

P Anethum graveolens

Common Name(s)

Dill, Garden Dill

How Used

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Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-ALPHA-PHELLANDRENE	Shoot	--	--	
2	(+)-CARVONE	Essential Oil	--	--	
2	(+)-CARVONE	Seed	--	--	
2	(+)-CARVONE	Seed Essent. Oil	--	--	
0	(+)-CIS-CARVEOL	Seed Essent. Oil	--	--	
0	(+)-LIMONENE	Seed Essent. Oil	--	--	
0	(+)-LIMONENE	Essential Oil	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-TRANS-CARVEOL	Seed Essent. Oil	--	--	
0	(-)-CARVONE	Seed Essent. Oil	--	--	
0	(-)-CIS-CARVEOL	Seed Essent. Oil	--	--	
0	(-)-DIHYDROCARVONE	Seed	--	--	
0	(-)-LIMONENE	Seed Essent. Oil	--	--	
0	(-)-LIMONENE	Essential Oil	--	--	
0	(-)-TRANS-CARVEOL	Seed Essent. Oil	--	--	
0	1,4-TERPINENOL	Plant	--	--	
0	1,5-CINEOL	Seed Essent. Oil	--	--	
0	1,5-CINEOLE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	1-DIHYDROCARVEOL	Seed	75	490	
0	1-DIHYDROCARVEOL	Leaf	10	30	
0	1-METHYL-4-ISOPROPENYL-BENZENE	Fruit	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	1-METHYL-4-ISOPROPENYL-BENZENE	Seed	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	1-METHYL-4-ISOPROPENYL-BENZENE	Essential Oil	--	--	
0	2-DIHYDROCARVEOL	Seed	155	1000	
0	2-DIHYDROCARVEOL	Leaf	10	30	
0	2-NONANOL	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	3',4'-DIMETHOXYQUERCETIN	Leaf	--	--	
0	3,6-DIMETHYL-2,3,3A,4,5,7A-HEXAHYDROBENZOFURAN	Leaf	240	750	
0	3,6-DIMETHYL-2,3,4,5,8,9-HEXAHYDROBENZOFURAN	Plant	--	--	
0	3,6-DIMETHYL-3-ALPHA-4,5,7-ALPHA-TETRAHYDROCOUMARAN	Seed	--	--	
0	3,6-DIMETHYL-3-ALPHA-4,5,7-ALPHA-TETRAHYDROCOUMARAN	Essential Oil	--	--	
0	3,6-DIMETHYL-3A,4,5,7A-TETRAHYDROCOUMARAN	Fruit	--	--	
0	3,6-DIMETHYLCOUMARAN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	3,6-DIMETHYLCOUMARAN	Essential Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	3,7-DIMETHYL-4,5,6,9-TETRAHYDROCOUMARAN	Fruit	--	--	
0	3,7-DIMETHYL-4,5,6,9-TETRAHYDROCOUMARAN	Seed	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	4'-METHOXY-KAEMPFEROL	Leaf	--	--	
0	4-ALPHA-DIMETHYLSTYRENE	Root	--	--	
0	4-METHYL-AESCULETIN	Seed Essent. Oil	--	--	
10	5-METHOXY-PSORALEN	Seed	--	--	
0	6,7-DIHYDRO-8,8-DIMETHYL-2H,8H-BENZO-(1,2B:5,4')-DIPYRAN-2,6-DIONE	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	6,7-DIHYDRO-8,8-DIMETHYL-2(H),8(H)BENZO-(1,2B,5,4B'-DIPYRAN-2-6-DIONE	Seed	--	--	
0	6,7-DIHYDRO-8,8-DIMETHYL-2(H),8(H)BENZO-(1,2B,5,4B'-DIPYRAN-2-6-DIONE	Shoot	--	80	
0	6-OCTADECENOIC-ACID	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	7-OCTADECENOIC-ACID	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
32	AESCULETIN	Seed	--	--	
32	AESCULETIN	Seed Essent. Oil	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA,ALPHA-BETA-TRIMETHYLBENZYL-ALCOHOL	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	ALPHA-CADINENE	Leaf	1	3	-0.4224867804418495
0	ALPHA-CARVONE	Seed Essent. Oil	--	400000	
0	ALPHA-CUBEBENE	Shoot	--	--	
0	ALPHA-DIMETHYLSTYRENE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
15	ALPHA-LINOLENIC-ACID	Fruit	1500	1624	-0.41702058222254973
15	ALPHA-LINOLENIC-ACID	Seed	1500	1624	-0.29885281200374875 USDA's Ag Handbook 8 and sequelae)
0	ALPHA-P-DIMETHYL-STYRENE	Seed	10	75	-0.4800153607373193
0	ALPHA-P-DIMETHYL-STYRENE	Leaf	5	45	3.2968315661477114
0	ALPHA-P-DIMETHYL-STYRENE	Essential Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-P-STYRENE	Shoot Essent. Oil	--	1800	
11	ALPHA-PHELLANDRENE	Leaf	20	8025	5.376830730634647
11	ALPHA-PHELLANDRENE	Seed	125	7469	1.5339306210630879
11	ALPHA-PHELLANDRENE	Essential Oil	--	--	
11	ALPHA-PHELLANDRENE	Shoot Essent. Oil	248800	525100	1.4141949197576593
11	ALPHA-PHELLANDRENE	Seed Essent. Oil	--	--	
11	ALPHA-PHELLANDRENE	Root Essent. Oil	--	--	
28	ALPHA-PINENE	Fruit	24	1001	-0.4574419530274206
28	ALPHA-PINENE	Seed	12	1001	-0.394802482900677
28	ALPHA-PINENE	Leaf	25	405	-0.19825008164168667
28	ALPHA-PINENE	Essential Oil	--	--	
28	ALPHA-PINENE	Shoot Essent. Oil	17500	31700	1.9801582592954505
