

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Terminalia chebula

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,2,3,4,6-PENTAGALLOYLGLUCOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	1,3,6-TRIGALLOYLGLUCOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	2,3(S)-HEXAHYDROXY-DIPHENOYL-D-GLUCOSE	Leaf		304.7		Lin,T.C.,et al.1990.Tannins and Related Compounds.CII.Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	2,3-DI-O-GALLOYL-BETA-D-GLUCOSE	Leaf		13.8		Lin,T.C.,et al.1990.Tannins and Related Compounds.CII.Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	2-ALPHA-HYDROXY-MICROMERIC-ACID	Leaf		106.2		Singh, C. 1990. 2-alpha-hydroxymicromeric acid, a Pentacyclic Triterpene from Terminalia chebula. Phytochemistry, 29 7: 2348-2350.
0	3,6-DIGALLOYLGLUCOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	9-(2-HYDROXY-ETHOXY-METHYL)-GUANIDINE	Plant				Hozumi, T., Ooyama, H., Shiraki, K., Kurokawa, M., Nakano, M., Morohashi, M., Nanba, T. 1996. Geum Japonicum or Other Plant Extracts for Prevention of Herpes Virus Infection Recurrence. Patent-Japan Kokai Tokyo Koho-08,268,901: 8 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ARABINOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ARACHIDIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminalia chebula. J. Inst. Chem. (Calcutta) 46: 189-.
14	ARGININE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ARJUNGENIN	Fruit				Lu, P. P., Liu, X. G., Li, X. C., Zhang, D. C., Yokoi, T. 1992. Triterpenes of Terminalia chebula Retz. Chih Wu Hsueh Pao 34 (2): 126-132.
0	ARJUNGENIN	Pericarp		230.0		Reddy, B. M., Rao, N. K., Ramesh, M., Appa Rao, A. V. N., Lin, L. J., Lin, L. Z., Cordell, G. A. 1994. Chemical Investigation of the Fruits of Terminalia chebula. Int. J. Pharmacog 32 (4):352-356.
0	ARJUNGLUCOSIDE I	Pericarp		300.0		Reddy, B. M., Rao, N. K., Ramesh, M., Appa Rao, A. V. N., Lin, L. J., Lin, L. Z., Cordell, G. A. 1994. Chemical Investigation of the Fruits of Terminalia chebula. Int. J. Pharmacog 32 (4):352-356.
0	ARJUNGLUCOSIDE I	Stem Bark				Kundu, A. P., Mahato, S. B. 1993. Triterpenoids and their Glycosides from Terminalia chebula. Phytochemistry 32 4: 999-1002.
5	ARJUNOLIC-ACID	Fruit				Lu, P. P., Liu, X. G., Li, X. C., Zhang, D. C., Yokoi, T. 1992. Triterpenes of Terminalia chebula Retz. Chih Wu Hsueh Pao 34 (2): 126-132.
112	ASCORBIC-ACID	Fruit		920.0	-0.22728617216267144	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	ASPARAGINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	BEHENIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminalia chebula. J. Inst. Chem. (Calcutta) 46: 189-.
0	BELLERICOSIDE	Stem Bark				Kundu, A. P., Mahato, S. B. 1993. Triterpenoids and their Glycosides from Terminalia chebula. Phytochemistry 32 4: 999-1002.
0	BETA-GLUCOGALLIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
47	BETA-SITOSTEROL	Bark				Beri, R. M. 1970. Phytosterol in Some Plant Materials. Indian Oil Soap J. 35: 274-275.
47	BETA-SITOSTEROL	Fruit				Lu, P. P., Liu, X. J., Li, X. G., Wen, J. Q. 1991. Chemical Constituents of Fruits of Terminalia chebula Retz. Shanghai Yike Daxue Xuebao 18 (3): 233-235.
8	CHEBULAGIC-ACID	Leaf	2523.8	5300.0	1.0	--
8	CHEBULAGIC-ACID	Fruit		258.6		--
1	CHEBULANIN	Fruit				Tokura, K., Kagawa, S. 1993. Anticancer Agents Containing Chebulanin from Terminalia chebula. Patent-Japan Kokai Tokyo Koho-07 138,165: 4 pp.
