

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Linum usitatissimum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARBOHYDRATES	Hay	801000.0	817000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	LINOLENIC-ACID	Seed Oil	210000.0	553000.0	0.9417924041354631	--
15	FIBER	Hay	365000.0	462000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Seed	40000.0	450000.0	0.9724195926436688	--
0	CARBOHYDRATES	Seed	299000.0	397000.0	-0.5023482242890303	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PROTEIN	Seed	160000.0	341000.0	0.9536344979354476	--
18	OLEIC-ACID	Seed Oil		283000.0	-0.1995525939212177	--
15	ALPHA-LINOLENIC-ACID	Seed	108000.0	254600.0	4.689859301771256	--
0	LINOLENIC-ACID	Seed	108000.0	228000.0	3.4004528622626684	--
27	LINOLEIC-ACID	Seed Oil		182000.0	-0.8223368361797175	--
1	CELLULOSE	Seed	93000.0	147000.0	0.3583523215580603	--
7	GLUCOSE	Seed	111000.0	146000.0	3.201211441889907	--
15	FIBER	Seed	48000.0	126000.0	-0.06931908335079716	--
18	OLEIC-ACID	Seed	16.0	120000.0	0.007370246204918166	--
0	PHENOLIC-ACIDS	Seed	810.0	103400.0		--
24	PECTIN	Seed	53900.0	100000.0	2.5314122594852875	--
27	LINOLEIC-ACID	Seed	30000.0	100000.0	-0.06102368779923489	--
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.
13	PALMITIC-ACID	Seed Oil		90000.0	-0.6107337786717688	--
3	MUCILAGE	Seed	20000.0	84000.0	-0.7141062298500116	--
8	STEARIC-ACID	Seed Oil		81000.0	-0.2772564234419937	--
0	PROTEIN	Hay	76000.0	78000.0	-1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	ASH	Hay	62000.0	72000.0	-1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PHYTIN	Seed	24000.0	64000.0	1.6398847943395507	--
0	FAT	Hay	33000.0	61000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Seed	26000.0	49000.0	0.03368352764748354	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	GALACTURONIC-ACID	Seed	9000.0	48489.0		--
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.
9	PHYTIC-ACID	Seed	18000.0	33000.0	1.1694904127352321	--
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.
4	PHOSPHORUS	Seed	3961.0	20335.0	3.9590351958118073	--
0	L-RHAMNOSE	Seed	3900.0	17800.0		--
14	POTASSIUM	Hay		17400.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
0	D-XYLOSE	Seed	5400.0	16200.0		--
14	POTASSIUM	Seed	7964.0	15009.0	0.21448936936526888	--
0	MANNURONIC-ACID	Seed	4500.0	9000.0		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
28	CALCIUM	Seed	1820.0	7400.0	0.5975460826300514	--
0	L-GALACTOSE	Seed	2400.0	7200.0		--
0	L-ARABINOSE	Seed	2700.0	7200.0	-1.0	--
28	CALCIUM	Hay		7200.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
0	PHOSPHATIDES	Seed		7000.0	-0.09878698384821892	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
9	HCN	Flower		6920.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
0	PHENOLIC-ACID-ESTERS	Seed	739.0	5420.0		--
1	LINUSTATIN	Seed	4.8	5380.0		--
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.
0	PENTOSES	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.
1	NEOLINUSTATIN	Seed	19.0	4540.0		--
14	SULFUR	Seed	608.0	4200.0	0.9418680963960322	--
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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
65	MAGNESIUM	Hay		3100.0	-1.0	--
0	AMMONIA(NH3)	Seed		3000.0	-0.3519642461737174	--
0	NH3	Seed		3000.0	-1.4101609728096458	--
0	AMMONIA	Seed		3000.0	-1.1097957592672159	--
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.
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.
9	HCN	Shoot		1280.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
4	PHOSPHORUS	Hay		1110.0		CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	SODIUM	Seed	400.0	1014.0	0.8939255700301022	--
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.
9	HCN	Root		670.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
9	HCN	Seed	0.08	600.0	-0.3812623601747087	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	GAMMA-TOCOPHEROL	Oil		573.0	0.7575983644124141	--
6	IRON	Seed	29.0	549.0	1.8501912385034966	--
9	HCN	Hull Husk		460.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	SUCROSE	Seed		388.0	-0.6923667566162774	--
2	TRANS-FERULIC-ACID	Seed		375.0	-0.47614826602151417	--
2	LINAMARIN	Seed	0.0	320.0		--
0	TRANS-SINAPIC-ACID	Seed		290.0		--
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.
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.
14	MANGANESE	Seed	50.0	70.0	0.2052706550190378	--
25	P-COUMARIC-ACID	Seed		60.0	-0.364755663014079	--
0	TRANS-CAFFEIC-ACID	Seed		55.0		--
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.
2	NICOTINAMIDE	Seed		38.0	1.0	--
0	LINOCINNAMARIN	Seed		30.0		--
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.
47	BETA-SITOSTEROL	Seed		19.0	-0.6236819715213897	--
39	NIACIN	Seed		15.0	-0.8347441211060711	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	MANGANESE	Hay		8.1	-1.0000000000000002	--
32	ALPHA-TOCOPHEROL	Oil		5.0	-0.6929583568728471	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LINUSITAMARIN	Seed		5.0		--
0	CIS-LINOLEIC-ACID-METHYL-ESTER	Seed		4.3		--
0	TRANS-LINOLEIC-ACID-METHYL-ESTER	Seed		4.3		--
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.