28	ALPHA-PINENE	Seed Essent. Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-PYRONENE	Leaf	2	6	
13	ALPHA-TERPINENE	Leaf	0.1	2100	0.7727809471570283
13	ALPHA-TERPINENE	Shoot Essent. Oil	--	3400	-0.7201742929072495
13	ALPHA-TERPINENE	Seed Essent. Oil	--	--	
13	ALPHA-TERPINENE	Essential Oil	--	--	
23	ALPHA-TERPINEOL	Plant	--	--	
23	ALPHA-TERPINEOL	Leaf	0.1	20	-0.5551409616382911
23	ALPHA-TERPINEOL	Essential Oil	--	83800	2.9380498160693636
0	ALPHA-THUJENE	Fruit	36	231	-0.3826530299675151
0	ALPHA-THUJENE	Seed	36	231	-0.09092270877057655 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-THUJENE	Leaf	10	25	-0.3676513337976657
0	ALPHA-THUJENE	Leaf Essent. Oil	--	33400	1.3792500393171634
0	ALPHA-THUJENE	Essential Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-THUJENE	Shoot Essent. Oil	--	10600	0.6195817292104092
32	ALPHA-TOCOPHEROL	Leaf	16	147	-0.6328641971482494
5	ALUMINUM	Plant	4	210	-0.3394094982503418 ACTA AGRIC SCAND SUPPL 22: 1980
0	ANETHOFURAN	Essential Oil	--	169000	
36	ANETHOLE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	ANISIC-ALDEHYDE	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
101	APIGENIN	Leaf	--	--	
0	APIGENIN-7-O-BETA-D-GLUCURONIDE	Leaf	--	--	
2	APIOL	Essential Oil	--	--	
2	APIOL	Shoot	--	--	
2	APIOL	Root Essent. Oil	--	--	
2	APIOL	Seed	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
20	APIOLE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	ARGINASE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
14	ARGININE	Fruit	12630	13678	2.498859968309268
14	ARGININE	Seed	12630	13678	-0.46418798189668253 USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Plant	0.01	0.06	-0.44843252644734777 ACTA AGRIC SCAND SUPPL 22: 1980
112	ASCORBIC-ACID	Plant	1214	1440	-0.2556325868627872
112	ASCORBIC-ACID	Seed	--	1150	0.35194448135668727
0	ASH	Fruit	64000	84000	0.707881426838069
0	ASH	Plant	26000	205880	1.5332133347973154
0	ASH	Seed	64000	84000	1.0864005763968383
0	BENZOIC-ACID-METHYL-ESTER	Seed Essent. Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	BENZYL-ETHER	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	BENZYL-ETHER	Essential Oil	--	--	
26	BERGAPTEN	Fruit	--	--	
26	BERGAPTEN	Seed	--	--	
26	BERGAPTEN	Seed Essent. Oil	--	--	
0	BETA-CARYOPHYLLENE	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	BETA-CARYOPHYLLENE	Essential Oil	--	--	
5	BETA-ELEMENE	Fruit	12	77	-0.4611977234510915
5	BETA-ELEMENE	Seed	12	77	-0.6456318401912606 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
13	BETA-EUDESOL	Essential Oil	--	--	
2	BETA-MYRCENE	Plant	--	--	
2	BETA-MYRCENE	Seed Essent. Oil	--	--	
2	BETA-MYRCENE	Essential Oil	--	--	
3	BETA-PHELLANDRENE	Fruit	168	1925	-0.1401637043460988
3	BETA-PHELLANDRENE	Root	168	1925	
3	BETA-PHELLANDRENE	Leaf	120	2100	4.5514578733129
3	BETA-PHELLANDRENE	Seed	25	1925	-0.06920272549899337 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	BETA-PHELLANDRENE	Essential Oil	--	31600	1.724225349934716
3	BETA-PHELLANDRENE	Shoot Essent. Oil	82100	169300	1
3	BETA-PHELLANDRENE	Root Essent. Oil	--	--	
3	BETA-PHELLANDRENE	Seed Essent. Oil	--	--	
13	BETA-PINENE	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Leaf	1	40	-0.3701299985454314
13	BETA-PINENE	Leaf Essent. Oil	--	13600	-0.3687230671050535
13	BETA-PINENE	Shoot Essent. Oil	--	--	
13	BETA-PINENE	Essential Oil	--	--	
47	BETA-SITOSTEROL	Plant	--	490	-0.10551968168882546
47	BETA-SITOSTEROL	Seed Essent. Oil	--	--	
47	BETA-SITOSTEROL	Seed	--	--	
47	BETA-SITOSTEROL	Root	--	--	
0	BETA-SITOSTEROL-GLUCOSIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	BETA-SITOSTEROL-GLYCOSIDE	Fruit	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BETA-SITOSTEROL-GLYCOSIDE	Seed	--	--	=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
3	BETA-TERPINEOL	Fruit	--	--	
3	BETA-TERPINEOL	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
3	BETA-TERPINEOL	Seed	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
4	BORON	Plant	4	35	-0.4551354442400374