0	CHEBULIC-ACID	Fruit		8620.6		--
0	CHEBULIC-ACID	Leaf		300.4		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebulic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CHEBULIC-ACID-TRIETHYL-ESTER	Fruit				Lu, P. P., Liu, X. J., Li, X. G., Wen, J. Q. 1991. Chemical Constituents of Fruits of Terminalia chebula Retz. Shanghai Yike Daxue Xuebao 18 (3): 233-235.
6	CHEBULINIC-ACID	Fruit		11241.3		--
0	CHEBULOSIDE-I	Stem Bark				Kundu, A. P., Mahato, S. B. 1993. Triterpenoids and their Glycosides from Terminalia chebula. Phytochemistry 32 4: 999-1002.
0	CHEBULOSIDE-II	Stem Bark				Kundu, A. P., Mahato, S. B. 1993. Triterpenoids and their Glycosides from Terminalia chebula. Phytochemistry 32 4: 999-1002.
0	CHEBUPENTOL	Fruit				Lu, P. P., Liu, X. G., Li, X. C., Zhang, D. C., Yokoi, T. 1992. Triterpenes of Terminalia chebula Retz. Chih Wu Hsueh Pao 34 (2): 126-132.
0	COLOSOLIC-ACID	Leaf		312.5		Singh, C. 1990. 2-alpha-hydroxymicromeric acid, a Pentacyclic Triterpene from Terminalia chebula. Phytochemistry, 29 7: 2348-2350.
13	CORILAGIN	Leaf		293.0	-1.0	Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebulic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
13	CORILAGIN	Fruit	724.0	8500.0		--
5	DAUCOSTEROL	Fruit				Lu, P. P., Liu, X. J., Li, X. G., Wen, J. Q. 1991. Chemical Constituents of Fruits of Terminalia chebula Retz. Shanghai Yike Daxue Xuebao 18 (3): 233-235.
0	DEHYDROSHIKIMIC-ACID	Fruit				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	DIHYDROSHIKIMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
51	ELLAGIC-ACID	Fruit		690.0	-0.49557477046092807	--
51	ELLAGIC-ACID	Leaf		379.0	-0.6995114391849991	Lin,T.C.,et al.1990.Tannins and Related Compounds.CII.Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	FAT	Seed	343000.0	364000.0	0.5194268305131962	--
0	FAT	Fruit		400000.0	2.413915735487906	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	FIXED-OIL	Seed				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminalia chebula. J. Inst. Chem. (Calcutta) 46: 189-.
8	FRUCTOSE	Fruit		10000.0	-0.7809376482767042	--
62	GALLIC-ACID	Fruit		4310.0	-0.8577693162343898	--
62	GALLIC-ACID	Leaf		53.3	-0.8698914721339668	Lin,T.C.,et al.1990.Tannins and Related Compounds.CII.Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
1	GALLIC-ACID-ETHYL-ESTER	Fruit				--
0	GENTIOBIOSE	Fruit				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
7	GLUCOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	HEXAOXYDIPHENIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	ISOQUERCITRIN	Fruit				Polovyanov, G. G. 1974. Flavonoids from the Fruit of the Yellow Myrobalan Plum. Chem. Nat. Comp. 10 (5): 690-.
27	LINOLEIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminalia chebula. J. Inst. Chem. (Calcutta) 46: 189-.
27	LINOLEIC-ACID	Seed	80100.0	84800.0	-0.1912587968305897	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	MALTOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	MANNITOL-ISOMER	Pericarp		100.0		Reddy, B. M., Rao, N. K., Ramesh, M., Appa Rao, A. V. N., Lin, L. J., Lin, L. Z., Cordell, G. A. 1994. Chemical Investigation of the Fruits of Terminalia chebula. Int. J. Pharmacog 32 (4):352-356.
6	MASLINIC-ACID	Leaf		312.5	1.3973453443025725	Singh, C. 1990. 2-alpha-hydroxymicromeric acid, a Pentacyclic Triterpene from Terminalia chebula. Phytochemistry, 29 7: 2348-2350.
0	MYROBALANIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	NEOCHEBULAGIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NEOCHEBULIC-ACID	Plant				J.S. Glasby Dict.Plis Containing 2ndary Metabolite. 1991.