5	DAUCOSTEROL	Seed		3.0	-0.8762395152008512	--
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.
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.
0	CYCLOLINOPEPTIDE-B	Seed		2.0		--
31	THIAMIN	Seed		1.8	-1.141416879500738	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
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.
8	GLUTAMIC-ACID	Seed		1.153	-1.7598687378912001	--
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.
3	ASPARTIC-ACID	Seed		0.557	-2.0052985487141943	--
14	ARGININE	Seed		0.554	-1.0433413024542735	--
12	GLYCINE	Seed		0.352	-1.5834447610833413	--
53	BETA-CAROTENE	Seed	0.0	0.321	-0.4092431063494038	--
2	LEUCINE	Seed		0.316	-1.6349859893322434	--
3	VALINE	Seed		0.284	-1.4793036444616081	--
3	ALANINE	Seed		0.254	-2.158955919799553	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	SERINE	Seed		0.248	-2.0265239206958663	--
7	PHENYLALANINE	Seed		0.239	-1.3781037282174438	--
3	ISOLEUCINE	Plant		0.237	-1.4141272939903209	--
4	LYSINE	Plant		0.209	-1.2551253944019245	--
4	THREONINE	Seed		0.195	-1.8202596354546852	--
0	PROLINE	Seed		0.191	-2.226996902840283	--
8	TYROSINE	Seed		0.133	-1.7932335597859743	--
7	HISTIDINE	Seed		0.108	-1.6280448288553528	--
15	METHIONINE	Seed		0.09	-1.1141398667164637	--
13	CYSTEINE	Seed		0.09	-1.10002836803819	--
29	TRYPTOPHAN	Seed		0.089	-1.1339383282290112	--
0	HEXADECANOIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
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	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	CERYL-CEROTATE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINCAFFEIN	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
0	DELPHINIDIN-3-DIGLUCOSIDE	Flower				--
33	NORDIHYDROGUAIARETIC-ACID	Seed				--
0	DELPHINIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
78	LUTEOLIN	Plant				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.
0	TITANIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CYANIDIN-3-GLUCOSYL-RUTINOSIDE	Flower				--
1	CHOLESTEROL	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	SILVER	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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	CERYL-ALCOHOL	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	Reference Citation
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	DELPHINIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
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.
2	MOLYBDENUM	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				--
0	LUCENIN-2	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	TIN	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CYANIDIN-3,5-DIGLUCOSIDE	Cotyledon				--
1	PHYTOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CEROTIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	SINAPIC-ACID-GLUCOSE-ESTER	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	DELPHINIDIN-3-0-BETA-D-GLUCOSIDE	Flower				--
0	METHYL-LINAMARIN	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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.
7	CYANIDIN	Flower				Abstract (See species file)
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.
9	DELPHINIDIN	Flower				Abstract (See species file)
0	BARIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINUM-GALACTANS	Tissue Culture				--

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0	L-ARABANOFURANOSE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
18	VITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	COLININ	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ALPHA-CEPHALINE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	LOTAUSTRALIN	Seed				--
3	SECOISOLARICIRE SINOL	Plant				Stitt, Paul. Why George should eat broccoli.
2	ERUCIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	SECOISOLARICIRE SINOL	Seed				--
4	ORIENTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CYCLOLINOPEPTIDE-A	Seed Oil				--
0	AUXINE-ESTER	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	ISOVITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	VICENIN-2	Leaf				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
2	COBALT	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
11	LITHIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	EICOSANOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	POLYSACCHARIDES	Seed				--
0	LINAMARASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
27	LINOLEIC-ACID	Flower				--
4	ISOORIENTIN	Leaf				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.
0	D-XYLOPYRANOSE	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	GLUCURONIC-ACID	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	STRONTIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
11	GERANYL-GERANIOL	Seed				--
0	CHRYSANTHEMIN	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	LIPASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	RHAMNOGALACTURONAN	Seed				Abstract (See species file)
0	DICROTALIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	CAMPESTEROL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
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				--
32	ALPHA-TOCOPHEROL	Seed Oil				--
1	RAFFINOSE	Seed				--
27	LINOLEIC-ACID	Sprout Seedling				--
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.
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
24	CHROMIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PEROXIDASE	Cotyledon				--
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.
0	DIASTASE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CALLISTEPHIN	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.
77	CHLOROGENIC-ACID	Seed				--
0	CYCLOLINOPEPTIDE	Seed				--
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.
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.
0	BETA-HYDROXY-BETA-METHYL-GLUTARIC-ACID	Seed				--
14	GAMMA-TOCOPHEROL	Seed Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ARSENIC	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.
7	CYCLOARTENOL	Seed				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	SQUALENE	Seed				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
77	CHLOROGENIC-ACID	Plant				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	FERULIC-ACID-ESTER	Seed				List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PELARGONIDIN-3-O-BETA-D-RUTINOSIDE	Flower				--
0	DELPHINIDIN-3-TRIGLUCOSIDE	Flower				--
18	OLEIC-ACID	Flower				--
15	ALPHA-LINOLENIC-ACID	Flower				--
10	SQUALENE	Seed Oil				--
0	FLAVONOIDS	Tissue Culture				--
0	CYANIDIN-3-TRIGLUCOSIDE	Flower				--
0	PELARGONIDIN-3-O-BETA-D-GLUCOSYL-RUTINOSIDE	Flower				--
61	FERULIC-ACID	Seed				--
0	DELPHINIDIN-3-GLUCOSYL-RUTINOSIDE	Flower				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
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				--