

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Lawsonia inermis*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(20S)-3BETA-30-DIHYDROXYLUPANE	Bark				--
4	1,2-DIHYDROXY-4-GLUCOSYLNAPHTHALENE	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	1,3-DIHYDROXY-6,7-DIMETHOXYXANTHONE	Plant				--
0	1,3-DIHYDROXYNAPHTHALENE	Leaf				--
0	1,4-DIGLUCOSYLOXY-2-HYDROXYNAPHTHALENE	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	1,4-NAPHTHAQUINONE	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
3	1,4-NAPHTHOQUINONE	Leaf				--
0	1-HYDROXY-3,6-DIACETOXY-7-METHOXYXANTHONE	Plant				--
0	3-BETA-HYDROXY-20-OXO-30-NORLUPANE	Plant				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	30-NOR-LUPAN-3-BETA-OL-20-ONE	Bark				--
0	3BETA-30-DIHYDROXYLUP-20(29)-ENE	Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
0	4-GLUCOSYLOXY-1,2-DIHYDROXYNAPHTHALENE	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	ACACETIN-7-O-GLUCOSIDE	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
32	AESCULETIN	Leaf				--
5	ALPHA-IONONE	Flower Essent. Oil		180000.0		--
5	ALPHA-IONONE	Flower	20.0	40.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	APIGENIN-4'-GLUCOSIDE	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	APIGENIN-4'-O-BETA-D-GLUCOSIDE	Leaf				--
0	APIGENIN-7-O-BETA-GLUCOSIDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	ARACHIDIC-ACID	Oil		96000.0		--
0	ARACHIDIC-ACID	Seed	5375.0	11730.0	0.49255332125520745	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ASH	Leaf		148000.0	0.5135573973094308	Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
0	ASH	Seed	47500.0	52780.0	0.14737696891241386	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	BEHENIC-ACID	Seed	945.0	2065.0	-0.48479943048982227	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	BEHENIC-ACID	Oil		17000.0		Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
1	BEHENIC-ACID	Seed Oil		16900.0	0.4016806247889112	--
13	BETA-IONONE	Flower Essent. Oil		720000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-IONONE	Flower	80.0	160.0	-0.5452962043746039	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
47	BETA-SITOSTEROL	Bark				--
47	BETA-SITOSTEROL	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	BETA-SITOSTEROL-3-O-GLUCOSIDE	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
13	BETULIN	Plant				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
13	BETULIN	Bark				--
22	BETULINIC-ACID	Plant				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
22	BETULINIC-ACID	Bark				--
0	CARBOHYDRATES	Seed	671700.0	746330.0	0.8859597692080711	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	COSMOSIIN	Leaf				--
0	COUMARINS	Leaf	12700.0	21400.0	1.0	Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
3	CYNAROSIDE	Leaf	525.0	1500.0		--
5	DAUCOSTEROL	Leaf	123.0	1000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDROXYLUPENE	Bark				Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
0	EO	Flower	100.0	200.0	-0.41666386041507664	--
30	ESCULETIN	Leaf				--
0	FAT	Seed	56000.0	122220.0	-0.7541149139973352	--
15	FIBER	Seed	335000.0	372200.0	1.874718165586639	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FIXED-OIL	Seed		75000.0	-1.240735468629314	--
12	FRAXETIN	Leaf	50000.0	100000.0		--
1	GALACTOSE	Leaf				--
62	GALLIC-ACID	Leaf		69000.0	1.5912684328301319	--
7	GLUCOSE	Leaf				--
0	HENNADIOL	Bark		26.0		--
0	HENNOSIDES	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	ISOPLUMBAGIN	Stem Bark		500.0		--
1	ISOPLUMBAGIN	Bark				--
0	LACOUMARIN	Plant		40.0		--
0	LACOUMARIN	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	LALOISIDE	Leaf		7650.0		--
7	LAURIC-ACID	Seed Oil				--
0	LAWNERMIS-ACID	Seed		6.0		--
0	LAWNERMIS-ACID-METHYL-ESTER	Seed		4.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	LAWSARITOL	Bark				--
1	LAWSARITOL	Resin, Exudate, Sap		80.0		--
0	LAWSARITOL-A	Root		54.0		--
26	LAWSONE	Petiole	2500.0	25000.0		--
26	LAWSONE	Leaf	4300.0	40000.0		--
26	LAWSONE	Seed		130.0		--
26	LAWSONE	Bark				--
0	LAWSONIASIDE	Leaf		1450.0		--
0	LAXANTHONE-I	Plant				--
0	LAXANTHONE-I	Leaf		100.0		--
0	LAXANTHONE-II	Plant				--
0	LAXANTHONE-II	Leaf		160.0		--
0	LAXANTHONE-III	Plant				--
0	LAXANTHONES	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
27	LINOLEIC-ACID	Oil		293000.0		--
27	LINOLEIC-ACID	Seed	16415.0	35820.0	-0.6109242994855738	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	LINOLENIC-ACID	Seed Oil		40000.0	-0.8571140548720826	--
0	LUPANE	Bark				Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
21	LUPEOL	Plant				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
21	LUPEOL	Bark				--