18	OLEIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminaliaa chebula. J. Inst. Chem. (Calcutta) 46: 189-.
18	OLEIC-ACID	Seed	200100.0	213000.0	0.7718848508656724	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
9	OXALIC-ACID	Bark				Bharadwaj, K., Chandra, V. 1983. Comparative Incidence of Calcium Oxalate as a Source of Oxalic Acid in Barks of Seven Species of Terminalia. Biol. Mem. 8 1/2: 54-62.
25	P-COUMARIC-ACID	Plant				Kim, J. S., Lee, G. D., Kwon, J. H., Yoon, H. S. 1993. Indentification of Phenolic Antioxidative Components in Terminalia chebula Retz. Han'guk Nonghwa Hakhoe Chi 36 4: 239-243.
13	PALMITIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminaliaa chebula. J. Inst. Chem. (Calcutta) 46: 189-.
13	PALMITIC-ACID	Fruit				Lu, P. P., Liu, X. J., Li, X. G., Wen, J. Q. 1991. Chemical Constituents of Fruits of Terminalia chebula Retz. Shanghai Yike Daxue Xuebao 18 (3): 233-235.
24	PECTIN	Fruit		2080.0	-0.6055528056020009	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PENTAGALLOYL-BETA-D-GLUCOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	PHOSPHORIC-ACID	Fruit				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	PROLINE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
12	PUNICALAGIN	Leaf		51429.0	1.0	Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
12	PUNICALAGIN	Fruit		131.0		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
7	PUNICALIN	Leaf		117.0	-1.0	Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
176	QUERCETIN	Fruit				Polovyanov, G. G. 1974. Flavonoids from the Fruit of the Yellow Myrobalan Plum. Chem. Nat. Comp. 10 (5): 690-.
1	QUINIC-ACID	Fruit		15000.0	1.174010563697763	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	RHAMNOSE	Fruit				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
87	RUTIN	Fruit				Polovyanov, G. G. 1974. Flavonoids from the Fruit of the Yellow Myrobalan Plum. Chem. Nat. Comp. 10 (5): 690-.
1	SENNOSIDE-A	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SHIKIMIC-ACID	Fruit		22000.0	1.0	--
11	SORBITOL	Fruit				--
8	STEARIC-ACID	Seed Oil				Miglani, B. D., Chawla, A. S. 1974. Chemical Investigation of the Oil of Terminalia chebula. J. Inst. Chem. (Calcutta) 46: 189-.
7	SUCCINIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SUCROSE	Fruit		10000.0	-0.675913070766718	--
0	SUGAR	Fruit		85000.0	-0.6988615703668221	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	TANNIN	Fruit	1090.0	355000.0	2.513227153575772	--
0	TANNINS	Fruit	20000.0	45000.0	-0.4012118489129089	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	TERCHEBIN	Fruit				--
0	TERCHEBULIN	Fruit		54.4		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebulic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.

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0	TERFLAVIN-A	Fruit		16.5		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	TERFLAVIN-B	Leaf		85.7	1.0000000000000002	Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	TERFLAVIN-C	Leaf		25.7		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	TERFLAVIN-D	Leaf		18.0		Lin, T.C., et al. 1990. Tannins and Related Compounds. CII. Structures of Terchebulin, an Ellagitannin Having a Novel Tetraphenylcarboxylic Acid (Terchebolic Acid) and Biogenetically Related Tannins from Terminalia chebula Retz. Chem Pharm Bull 38 11:3004-3008.
0	TERMINOIC-ACID	Fruit				Lu, P. P., Liu, X. G., Li, X. C., Zhang, D. C., Yokoi, T. 1992. Triterpenes of Terminalia chebula Retz. Chih Wu Hsueh Pao 34 (2): 126-132.
0	TRIACONTANOIC-ACID	Fruit				Lu, P. P., Liu, X. J., Li, X. G., Wen, J. Q. 1991. Chemical Constituents of Fruits of Terminalia chebula Retz. Shanghai Yike Daxue Xuebao 18 (3): 233-235.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	VANILLIC-ACID	Plant				Kim, J. S., Lee, G. D., Kwon, J. H., Yoon, H. S. 1993. Identification of Phenolic Antioxidative Components in Terminalia chebula Retz. Han'guk Nonghwa Hakhoe Chi 36 4: 239-243.
0	WATER	Fruit		100000.0	-2.915726070898341	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	XYLOSE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.