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
4	BORON	Seed	28	50	1.2280232969498832	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).
0	BROMINE	Plant	1	6	-0.8145201350468994	ACTA AGRIC SCAND SUPPL 22: 1980
10	BUTYL-PHTHALIDE	Root	--	--		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.
3	CADMIUM	Plant	0.02	1	-0.33413040437309494	ACTA AGRIC SCAND SUPPL 22: 1980
102	CAFFEIC-ACID	Fruit	--	--		
102	CAFFEIC-ACID	Seed	--	--		
102	CAFFEIC-ACID	Leaf	--	1140	-0.5577746068901522	
0	CALAMENENE	Leaf	1	3	-0.584716751803048	
28	CALCIUM	Fruit	14003	17671	3.1878884648612305	
28	CALCIUM	Plant	1900	21453	0.8411434580787619	
28	CALCIUM	Seed	14003	17671	2.483896866251749	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
2	CAMPESTEROL	Plant	--	490	1.9454938284556806	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
9	CAMPHENE	Plant	--	--		Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
41	CAMPHOR	Root	--	--		
0	CARBOHYDRATES	Fruit	551700	597491	-0.9913792273955132	
0	CARBOHYDRATES	Plant	558200	602000	-0.45327014330730514	
0	CARBOHYDRATES	Seed	551700	597491	0.2944435139648482	
0	CAROTENE	Seed	--	--		
0	CAROTENOIDS	Leaf	465	465	1.0000000000000002	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
37	CARVACROL	Plant	--	--		
37	CARVACROL	Leaf	165	450	0.1349696974520959	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
37	CARVACROL	Seed Essent. Oil	--	--		
1	CARVEOL	Leaf	225	600	0.9999999999999998	Wealth of India.
19	CARVONE	Plant	--	--		
19	CARVONE	Seed	4100	46200	1.3184783989470024	
19	CARVONE	Leaf	0.1	6365	1.0223609522154844	
19	CARVONE	Shoot Essent. Oil	--	145000	1.4134474688959218	
19	CARVONE	Root	--	--		
19	CARVONE	Leaf Essent. Oil	--	774300		
19	CARVONE	Essential Oil	273800	456000	0.9613797011049258	
19	CARVONE	Seed Essent. Oil	170000	455800	-0.9391038099371176	
0	CARVOTANACETONE	Fruit	--	--		
0	CARVOTANACETONE	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CARVOTANACETONE	Root Essent. Oil	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	CARVOTANACETONE	Essential Oil	--	--		
77	CHLOROGENIC-ACID	Fruit	--	--		
77	CHLOROGENIC-ACID	Seed	--	--		
24	CHROMIUM	Plant	0.01	0.29	-0.8360358979548524	ACTA AGRIC SCAND SUPPL 22: 1980
0	CINEOLE	Plant	--	--		Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	CIS-3-HEXEN-1-OL	Leaf	0.1	365	-0.4917978922098716	
0	CIS-3-HEXEN-1-YL-ACETATE	Leaf	0.1	15		
0	CIS-CARVEOL	Fruit	--	--		
0	CIS-CARVEOL	Seed	--	--		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-DIHYDROCARVONE	Fruit	36	12782		
0	CIS-DIHYDROCARVONE	Seed	36	12782	1.414205737599967	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	CIS-DIHYDROCARVONE	Leaf	40	110		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	CIS-DIHYDROCARVONE	Essential Oil	--	--	
