

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Linum usitatissimum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	ALPHA-LINOLENIC-ACID	Seed	108000.0	254600.0	4.689859301771256	--
4	PHOSPHORUS	Seed	3961.0	20335.0	3.9590351958118073	--
0	LINOLENIC-ACID	Seed	108000.0	228000.0	3.4004528622626684	--
7	GLUCOSE	Seed	111000.0	146000.0	3.201211441889907	--
77	ZINC	Seed	85.0	155.0	3.1191728559254055	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
24	PECTIN	Seed	53900.0	100000.0	2.5314122594852875	--
6	IRON	Seed	29.0	549.0	1.8501912385034966	--
0	PHYTIN	Seed	24000.0	64000.0	1.6398847943395507	--
65	MAGNESIUM	Seed	3715.0	7002.0	1.6024579573476614	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
9	PHYTIC-ACID	Seed	18000.0	33000.0	1.1694904127352321	--
3	CADMIUM	Seed	0.075	2.8	1.0827489707798146	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
0	CARBOHYDRATES	Hay	801000.0	817000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PHOSPHATIDYL-CHOLINE	Seed	160.0	2025.0	1.0	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
15	FIBER	Hay	365000.0	462000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Hay	33000.0	61000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	NICOTINAMIDE	Seed		38.0	1.0	--
0	FAT	Seed	40000.0	450000.0	0.9724195926436688	--
0	PROTEIN	Seed	160000.0	341000.0	0.9536344979354476	--
14	SULFUR	Seed	608.0	4200.0	0.9418680963960322	--
0	LINOLENIC-ACID	Seed Oil	210000.0	553000.0	0.9417924041354631	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SODIUM	Seed	400.0	1014.0	0.8939255700301022	--
14	GAMMA-TOCOPHEROL	Oil		573.0	0.7575983644124141	--
12	COPPER	Seed	17.0	23.0	0.7424671767599702	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
28	CALCIUM	Seed	1820.0	7400.0	0.5975460826300514	--
13	LIGNIN	Seed	52000.0	72000.0	0.4935473881578569	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
0	PENTOSANS	Seed	79000.0	99000.0	0.42471142796963834	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
1	CELLULOSE	Seed	93000.0	147000.0	0.3583523215580603	--
14	POTASSIUM	Seed	7964.0	15009.0	0.21448936936526888	--
14	MANGANESE	Seed	50.0	70.0	0.2052706550190378	--
0	ASH	Seed	26000.0	49000.0	0.03368352764748354	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
18	OLEIC-ACID	Seed	16.0	120000.0	0.007370246204918166	--
27	LINOLEIC-ACID	Seed	30000.0	100000.0	-0.06102368779923489	--
15	FIBER	Seed	48000.0	126000.0	-0.06931908335079716	--
0	PHOSPHATIDES	Seed		7000.0	-0.09878698384821892	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
18	OLEIC-ACID	Seed Oil		283000.0	-0.1995525939212177	--
8	STEARIC-ACID	Seed	13595.0	16545.0	-0.20641972214709475	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
13	PALMITIC-ACID	Seed	19005.0	22515.0	-0.23504354469855987	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
8	STEARIC-ACID	Seed Oil		81000.0	-0.2772564234419937	--
0	AMMONIA(NH3)	Seed		3000.0	-0.3519642461737174	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
25	P-COUMARIC-ACID	Seed		60.0	-0.364755663014079	--
9	HCN	Seed	0.08	600.0	-0.3812623601747087	--
93	TOCOPHEROL	Seed		47.0	-0.4002735595606585	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
53	BETA-CAROTENE	Seed	0.0	0.321	-0.4092431063494038	--
16	ACETIC-ACID	Seed	3105.0	3853.0	-0.45177356521117334	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	CHOLINE	Seed	910.0	1180.0	-0.46342254709086045	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	TRANS-FERULIC-ACID	Seed		375.0	-0.47614826602151417	--
20	LECITHIN	Seed		8800.0	-0.4991948044159543	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CARBOHYDRATES	Seed	299000.0	397000.0	-0.5023482242890303	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	CHLORINE	Seed	42.0	78.0	-0.5791204881302392	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PHOSPHOLIPIDS	Seed	360.0	4050.0	-0.5954216753452876	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
13	PALMITIC-ACID	Seed Oil		90000.0	-0.6107337786717688	--
47	BETA-SITOSTEROL	Seed		19.0	-0.6236819715213897	--
14	SUCROSE	Seed		388.0	-0.6923667566162774	--