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78	LUTEOLIN	Plant				Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989.
78	LUTEOLIN	Leaf		29.0	-0.5868818953220738	--
0	LUTEOLIN-3'-GLUCOSIDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	LUTEOLIN-3'-O-BETA-D-GLUCOSIDE	Leaf		1175.0		--
2	LUTEOLIN-7-O-GLUCOSIDE	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
18	MANNITOL	Leaf				--
6	MYRISTIC-ACID	Seed Oil				--
0	N-TRIACONTANOL	Bark				=ICMR(Indian Council of Medical Research).1976.Medicinal Plants of India.Vol.1.Indian Council of Med. Res.Cambridge Printing Works, New Delhi.487 pp;ICMR.1987.Medicinal Plants of India.Vol.2.Indian Council of Med. Res.Cambr. Printing Works,New Delhi.600pp
0	N-TRIACONTANYL-TRIDECANATE	Bark				--
0	N-TRIACONTYL-N-TRIDECANOATE	Bark				--
0	N-TRIACONTYL-N-TRIDECANOATE	Seed				--
0	N-TRIACONTYL-N-TRIDECANOATE	Leaf				--
0	N-TRIACONTYL-N-TRIDECANOATE	Root				--
18	OLEIC-ACID	Seed	19410.0	42360.0	-0.6308761398796081	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
18	OLEIC-ACID	Oil	346600.0	347000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Seed	5080.0	11085.0	-0.4708815318438094	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
13	PALMITIC-ACID	Oil	90700.0	91000.0		--
0	PENTOSANS	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PROTEIN	Seed	50000.0	55555.0	-1.5855466027617497	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	QUINONE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	RESEDINE	Plant				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.
0	RESIN	Leaf	20000.0	30000.0	-1.2544845011531556	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
44	SCOPOLETIN	Leaf				--
8	STEARIC-ACID	Oil	157800.0	158000.0		--
8	STEARIC-ACID	Seed	8835.0	19285.0	-0.1469710263684741	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	STEROLS	Plant				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
12	STIGMASTEROL	Leaf				Rizk, A.F.M. and Al-Nowaihi, A.S., The Phytochemistry of the Horticultural Plants of Qatar, Scientific and Applied Research Centre, University of Qatar.

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14	SUCROSE	Leaf				--
0	SUGARS	Leaf		110000.0	1.0793781366899218	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TANNINS	Leaf	50000.0	100000.0	0.0706491892014639	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TILIANIN	Leaf		200.0		--
1	TRIACONTAN-1-OL	Bark				--
0	WATER	Leaf		90000.0	-3.5802814265384173	Duke, J. A. and duCellier, J. L. 1993. CRC Handbook of Alternative Cash Crops. CRC Press. Boca Raton, FL 33431. 536 pp. US \$312.50.
0	WATER	Seed		106000.0	-0.4666571660641496	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	XANTHONES	Leaf				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
3	XYLOSE	Leaf				--