0	CIS-LIGUSTILIDE	Root	--	--	
3	CIS-OCIMENE	Essential Oil	--	--	
2	COBALT	Plant	0.002	0.29	-0.4679399461194481 ACTA AGRIC SCAND SUPPL 22: 1980
12	COPPER	Fruit	--	8	-0.3750564717845157
12	COPPER	Plant	1.7	17	0.33037825900684764
12	COPPER	Seed	8	8	-0.6181060132518703 USDA's Ag Handbook 8 and sequelae)
0	COUMARINS	Seed	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	D-(+)-CARVONE	Fruit	5196	37653	
0	D-(+)-CARVONE	Seed	5196	37653	
0	D-(+)-DIHYDROCARVONE	Fruit	168	1925	
0	D-(+)-DIHYDROCARVONE	Seed	168	1925	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	D-(+)-LIMONENE	Fruit	3972	31416	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	D-(+)-LIMONENE	Seed	3972	31416		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	D-8-DEHYDRO-P-CYMENE	Seed	--	--		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	D-ALPHA-PHELLANDRENE	Fruit	516	7469		
0	D-ALPHA-PHELLANDRENE	Seed	516	7469	1	
0	DECANAL	Fruit	24	154	1.7690158710879875	
0	DECANAL	Seed	24	154		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
8	DELTA-3-CARENE	Leaf	--	0.1	-0.4906741021305423	
0	DELTA-5,6-OCTADECENOIC-ACID	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
9	DELTA-CADINENE	Leaf	1	3	-0.4510248293697561	
2	DIHYDROCARVEOL	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
2	DIHYDROCARVEOL	Leaf	150	400	0.916253604438744	
0	DIHYDROCARVONE	Leaf	390	1050	-1	Wealth of India.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDROCARVONE	Seed Essent. Oil	--	--	
0	DIHYDROCARVONE	Essential Oil	--	400900	1.999909888648586
0	DIHYDROCARVONE	Leaf Essent. Oil	--	1700	
0	DIHYDROCARVONE	Root	--	--	
0	DILL-ETHER	Leaf	60	3495	
0	DILL-ETHER	Seed	45	300	
0	DILL-ETHER	Shoot Essent. Oil	--	290200	
0	DILL-ETHER	Essential Oil	--	--	
0	DILL-FURAN	Essential Oil	--	--	
0	DILLANOL	Seed	--	--	
0	DILLANOSIDE	Plant	--	--	
0	DILLANOSIDE	Seed	--	--	
6	DILLAPIOL	Root Essent. Oil	--	--	
6	DILLAPIOL	Seed	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
6	DILLAPIOL	Plant	--	--	
6	DILLAPIOL	Essential Oil	223000	266300	
6	DILLAPIOL	Leaf Essent. Oil	--	200	
6	DILLAPIOL	Shoot Essent. Oil	--	3100	
0	DILLAPIOLE	Fruit	1440	40425	1
0	DILLAPIOLE	Seed	1440	40425	1
0	DILLAPIOLE	Leaf	100	375	
0	DILLAPIONAL	Seed Essent. Oil	--	--	
7	DIPENTENE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	EICOSANE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
16	ELEMICIN	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
16	ELEMICIN	Shoot Essent. Oil	--	--	
0	EO	Fruit	12000	77000	0.6766879839519779
0	EO	Plant	5600	15000	0.39984481264221844
0	EO	Root	300	500	-0.631241020868696 Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	EO	Leaf	1640	15000	0.30477802284223493