32	ALPHA-TOCOPHEROL	Oil		5.0	-0.6929583568728471	--
15	RIBOFLAVIN	Seed		1.7	-0.6991387592002618	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	MUCILAGE	Seed	20000.0	84000.0	-0.7141062298500116	--
27	LINOLEIC-ACID	Seed Oil		182000.0	-0.8223368361797175	--
39	NIACIN	Seed		15.0	-0.8347441211060711	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
5	DAUCOSTEROL	Seed		3.0	-0.8762395152008512	--
0	SILICA	Seed	322.0	608.0	-1.0	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	L-ARABINOSE	Seed	2700.0	7200.0	-1.0	--
0	ASH	Hay	62000.0	72000.0	-1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PROTEIN	Hay	76000.0	78000.0	-1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
65	MAGNESIUM	Hay		3100.0	-1.0	--
10	LIGNANS	Seed	525.0	675.0	-1.0	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
0	OLEORESIN	Seed	520.0	5850.0	-1.0	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
14	MANGANESE	Hay		8.1	-1.0000000000000002	--
14	ARGININE	Seed		0.554	-1.0433413024542735	--
5	STARCH	Seed	2000.0	39000.0	-1.0980435455891777	Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
13	CYSTEINE	Seed		0.09	-1.10002836803819	--
0	AMMONIA	Seed		3000.0	-1.1097957592672159	--
15	METHIONINE	Seed		0.09	-1.1141398667164637	--
29	TRYPTOPHAN	Seed		0.089	-1.1339383282290112	--
31	THIAMIN	Seed		1.8	-1.141416879500738	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	LYSINE	Plant		0.209	-1.2551253944019245	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ISOLEUCINE	Seed		4.0	-1.3382280003117872	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	PHENYLALANINE	Seed		0.239	-1.3781037282174438	--
0	NH3	Seed		3000.0	-1.4101609728096458	--
3	ISOLEUCINE	Plant		0.237	-1.4141272939903209	--
0	PENTOSSES	Seed	4010.0	4977.0	-1.4142135623730951	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	VALINE	Seed		0.284	-1.4793036444616081	--
12	GLYCINE	Seed		0.352	-1.5834447610833413	--
7	HISTIDINE	Seed		0.108	-1.6280448288553528	--
2	LEUCINE	Seed		0.316	-1.6349859893322434	--
4	LYSINE	Seed		2.5	-1.63848275248756	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
8	GLUTAMIC-ACID	Seed		1.153	-1.7598687378912001	--
8	TYROSINE	Seed		0.133	-1.7932335597859743	--
4	THREONINE	Seed		0.195	-1.8202596354546852	--
3	ASPARTIC-ACID	Seed		0.557	-2.0052985487141943	--
1	SERINE	Seed		0.248	-2.0265239206958663	--
3	ALANINE	Seed		0.254	-2.158955919799553	--
0	PROLINE	Seed		0.191	-2.226996902840283	--
1	EICOSANOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MANNURONIC-ACID	Seed	4500.0	9000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	TIN	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	PHYTOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUCENIN-2	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	HCN	Shoot		1280.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	SINAPIC-ACID-GLUCOSE-ESTER	Seed				--
13	P-HYDROXY-BENZOIC-ACID	Sprout Seedling				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.
0	LINEIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-XYLOPYRANOSE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LINUSITAMARIN	Seed		5.0		--
0	METHYL-LINAMARIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	GERANYL-GERANIOL	Seed				--
0	CHRYSANTHEMIN	Flower				--
0	DICROTALIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	GAMMA-LINOLENIC-ACID	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	CAMPESTEROL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUCENIN-1	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	SINAPIC-ACID	Seed				--
0	P-COUMARIC-ACID-ESTER	Sprout Seedling				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LINASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CYCLOLINOPEPTIDE-B	Seed		2.0		--
0	TRANS-CAFFEIC-ACID	Seed		55.0		--
0	L-ARABANOFURANOSE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	CHROMIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
18	VITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	24-METHYLENE-CYCLOARTENOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINUM-GALACTANS	Tissue Culture				--
