

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Phoenix dactylifera

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	5-O-CAFFEYOYLSHIKIMIC-ACID	Fruit				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	LUPYL-ACETATE	Stem				--
0	7BETA-GLUCOSYL-CHRYSOERIOL	Stem				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	ISOFUCOSTEROL	Fruit				Abstract (See species file)
0	BRASSICASTEROL	Seed				Abstract (See species file)
0	MARGARIC-ACID	Seed				Abstract (See species file)
0	3,5-DIHYDROXY-4-METHOXYBENZALDEHYDE	Stem				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	Stem				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	6BETA-HYDROXYSTIGMASTA-4,22-DIEN-3-ONE	Stem				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.
4	ISOCHLOROGENIC-ACID	Fruit				Abstract (See species file)
0	3,5-DIHYDROXY-4-METHOXY-BENZOIC-ACID	Stem				Abstract (See species file)
12	STIGMASTEROL	Fruit				Abstract (See species file)
57	COUMARIN	Leaf				Morton, J.F., Major Medicinal Plants. 1977. Atlas of Medicinal Plants of Middle America. Bahamas to Yucatan. 1981.
0	LINONELIC-ACID	Seed				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	CAPRYLIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	PALMITOLEIC-ACID	Seed				Abstract (See species file)
0	6BETA-HYDROXYCAMPEST-4-ENE-3-ONE	Stem				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	TRICOSANOIC-ACID	Seed				Abstract (See species file)
87	RUTIN	Pollen Or Spore				Abstract (See species file)
47	BETA-SITOSTEROL	Pollen Or Spore				Abstract (See species file)
0	3,5,4'-TRIHYDROXYSTILBENE	Stem				Abstract (See species file)
0	STIGMAST-4-ENE-3-ONE	Stem				Abstract (See species file)
3	XYLOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	CAPRIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	6-BETA-HYDROXY-STIGMAST-4-EN-3-ONE	Stem				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	TRANS-3,5,3',5'-TETRAHYDROXY-4-METHYLSTILBENE	Stem				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	RIBOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	MALTOSE	Seed				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-O-METHYLXYLOSE	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	STIGMAST-4-ENE-3,6-DIONE	Stem				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.
8	ESTRONE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	PIPECOLIC-ACID	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				Abstract (See species file)
1	LEUCOANTHOCYANIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	WAX	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	CAMPESTEROL	Stem				Abstract (See species file)
4	P-HYDROXYBENZALDEHYDE	Stem				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	5ALPHA-CAMPESTERAN-3,6-DIONE	Stem				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.
9	BETA-AMYRIN	Pollen Or Spore				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,3-DI-O-METHYLXYLOSE	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	GALACTURONIC-ACID	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	STIGMAST-4,22-DIENE-3,6-DIONE	Stem				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	ESTROGEN	Seed				Abstract (See species file)
0	CIS-3,5,3',5'-TETRAHYDROXY-4-METHYLSTILBENE	Stem				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	ARABINOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	CAMPESTAN-4-EN-3-ONE	Stem				Abstract (See species file)
13	P-HYDROXY-BENZOIC-ACID	Stem				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	5-OXYPIPECOLIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	INVERTASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
20	BENZOIC-ACID	Stem				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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,3,4-TRI-O-METHYLXYLOSE	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	GALACTOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
5	ERGOSTEROL	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	RHAMNOSE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
101	APIGENIN	Stem				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	CAMPEST-4-EN-3-ONE	Stem				Abstract (See species file)
9	OXALIC-ACID	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	5-ALPHA-STIGMASTAN-3,6-DIONE	Stem				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.
1	BEHENIC-ACID	Seed				Abstract (See species file)
16	LYCOPENE	Fruit				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.
2	LUPEOL-ACETATE	Stem				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CAMPEST-4-EN-3,6-DIONE	Stem				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	5-ALPHA-STIGMAST-22-ENE-3,6-DIONE	Stem				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	HENEICOSANOIC-ACID	Seed				Abstract (See species file)
0	BAIKIAIN	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUTEOLIN-7-RUTINOSIDE	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	DEHYDRO-BETA-CAROTENE	Fruit				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.
176	QUERCETIN	Pollen Or Spore				Abstract (See species file)
77	CHLOROGENIC-ACID	Fruit				Abstract (See species file)
0	PEROXIDASE	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
4	LACTOSE	Seed				Abstract (See species file)
2	VIOLAXANTHIN	Fruit				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	4-HYDROXY-3-METHOXYBENZALDEHYDE	Stem				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.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GLYCOSYLAPIGENIN	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	LUTEOLIN-7-GLYCOSIDE	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.
8	ESTRONE	Pollen Or Spore				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
11	SORBITOL	Fruit				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DACTYLIFRIC-ACID	Fruit				Abstract (See species file)
0	FLAVOXANTHIN	Fruit				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	4-HYDROXY-3-METHOXY-CINNAMIC-ACID	Stem				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.