0	EO	Seed	12000	77000	0.4229268931630007
0	EO	Shoot	--	--	
5	ERGOSTEROL	Seed Essent. Oil	--	--	
30	ESCULETIN	Fruit	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
30	ESCULETIN	Seed	--	--		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.
76	EUGENOL	Plant	--	--		
76	EUGENOL	Leaf	280	750	-0.7280702362058284	
76	EUGENOL	Essential Oil	--	--		
0	FAT	Fruit	68000	180200	0.7351010154890802	
0	FAT	Plant	43000	47000	-0.06928247240962923	
0	FAT	Seed	68000	180200	-0.44871351459820963	
6	FENCHONE	Leaf	1	15	-0.40382222941102286	
61	FERULIC-ACID	Fruit	--	--		
61	FERULIC-ACID	Seed	--	--		
15	FIBER	Fruit	177230	264869	1.1625047691716495	
15	FIBER	Leaf	119300	128000	-0.41469774487153704	
15	FIBER	Seed	177230	264869	1.0272142583335766	
26	FLAVONE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	FLUORINE	Plant	0.1	5.3	-0.5842309569009599	ACTA AGRIC SCAND SUPPL 22: 1980

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
6	FURFURAL	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	GAMMA-PINENE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	GAMMA-SITOSTEROL	Fruit	--	--	
0	GAMMA-SITOSTEROL	Seed	--	--	
11	GAMMA-TERPINENE	Fruit	12	77	-0.6371546249494475
11	GAMMA-TERPINENE	Seed	12	77	-0.8148071104880178 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	GAMMA-TERPINENE	Leaf	0.1	30	-0.314079686023923
35	GERANIOL	Fruit	24	154	0.33290806848468324
35	GERANIOL	Seed	24	154	-1 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	GERMACRENE-D	Leaf	70	190	-0.37126607051679333

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	HEXADECANE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
7	HISTIDINE	Fruit	3200	3466	1.229336833484955
7	HISTIDINE	Seed	3200	3466	-0.7066452608029122 USDA's Ag Handbook 8 and sequelae)
30	HYPEROSIDE	Leaf	--	--	
25	IMPERATORIN	Seed Essent. Oil	--	--	
6	IRON	Fruit	114	230	0.3848598276758552
6	IRON	Plant	23	755	0.1508119809777941
6	IRON	Seed	114	230	0.3680195076933262
6	IRON	Leaf	--	--	
0	ISODILLAPIOL	Essential Oil	--	--	
16	ISOEUGENOL	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
3	ISOLEUCINE	Fruit	7670	8307	1.4023694860203781
3	ISOLEUCINE	Seed	7670	8307	-0.2787525308175236 USDA's Ag Handbook 8 and sequelae)
0	ISOMYRISTICIN	Leaf	--	--	Wealth of India.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	ISOPIPERITENONE	Shoot Essent. Oil	--	4000	
22	ISOQUERCITRIN	Leaf	--	--	
11	ISORHAMNETIN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	ISORHAMNETIN-3-GLUCURONIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	ISORHOIFOLIN	Leaf	--	--	
0	ISOTHYMOL	Leaf	2	5	
75	KAEMPFEROL	Fruit	--	--	
75	KAEMPFEROL	Seed	--	--	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.
0	KAEMPFEROL-3-GLUCURONIDE	Leaf	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	KAEMPFEROL-3-O-BETA-D-GLUCURONIDE	Seed	--	--	
0	KAEMPFEROL-GLYCOFLAVONE	Seed	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
7	LAURIC-ACID	Fruit	100	108	-0.4441927698072271	
7	LAURIC-ACID	Seed	100	108	-0.5113625956002235	USDA's Ag Handbook 8 and sequelae)
0	LEAD	Plant	0.05	0.8	-0.5492766752904812	ACTA AGRIC SCAND SUPPL 22: 1980
2	LEUCINE	Fruit	9250	10018	1.0452643502878531	
2	LEUCINE	Seed	9250	10018	-0.6761051130330088	USDA's Ag Handbook 8 and sequelae)
60	LIMONENE	Plant	--	--		
60	LIMONENE	Leaf	125	3735	3.4814383627388343	
60	LIMONENE	Essential Oil	467000	628800	2.882227993253224	
60	LIMONENE	Shoot Essent. Oil	--	119200	0.3094342045722538	
60	LIMONENE	Leaf Essent. Oil	--	214300	0.2690608628408047	
60	LIMONENE	Seed Essent. Oil	--	--		
60	LIMONENE	Root Essent. Oil	--	--		
0	LINALOL	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
53	LINALOOL	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
53	LINALOOL	Essential Oil	--	--	
7	LINALYL-ACETATE	Seed	--	--	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
27	LINOLEIC-ACID	Fruit	9600	10397	-0.2087139721578888
27	LINOLEIC-ACID	Seed	9600	10397	-0.828751087439793 USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Plant	--	--	
7	LUTEOLIN-7-GLUCOSIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	LUTEOLIN-GLYCOSIDE	Seed	--	--	
4	LYSINE	Fruit	10380	11242	1.8459850057143503
