

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	FIBER	Hay	365000.0	462000.0	1.0	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
18	OLEIC-ACID	Seed Oil		283000.0	-0.1995525939212177	--
15	ALPHA-LINOLENIC-ACID	Seed	108000.0	254600.0	4.689859301771256	--
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	--
24	PECTIN	Seed	53900.0	100000.0	2.5314122594852875	--
27	LINOLEIC-ACID	Seed	30000.0	100000.0	-0.06102368779923489	--
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	--
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.
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	--
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.
14	POTASSIUM	Seed	7964.0	15009.0	0.21448936936526888	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
28	CALCIUM	Seed	1820.0	7400.0	0.5975460826300514	--
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.
9	HCN	Flower		6920.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	LINUSTATIN	Seed	4.8	5380.0		--
1	NEOLINUSTATIN	Seed	19.0	4540.0		--
14	SULFUR	Seed	608.0	4200.0	0.9418680963960322	--
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	--
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	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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.
9	HCN	Seed	0.08	600.0	-0.3812623601747087	--
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		--
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	--
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	--
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	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	--
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.
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	--
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	--
1	SERINE	Seed		0.248	-2.0265239206958663	--
7	PHENYLALANINE	Seed		0.239	-1.3781037282174438	--
3	ISOLEUCINE	Plant		0.237	-1.4141272939903209	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	LYSINE	Plant		0.209	-1.2551253944019245	--
4	THREONINE	Seed		0.195	-1.8202596354546852	--
8	TYROSINE	Seed		0.133	-1.7932335597859743	--
7	HISTIDINE	Seed		0.108	-1.6280448288553528	--
13	CYSTEINE	Seed		0.09	-1.10002836803819	--
15	METHIONINE	Seed		0.09	-1.1141398667164637	--
29	TRYPTOPHAN	Seed		0.089	-1.1339383282290112	--
77	CHLOROGENIC-ACID	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	SECOISOLARICIRESINOL	Seed				--
4	GLUCURONIC-ACID	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
1	RAFFINOSE	Seed				--
15	MALIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	ERUCIC-ACID	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	LIGNANS	Plant				--
1	DELPHINIDIN-3-O-BETA-D-GLUCOSIDE	Flower				--
77	CHLOROGENIC-ACID	Seed				--
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.

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1	EICOSANOL	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.
18	OLEIC-ACID	Flower				--
15	ALPHA-LINOLENIC-ACID	Flower				--
3	NICKEL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
18	VITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	ALPHA-LINOLENIC-ACID	Sprout Seedling				--
12	STIGMASTEROL	Seed				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.
1	PHYTOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	DELPHINIDIN	Flower				Abstract (See species file)

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4	ISOVITEXIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
33	NORDIHYDROGUAIARETIC-ACID	Seed				--
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	CHOLESTEROL	Seed				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
4	ISOORIENTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	VANADIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
10	SQUALENE	Seed				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.
78	LUTEOLIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	CYCLOARTENOL	Seed				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
27	LINOLEIC-ACID	Flower				--
2	LOTAUSTRALIN	Seed				--
7	CYANIDIN	Flower				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
27	LINOLEIC-ACID	Sprout Seedling				--
3	SILVER	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	MOLYBDENUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
11	GERANYL-GERANIOL	Seed				--
32	ALPHA-TOCOPHEROL	Seed Oil				--
11	LITHIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	COBALT	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.
2	ARSENIC	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
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.
24	CHROMIUM	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	GAMMA-TOCOPHEROL	Seed Oil				--

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.
61	FERULIC-ACID	Seed				--
3	SECOISOLARICRESINOL	Plant				Stitt, Paul. Why George should eat broccoli.
9	SINAPIC-ACID	Seed				--
10	SQUALENE	Seed Oil				--
4	ORIENTIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
101	APIGENIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	DELTA-TOCOPHEROL	Seed Oil				--
4	TIN	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.