15	LUTEIN	Fruit				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.
1	CHOLESTEROL	Pollen Or Spore				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	D-MANNOSE	Seed				Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	ACETALDEHYDE	Fruit				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	URONIC-ACID	Pollen Or Spore				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	3-CAFFEYOYLSHIKIMIC-ACID	Fruit				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.
1	CHOLESTEROL	Fruit		0.0		USDA's Ag Handbook 8 and sequelae)
12	IODINE	Fruit		0.06	-0.2904150459573493	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
5	PHYLLOQUINONE	Fruit		0.06	-0.22359887323159108	--
15	FOLACIN	Fruit	0.08	0.17	-0.7670170596960343	USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Fruit	0.2	1.3	-0.7944081953947483	--
31	THIAMIN	Fruit	0.1	1.7	-0.4650060616434584	--
12	COPPER	Seed	0.6	2.0	-1.1623352892566066	Abstract (See species file)
0	VIT-B-6	Fruit	2.0	3.0	-0.8751338727185397	USDA's Ag Handbook 8 and sequelae)
53	BETA-CAROTENE	Fruit	1.0	3.6	-0.14384189399264724	--
77	ZINC	Fruit	3.0	4.0	-0.7913051373688869	USDA's Ag Handbook 8 and sequelae)
12	COPPER	Fruit	2.0	4.0	-0.6863742487163819	--
0	LEAD	Seed	0.1	4.0	0.4585092910843749	Abstract (See species file)
4	BORON	Fruit		7.0	-0.6629690111653129	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
26	SEROTONIN	Fruit	8.0	9.0	-1.3897978667604325	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
3	CADMIUM	Seed	0.0	9.0	4.252910566397704	Abstract (See species file)
11	PANTOTHENIC-ACID	Fruit	8.0	10.0	-0.5169531369709149	USDA's Ag Handbook 8 and sequelae)
5	ALUMINUM	Seed	3.0	13.0	-0.34201085436666395	Abstract (See species file)
14	MANGANESE	Seed		16.0	-0.467393923690488	Abstract (See species file)
6	IRON	Seed	5.0	17.0	-0.6216437483021793	Abstract (See species file)
77	ZINC	Seed	0.6	29.0	-0.4579921356186253	Abstract (See species file)
14	MANGANESE	Fruit	3.0	45.0	-0.10681336019281051	--
7	SALICYLATES	Fruit	3.0	45.0	-0.20770615344752882	--
5	ALUMINUM	Fruit		51.0	-0.20868440554018103	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
39	NIACIN	Fruit	10.0	135.0	0.9932872798882364	--
6	IRON	Fruit	10.0	151.0	0.07148811973975773	--
7	CHLORINE	Fruit	270.0	310.0	-0.4791512669647793	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	SODIUM	Fruit	10.0	380.0	-0.1479158132265294	--
7	HISTIDINE	Fruit	10.0	390.0	-0.9273080508754981	--
21	CHLOROPHYLL	Fruit	0.0	410.0	1.542593994049385	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
28	CALCIUM	Seed	18.0	436.0	-0.6814478670478287	Abstract (See species file)
2	CYSTINE	Fruit	7.0	580.0	-0.4707560662338592	--
14	SULFUR	Fruit	510.0	590.0	-0.5738869470964798	--
29	TRYPTOPHAN	Fruit	500.0	645.0	-0.2883336982090432	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	SILICON	Fruit		660.0	1.5358789152594374	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	PHENYLALANINE	Fruit	8.0	740.0	-0.8967709656324975	--
112	ASCORBIC-ACID	Fruit	0.0	750.0	-0.23785626092666567	--
65	MAGNESIUM	Fruit	325.0	790.0	-0.6203759963079205	--
1	SODIUM	Seed	15.0	820.0	0.5859664537894901	Abstract (See species file)
5	GLUTAMINE	Fruit	650.0	870.0	1.1267392876723437	--
4	THREONINE	Fruit	10.0	980.0	-0.8470550566495191	--
4	PHOSPHORUS	Seed		1120.0	-1.1187018222711056	Abstract (See species file)
13	CYSTEINE	Fruit	110.0	1140.0	1.0	Abstract (See species file)
2	LEUCINE	Fruit	5.0	1140.0	-0.8420937960569738	--
3	ALANINE	Fruit	80.0	1290.0	-0.9501454757917915	--
0	PROLINE	Fruit	120.0	1590.0	-0.6636420137419976	--
0	CHLORIDE	Seed		1610.0	1.413247926503847	Abstract (See species file)
8	TYROSINE	Fruit	10.0	1730.0	-0.2853897488258916	--