4	LYSINE	Seed	10380	11242	-0.11603254287698407 USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Fruit	2449	2893	0.3534351875253372
65	MAGNESIUM	Plant	560	6470	0.7461924242723924
65	MAGNESIUM	Seed	2449	2893	-0.02098100116423311 USDA's Ag Handbook 8 and sequelae)
14	MANGANESE	Fruit	--	18	-0.2848478380503656

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
14	MANGANESE	Plant	8	435	2.4228210372847276
14	MANGANESE	Seed	18	18	-0.4424804207753204 USDA's Ag Handbook 8 and sequelae)
1	MERCURY	Plant	0.003	0.06	-0.5009617770057098 ACTA AGRIC SCAND SUPPL 22: 1980
15	METHIONINE	Fruit	1430	1549	0.7271352318996868
15	METHIONINE	Seed	1430	1549	-0.7141817868825112 USDA's Ag Handbook 8 and sequelae)
4	METHYL-BENZOATE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
6	METHYL-CHAVICOL	Fruit	--	--	
6	METHYL-CHAVICOL	Seed	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	MOLYBDENUM	Plant	--	0.1	-0.7655179249334362 ACTA AGRIC SCAND SUPPL 22: 1980
22	MYRCENE	Fruit	84	924	-0.24028812670479283
22	MYRCENE	Leaf	15	924	-0.1311775014332694
22	MYRCENE	Seed	20	924	-0.5501224655274027
22	MYRCENE	Shoot Essent. Oil	--	15600	-0.4397404959457284
22	MYRCENE	Essential Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
6	MYRISTIC-ACID	Fruit	100	108	-0.2640487123172083
6	MYRISTIC-ACID	Seed	100	108	-0.294589404195434 USDA's Ag Handbook 8 and sequelae)
31	MYRISTICIN	Fruit	--	--	
31	MYRISTICIN	Root	--	--	
31	MYRISTICIN	Seed	--	--	
31	MYRISTICIN	Leaf	45	220	-0.83677421638605
31	MYRISTICIN	Root Essent. Oil	--	--	
31	MYRISTICIN	Essential Oil	--	203000	1
31	MYRISTICIN	Shoot Essent. Oil	--	2000	
1	N-BUTYLPHTHALIDE	Root	--	--	
0	N-UNDECANE	Leaf	3	70	
0	NEOCNIDILIDE	Root	--	--	
2	NEOCNIDOLIDE	Root	--	--	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.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	NEOPHYTADIENE	Leaf	25	75	
39	NIACIN	Fruit	28	30	-0.41038049882634875
39	NIACIN	Plant	28	30	-0.6546703629814054 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
39	NIACIN	Seed	28	30	-0.3857324434479313 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
3	NICKEL	Plant	0.1	4.7	-0.9948320067476139 ACTA AGRIC SCAND SUPPL 22: 1980
0	NITROGEN	Plant	6800	55300	2.123792178566495 ACTA AGRIC SCAND SUPPL 22: 1980
0	NONADECANE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	NONANAL	Fruit	--	--	
0	NONANAL	Seed	--	--	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	OCTADECA-5,6-DIENOIC-ACID	Seed Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	OCTAN-1-AL	Root Essent. Oil	--	--	
0	OCTANOL	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
18	OLEIC-ACID	Fruit	93600	101369	0.30053967859239455
18	OLEIC-ACID	Plant	--	--	
18	OLEIC-ACID	Seed	78000	101369	-0.14578751292878622
4	OSTHOLE	Root	--	--	Wealth of India.
25	P-COUMARIC-ACID	Leaf	--	16	-0.34577655264533097
16	P-CYMENE	Fruit	336	3773	-0.08029864689784445
16	P-CYMENE	Seed	40	3773	0.2503968578555244
16	P-CYMENE	Leaf	30	4460	3.3052402930466984
16	P-CYMENE	Shoot	--	--	
16	P-CYMENE	Leaf Essent. Oil	--	21700	-0.45620901588660095
16	P-CYMENE	Essential Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
16	P-CYMENE	Seed Essent. Oil	--	--		
16	P-CYMENE	Root Essent. Oil	--	--		
0	P-CYMENE-8-OL	Leaf	2	6	1.0000000000000002	
0	P-MENTHA-1,3,8-TRIENE	Leaf	5	45		
0	P-MENTHA-2,4(8)-DIENE	Essential Oil	--	--		
13	PALMITIC-ACID	Fruit	5800	6281	-0.26775372349168214	
13	PALMITIC-ACID	Seed	5800	6281	-0.5700036394768608	USDA's Ag Handbook 8 and sequelae)
13	PALMITIC-ACID	Plant	--	--		
2	PALMITOLEIC-ACID	Fruit	500	542	-0.24636918327436183	
2	PALMITOLEIC-ACID	Seed	500	542	-0.28545713507529	USDA's Ag Handbook 8 and sequelae)
2	PALMITOLEIC-ACID	Plant	--	--		
4	PARAFFIN	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
0	PENTADECANE	Root	--	--		Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	PERSICARIN	Shoot	--	580	
0	PERSICARIN	Seed	--	--	
0	PETROSELINIC-ACID	Plant	--	--	
0	PETROSELINIC-ACID	Seed	--	816000	1.179419422049027
0	PETROSELINIC-ACID-TRIGLYCERIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
4	PHELLANDRENE	Essential Oil	--	--	
7	PHENYLALANINE	Fruit	6700	7256	1.3630311294640811
7	PHENYLALANINE	Seed	6700	7256	-0.5116370330548264 USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Fruit	2102	3723	0.153997696991918