0	DIASTASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CALLISTEPHIN	Flower				--
2	LOTAUSTRALIN	Seed				--
3	SECOISOLARICIRESINOL	Seed				--
4	ORIENTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	LINAMARIN	Seed	0.0	320.0		--
0	CYCLOLINOPEPTIDE-A	Seed Oil				--
0	CYCLOLINOPEPTIDE	Seed				--
3	SECOISOLARICIRESINOL	Plant				Stitt, Paul. Why George should eat broccoli.
4	ISOVITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GALACTURONIC-ACID	Seed	9000.0	48489.0		--
0	PHOSPHATIDYL-SERINE	Seed	160.0	2025.0		Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
12	VICENIN-2	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	DELTA-5-AVENASTEROL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	PHOSPHORUS	Hay		1110.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	LITHIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	POLYSACCHARIDES	Seed				--
0	LINAMARASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CIS-LINOLEIC-ACID-METHYL-ESTER	Seed		4.3		--
7	CYCLOARTENOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	ARSENIC	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	ISOORIENTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	FUCOSE	Seed	4000.0	5000.0		Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
77	CHLOROGENIC-ACID	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	VICENIN-1	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
27	LINOLEIC-ACID	Flower				--
4	GLUCURONIC-ACID	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
28	CALCIUM	Hay		7200.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	STRONTIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LIPASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DELPHINIDIN-3-TRIGLUCOSIDE	Flower				--
0	PEROXIDASE	Root				--
1	O-GLYCOFLAVONE-C-GLYCOSIDE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	LIGNANS	Plant				--
0	CIS-12-OXOPHYTODIENOIC-ACID	Seed				--
0	CYANIDIN-3-TRIGLUCOSIDE	Flower				--
32	ALPHA-TOCOPHEROL	Seed Oil				--
0	RHAMNOGALACTURONAN	Seed				Abstract (See species file)
15	MALIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
16	VANADIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	RAFFINOSE	Seed				--
27	LINOLEIC-ACID	Sprout Seedling				--
0	CAFFEIC-ACID-ESTER	Sprout Seedling				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	STIGMASTEROL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PEROXIDASE	Cotyledon				--
1	LINUSTATIN	Seed	4.8	5380.0		--
0	DELPHINIDIN-3-GLUCOSYL-RUTINOSIDE	Flower				--
0	PEROXIDASE	Hypocotyl				--
3	NICKEL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LIGNANDIGLUCOSIDE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	HCN	Root		670.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
77	CHLOROGENIC-ACID	Seed				--
0	CYANIDIN-3-O-BETA-D-GLUCOSYL-RUTINOSIDE	Flower				--
101	APIGENIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHENOLIC-ACID-ESTERS	Seed	739.0	5420.0		--
0	CERYL-CEROTATE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DELPHINIDIN-3-DIGLUCOSIDE	Flower				--
0	GENTIOBIOSE	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
9	HCN	Hull Husk		460.0		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	BETA-HYDROXY-BETA-METHYL-GLUTARIC-ACID	Seed				--
0	CYANIDIN-3-GLUCOSYL-RUTINOSIDE	Flower				--
14	GAMMA-TOCOPHEROL	Seed Oil				--
0	FERULIC-ACID-ESTER	Sprout Seedling				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PHENOLIC-ACIDS	Seed	810.0	103400.0		--
0	CERYL-ALCOHOL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ISOFUCOSTEROL	Seed				Endo, S., Ishizaki, T., Kimata, M. 1993. Fatty Acid and Sterol Compositions in the Seeds of <i>Perilla frutescens</i> and <i>Linum Usitatissimum</i> . <i>Takyo Gakugei Daigaku Kiyo Dai-4-Bumon</i> , 45: 27-32.
0	BETA-HYDROXY-BETA-METHYL-GLUTARIC-ACID-MONOMETHYLESTER	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	SQUALENE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	FERULIC-ACID-ESTER	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PELARGONIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
0	DELPHINIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
0	CYANOGENIC-GLYCOSIDES	Seed	3310.0	8350.0		Cunane, S. and Thompson, L. U., eds. 1995. Flaxseed in Human Nutrition. AOCS Press, Champaign IL. 384 pp.
18	OLEIC-ACID	Flower				--
1	NEOLINUSTATIN	Seed	19.0	4540.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	HCN	Flower		6920.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	ALPHA-LINOLENIC-ACID	Flower				--
0	CYANIDIN-3,5-DIGLUCOSIDE	Cotyledon				--
10	SQUALENE	Seed Oil				--
0	CEROTIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FLAVONOIDS	Tissue Culture				--
0	TRANS-LINOLEIC-ACID-METHYL-ESTER	Seed		4.3		--
0	PELARGONIDIN-3-O-BETA-D-GLUCOSYL-RUTINOSIDE	Flower				--
0	LINOCINNAMARIN	Seed		30.0		--
61	FERULIC-ACID	Seed				--
0	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Flower				--
6	MYRISTIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LEAD	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	ALPHA-LINOLENIC-ACID	Sprout Seedling				--
7	CYANIDIN	Flower				Abstract (See species file)
0	HEXADECANOIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CAROTENES	Seed	0.321	1.07		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	SINAPIC-ACID-ESTER	Sprout Seedling				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LINOCAFFEIN	Seed				--
0	FATTY-ACIDS	Seed Oil				Upadhy, G. S., Narayanaswamy, G., Kartha, A. R. S. 1974. Note on the Comparative Development of Fatty Acids in Ripening Seeds of 6 Dicot Species Producing C16-C18 Acid Fats. Indian J. Agr. Sci. 44: 620.
9	DELPHINIDIN	Flower				Abstract (See species file)
5	CONIFERYL-ALDEHYDE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	BARIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
33	NORDIHYDROGUAIARETIC-ACID	Seed				--
0	L-RHAMNOSE	Seed	3900.0	17800.0		--
0	TRANS-SINAPIC-ACID	Seed		290.0		--
0	COLININ	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DELPHINIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
0	ALPHA-CEPHALINE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HETEROSIDE	Sprout Seedling				Hegnauer, R. 1962-1997. Chemotaxonomie der Pflanzen, Bde 1-11. Birkhauser Verlag Basel, Boston, Berlin.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ERUCIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TITANIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	POTASSIUM	Hay		17400.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
78	LUTEOLIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	SILVER	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
11	PANTOTHENIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LININ	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	DELTA-TOCOPHEROL	Seed Oil				--
0	D-XYLOSE	Seed	5400.0	16200.0		--
1	CHOLESTEROL	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	AUXINE-ESTER	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	MOLYBDENUM	Seed				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	Refernce Citation
0	L-GALACTOSE	Seed	2400.0	7200.0		--
2	COBALT	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Flower				--