1	SERINE	Fruit	60.0	1960.0	-0.5941860880545526	--
28	CALCIUM	Fruit	140.0	2000.0	-0.4283573443119461	--
14	ARGININE	Fruit	620.0	2090.0	-0.5920936366686652	--
15	METHIONINE	Fruit	5.0	2190.0	1.5164823455152185	--
1	STACHYOSE	Seed		2200.0	-1.4073378200507318	Abstract (See species file)
14	POTASSIUM	Seed	28.0	2440.0	-0.8908725075191605	Abstract (See species file)
4	LYSINE	Fruit	30.0	2450.0	-0.4310869639742895	--
3	VALINE	Fruit	5.0	2710.0	-0.3596290253078901	--
1	RAFFINOSE	Seed		3000.0	-0.7470721014785289	Abstract (See species file)
12	GLYCINE	Fruit	40.0	3010.0	-0.2300074341376021	--
3	ASPARTIC-ACID	Fruit	20.0	3150.0	-0.9207574415888534	--
22	GABA	Fruit	2660.0	3370.0	1.407126578678398	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	GAMMA-AMINOBUTYRIC-ACID	Fruit	2660.0	3370.0	1.7044292848924936	Abstract (See species file)
0	KILOCALORIES	Fruit	1420.0	3550.0	-0.16790939262374893	--
6	MYRISTIC-ACID	Seed	2400.0	4000.0	-0.24363975823939635	--
2	ASPARAGINE	Fruit	2300.0	4500.0	2.264581694669994	Abstract (See species file)
3	ISOLEUCINE	Fruit	20.0	4650.0	0.3040077606201815	--
8	GLUTAMIC-ACID	Fruit	400.0	6160.0	-0.5507946581831958	--
14	POTASSIUM	Fruit	6250.0	8780.0	-0.8083399078943273	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Fruit	370.0	8795.0	1.69456590371845	--
8	ELLAGITANNIN	Plant	0.0	9900.0		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.
27	LINOLEIC-ACID	Seed	6000.0	10000.0	-0.8321526228533093	--
8	STEARIC-ACID	Seed	3000.0	10000.0	-0.3484239972825226	--
8	FRUCTOSE	Seed		15300.0	1.4089399073526936	Abstract (See species file)
7	GLUCOSE	Seed		16800.0	-0.14985111390158956	Abstract (See species file)
0	ASH	Seed	8900.0	18000.0	-0.8987230012448024	--
35	TANNIN	Fruit	200.0	18000.0	-0.7380230311091176	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FAT	Fruit	1000.0	25000.0	-0.4503041007248309	--
13	PALMITIC-ACID	Seed	15000.0	25000.0	-0.18376993157030574	--
2	GALLO-TANNIN	Plant	4300.0	27800.0		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.
30	POLYPHENOLS	Fruit		30000.0	1.146789651247877	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	SUCROSE	Seed		38200.0	-0.15445921462296788	Abstract (See species file)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PENTOSANS	Fruit		38800.0	-0.45384631987127366	Abstract (See species file)
0	PECTINS	Fruit	7200.0	39000.0	0.7313878222750974	--
0	PROTEIN	Fruit	9000.0	43000.0	-0.8914418450258965	--
0	PENTOSANS	Seed		43600.0	-0.7306943367909774	Abstract (See species file)
0	ASH	Fruit	5000.0	44800.0	-0.30721619226445124	--
0	TANNINS	Plant	7500.0	44800.0	-1.3376143849489774	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.
18	OLEIC-ACID	Seed	27000.0	51000.0	-0.55985026693048	--
7	LAURIC-ACID	Seed	4800.0	54000.0	-0.028060776935393963	--
0	PROTEIN	Seed	18200.0	58000.0	-1.5637970615499415	--
15	FIBER	Fruit	22000.0	85000.0	-0.5348255773149249	--
0	WATER	Seed	71700.0	90000.0	-0.5280558401867593	--
0	FAT	Seed	60000.0	100000.0	-0.8711556020733713	--
5	STARCH	Fruit		206000.0	-0.14195257090516208	Abstract (See species file)
15	FIBER	Seed	64000.0	300000.0	1.304614634419771	--
8	FRUCTOSE	Fruit		308000.0	4.088589817170726	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.
7	GLUCOSE	Fruit		357000.0	2.893929119951419	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.
14	SUCROSE	Fruit	0.0	400000.0	2.089285952799339	--
0	WATER	Fruit	153000.0	785000.0	0.06271804760462396	--
0	SUGARS	Fruit	380000.0	850000.0	2.6243722986131766	--
0	CARBOHYDRATES	Seed	655000.0	853000.0	1.3098878992465333	--
0	CARBOHYDRATES	Fruit	366100.0	948500.0	0.8856462811146213	USDA's Ag Handbook 8 and sequelae)