4	PHOSPHORUS	Plant	600	7625	1.9396126413461277
4	PHOSPHORUS	Seed	2102	3723	-0.430835600149335 USDA's Ag Handbook 8 and sequelae)
0	PHYTOCHELATIN-A	Tissue Culture	--	--	
0	PHYTOFLUENE	Seed	--	--	Wealth of India.
2	PHYTOSTEROLS	Plant	--	1240	0.15885150061665407 Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
61	PIPERINE	Seed	--	28.6	-1

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	PIPERITOL	Leaf	5	20	1
14	POTASSIUM	Fruit	10680	14122	-0.33571380248517246
14	POTASSIUM	Plant	8700	76450	3.8114363499495174
14	POTASSIUM	Seed	10680	14122	0.13648348307387825 USDA's Ag Handbook 8 and sequelae)
0	PROTEIN	Fruit	147680	226000	1.5617527309713977
0	PROTEIN	Plant	199600	216000	0.34857195641171973
0	PROTEIN	Seed	147680	226000	-0.06935005803918042
176	QUERCETIN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	QUERCETIN-3-O-RUTINOSIDE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
0	QUERCETIN-3-GLUCURONIDE	Leaf	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	QUERCETIN-3-GLUCURONIDE	Seed	--	--	
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Leaf	--	--	
2	QUERCETIN-3-O-BETA-D-GLUCURONIDE	Shoot	--	--	
4	QUERCETIN-3-RHAMNOGLUCOSIDE	Leaf	--	--	
0	QUERCETIN-3-SULFATE	Shoot	--	770	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-3-SULFATE	Seed	--	--	
44	QUERCITRIN	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
44	QUERCITRIN	Seed	--	500	
15	RIBOFLAVIN	Fruit	--	3	-0.4303249009534089
15	RIBOFLAVIN	Plant	3	3	-0.5861819139119265 USDA's Ag Handbook 8 and sequelae)
15	RIBOFLAVIN	Seed	3	3	-0.20090831129253928 USDA's Ag Handbook 8 and sequelae)
57	ROSMARINIC-ACID	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	RUBIDIUM	Plant	1.1	28	0.3807624787725667 ACTA AGRIC SCAND SUPPL 22: 1980
87	RUTIN	Leaf	--	1400	-0.9176299796056019 Varnaite, R. 1988. Rutin Content in Capsicum, Capsella, Urtica, Primula, Lepidium, Lactuca, Brassica, Anethum, Beta, Petroselinum, Allium Genera Representatives. Liet Tsr Mokslu Akad Darb Ser C, 4: 29-32.
5	SABINENE	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
5	SABINENE	Leaf	5	15	-0.25165177043728276
5	SABINENE	Essential Oil	--	--	
5	SABINOL	Leaf	1	3	-1.3518433080577976
5	SABINOL	Shoot Essent. Oil	--	5000	
29	SAFROLE	Plant	125	360	0.554163659253734
29	SAFROLE	Seed Essent. Oil	--	--	
0	SALICALDEHYDE	Plant	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
7	SALICYLATES	Seed	70	945	4.730027580498452
44	SCOPOLETIN	Fruit	--	--	
44	SCOPOLETIN	Seed	--	--	
44	SCOPOLETIN	Shoot	--	2	
44	SCOPOLETIN	Root	--	--	
44	SCOPOLETIN	Seed Essent. Oil	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
60	SELENIUM	Plant	0.001	0.012	-0.42698636145174623 ACTA AGRIC SCAND SUPPL 22: 1980
0	SENKYUNOLIDE	Root	--	--	
4	SILICON	Plant	30	700	3.674360216691932 ACTA AGRIC SCAND SUPPL 22: 1980
1	SODIUM	Fruit	158	262	-0.15910562070334694
1	SODIUM	Plant	1097	3308	-0.12095943629882361 USDA's Ag Handbook 8 and sequelae)
1	SODIUM	Seed	158	262	-0.29981285993350754 USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Fruit	1000	1083	-0.2073990310361778
8	STEARIC-ACID	Seed	1000	1083	-0.541892617814625 USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Plant	--	420	1.1614156001580258 Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
