	NEFERIN	Seed	--	--		
0	NELUMBINE	Leaf	--	--		
1	NELUMBOSIDE	Leaf	--	--		
2	NEO-CHLOROGENIC-ACID	Root	--	--		
39	NIACIN	Rhizome	21	130	0.9186705315156052	
39	NIACIN	Seed	4	78	1.0511049250581166	
1	NORNUCIFERINE	Leaf	--	--		
1	NUCIFERINE	Leaf	--	--		
1	NUCIFERINE	Seed	--	--		
0	O-METHYLCORYPALLINE	Seed	--	--		
18	OLEIC-ACID	Rhizome	140	670	-1	
18	OLEIC-ACID	Seed	620	1879	-0.9636537281728552	
3	OXOUSHINSUNINE	Seed	--	--		
13	PALMITIC-ACID	Seed	770	2333	-0.6514636896299181	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Rhizome	280	1340	-1	
2	PALMITOLEIC-ACID	Rhizome	20	95	-1	
7	PHENYLALANINE	Rhizome	470	2250	-1	
7	PHENYLALANINE	Seed	2060	6242	-0.6327266374250495	
4	PHOSPHORUS	Rhizome	1000	4785	0.14066169286845265	
4	PHOSPHORUS	Seed	590	7130	0.4694948719093944	
4	PHOSPHORUS	Fruit	2940	3267	0.015492353484958482	
14	POTASSIUM	Rhizome	3820	34925	2.4385217942907635	
14	POTASSIUM	Seed	3670	16652	0.3589805431834817	
0	PROLINE	Seed	3440	10424	-0.17914342148285398	
0	PROLINE	Rhizome	1360	6500	1	
3	PRONUCIFERINE	Seed	--	--		
0	PROTEIN	Fruit	172000	191111	1.0940505147857715	
0	PROTEIN	Rhizome	26000	167000	0.3411913153735525	
0	PROTEIN	Seed	41300	242000	0.07297822800946349	
4	PUFA	Seed	3120	9454	-0.7339901909326525	
4	PUFA	Rhizome	200	955	-1	
176	QUERCETIN	Flower	--	--		
0	QUERCETIN-3-GLUCURONIDE	Flower	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	RAFFINOSE	Rhizome	--	--		
0	REDUCING-SUGARS	Rhizome	15600	96296	1	
0	REDUCING-SUGARS	Fruit	24000	26667	-1.1602147215207481	
15	RIBOFLAVIN	Rhizome	0.6	3.7	-0.4247702403386429	
15	RIBOFLAVIN	Seed	0.4	2.6	-0.35420998757183836	
10	ROBININ	Plant	--	--		
0	ROEMERINE	Leaf	--	--		
87	RUTIN	Embryo	--	--		
1	SERINE	Rhizome	600	2870	1	
1	SERINE	Seed	2520	7636	-0.5631281506906898	
0	SFA	Seed	880	2667	-0.5522324907429264	
1	SODIUM	Rhizome	395	1935	1.5998918622066602	
1	SODIUM	Seed	10	490	0.06211847255545912	
1	STACHYOSE	Rhizome	--	--		
5	STARCH	Rhizome	92500	570988	0.8675764759039429	
8	STEARIC-ACID	Rhizome	10	50	-1	
14	SUCROSE	Fruit	41000	45556	-0.4238120028643726	
14	SUCROSE	Rhizome	4100	25309	-0.6188226376488517	
41	TANNIC-ACID	Rhizome	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	THIAMIN	Rhizome	2.2	14	1.5614503163088487	
31	THIAMIN	Seed	1.5	7.5	0.21850728435000166	
4	THREONINE	Rhizome	510	2440	1	
4	THREONINE	Seed	2000	6060	-0.4647145083594269	
15	TRIGONELLINE	Rhizome	--	--		
29	TRYPTOPHAN	Rhizome	200	955	1	
29	TRYPTOPHAN	Seed	590	1788	-0.5242003854770584	
8	TYROSINE	Rhizome	290	1390	1	
8	TYROSINE	Seed	1000	3030	-1.0913578208403276	
3	VALINE	Seed	2660	8061	-0.48654728017865406	
3	VALINE	Rhizome	550	2630	-1	
0	WATER	Rhizome	750000	838000	0.7144555660749288	
0	WATER	Seed	143000	80200	-0.5656625280868578	
77	ZINC	Seed	28	28	-0.48638233396421304	