12	STIGMASTEROL	Root	--	--	
12	STIGMASTEROL	Seed Essent. Oil	--	--	
14	SULFUR	Plant	1400	11175	3.111094705278092 ACTA AGRIC SCAND SUPPL 22: 1980
0	TANNINS	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
23	TERPINEN-4-OL	Fruit	12	77	-0.3466854896821412
23	TERPINEN-4-OL	Seed	0.1	77	-0.6507040021716104
23	TERPINEN-4-OL	Leaf	5	15	-0.33175766291960446
23	TERPINEN-4-OL	Essential Oil	--	--	
9	TERPINOLENE	Leaf	0.1	50	-0.1684008925639172
0	TETRADECANE	Root	--	--	Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
0	TETRAHYDROCOUMARANE	Plant	--	--	Pakistan Encyclopedia Planta Medica. 1986.
31	THIAMIN	Fruit	4	5	-0.0425885992841977
31	THIAMIN	Plant	4	5	-0.2209949208584362 USDA's Ag Handbook 8 and sequelae)
31	THIAMIN	Seed	4	5	-0.37795068225120004 USDA's Ag Handbook 8 and sequelae)
4	THREONINE	Fruit	5750	6227	1.3340819873960998
4	THREONINE	Seed	5750	6227	-0.4273575247230049 USDA's Ag Handbook 8 and sequelae)
71	THYMOL	Shoot Essent. Oil	--	1600	-0.6613738654809941

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
1	TOLUENE	Shoot Essent. Oil	--	--	
0	TRANS-2-HEXEN-1-OL	Leaf	0.1	15	-1
8	TRANS-ANETHOLE	Fruit	12	539	-0.9826483469276708
8	TRANS-ANETHOLE	Seed	12	539	-1.3057099249333581 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-BETA-OCIMENE	Leaf	6	20	-0.7318152701857925
1	TRANS-CARVEOL	Fruit	42	270	1
1	TRANS-CARVEOL	Seed	42	270	1 Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	TRANS-DIHYDROCARVONE	Fruit	24	154	-1
0	TRANS-DIHYDROCARVONE	Seed	24	154	1
0	TRANS-DIHYDROCARVONE	Leaf	100	290	
0	TRANS-DIHYDROCARVONE	Essential Oil	--	--	
0	TRANS-P-MENTHA-2-EN-OL	Leaf	10	30	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	TRIDECENE	Root	--	--		Rizk, A.F.M., The Phytochemistry of the Flora of Qatar, Scientific and Applied Research Centre, University of Qatar, Kingprint, Richmond, UK, 1986.
22	UMBELLIFERONE	Fruit	--	--		
22	UMBELLIFERONE	Seed	--	--		
22	UMBELLIFERONE	Root	--	--		
22	UMBELLIFERONE	Seed Essent. Oil	--	--		
0	UMBELLIPRENIN	Fruit	--	--		
0	UMBELLIPRENIN	Seed	--	--		
0	UMBELLIPRENIN	Seed Essent. Oil	--	--		
1	URANIUM	Leaf	--	0.16		Wealth of India.
1	URANIUM	Root	--	7.9	0.9999999999999998	Wealth of India.
0	UREASE	Plant	--	--		Pakistan Encyclopedia Planta Medica. 1986.
3	VALINE	Fruit	11200	12130	1.5839770667175401	
3	VALINE	Seed	11200	12130	0.014590043883791455	USDA's Ag Handbook 8 and sequelae)
16	VANADIUM	Leaf	--	0.84	-0.8876491141170819	Wealth of India.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
3	VICENIN	Fruit	--	--		
3	VICENIN	Seed	--	--		
1	VITAMIN-K	Seed	50	200		
0	VITAMIN-P	Leaf	--	--		Wealth of India.
0	WATER	Fruit	70310	83690	-2.9866434775739372	
0	WATER	Plant	73000	830000	0.2528779846519487	
0	WATER	Seed	70310	83690	-0.5522699422938635	USDA's Ag Handbook 8 and sequelae)
3	XANTHOPHYLL	Fruit	--	--		
3	XANTHOPHYLL	Seed	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
43	XANTHOTOXIN	Seed	--	--		
2	Z-LIGUSTILIDE	Root	--	--		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.
77	ZINC	Fruit	43	66	1.0740192620721936	
77	ZINC	Plant	11	150	0.9651488572052452	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
77	ZINC	Seed	43	66	0.592445203168114	USDA's Ag Handbook 8 and sequelae)
