

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Elettaria cardamomum*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	CHROMIUM	Fruit	20.5	29.5	3.6358814153792958	--
7	LINALYL-ACETATE	Plant	1197.0	8000.0	3.2689973925149545	--
23	TERPINEN-4-OL	Fruit	252.0	23200.0	3.155848425568043	--
23	ALPHA-TERPINEOL	Fruit	301.0	4300.0	3.129748982046047	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
16	P-CYMENE	Fruit	130.0	28000.0	3.1268626509574724	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.
67	1,8-CINEOLE	Fruit	525.0	56000.0	2.8178415879493794	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.
20	CHOLINE	Seed		4195.0	2.3743243649568977	--
0	ALPHA-THUJENE	Fruit	1330.0	3047.0	2.2243250322627803	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.
15	CITRONELLOL	Fruit	14.0	40.0	2.194384347727115	--
22	MYRCENE	Seed Essent. Oil		271400.0	2.188477209267345	--
23	ALPHA-TERPINEOL	Seed Essent. Oil	44000.0	448400.0	2.14826195942333	--
0	TRANS-SABINENE-HYDRATE	Fruit	875.0	2500.0	1.9988936839515734	--
22	MYRCENE	Root Essent. Oil		186000.0	1.9897792117406918	--
19	ACETYL-CHOLINE	Seed		165.0	1.8803761294063241	--
10	NEROL	Fruit	10.0	30.0	1.7314244526151554	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.
53	LINALOOL	Fruit	1288.0	8000.0	1.651823927016786	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	GERANYL-ACETATE	Fruit	525.0	1500.0	1.586814525845496	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.
14	MANGANESE	Fruit	66.0	280.0	1.4427459841229469	--
35	BORNEOL	Fruit	32.0	8000.0	1.414213259765724	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	ALPHA-TERPINYL-ACETATE	Fruit	1050.0	50000.0	1.4142077668473696	--
53	LINALOOL	Fruit Essent. Oil	51000.0	64000.0	1.4140174751728773	--
23	TERPINEN-4-OL	Fruit Essent. Oil		27000.0	1.4135559855648545	--
0	ALPHA-THUJENE	Plant	1330.0	3047.0	1.2969582121204046	--
0	EO	Fruit	25000.0	100000.0	1.1237392472820933	--
15	FIBER	Fruit	201000.0	251000.0	1.0316302183851198	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
67	1,8-CINEOLE	Seed Essent. Oil	23100.0	308000.0	1.0	--
0	ALPHA-TERPINEOL ACETATE	Fruit Essent. Oil	303300.0	430000.0	1.0	--
0	EO	Seed Essent. Oil		64500.0	1.0	--
15	CITRONELLOL	Fruit Essent. Oil		5000.0	1.0	--
20	CHOLINE	Pericarp		2663.0	1.0	--
19	ACETYL-CHOLINE	Pericarp		70.0	1.0	--
0	CARBOHYDRATES	Seed	685000.0	747000.0	0.8886224845650202	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	LINALOL	Fruit	1288.0	8000.0	0.7335098243244321	--
60	LIMONENE	Fruit	595.0	9481.0	0.6095312442214162	--
5	STARCH	Seed	200000.0	400000.0	0.3637981937344068	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	ALPHA-TERPINEOL	Fruit Essent. Oil	17000.0	28000.0	0.3488244464514957	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ASH	Seed		58000.0	0.30438219732588906	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	BETA-PHELLANDRENE	Seed Essent. Oil		32500.0	0.2534211311349079	--
0	PROTEIN	Fruit	100000.0	128000.0	0.24802011650290137	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
12	COPPER	Fruit	3.8	15.4	0.20088141553943706	--
28	ALPHA-PINENE	Root Essent. Oil		123000.0	0.14189313736220527	--
0	FAT	Fruit	10000.0	100000.0	0.12253986651771635	--
22	MYRCENE	Fruit	336.0	3000.0	0.08390905500959031	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
28	ALPHA-PINENE	Fruit	217.0	3000.0	0.06445786160358473	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
14	POTASSIUM	Seed	11790.0	12857.0	0.025234953019076498	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
6	IRON	Seed	140.0	153.0	0.01025391749776786	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Seed	3830.0	4177.0	0.005616516315891836	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	CARBOHYDRATES	Fruit	421000.0	778000.0	-0.026104839799594735	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Fruit		54000.0	-0.06897899594447202	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
77	ZINC	Fruit	23.0	28.0	-0.06924407952072656	--
5	SABINENE	Fruit	500.0	1425.0	-0.08802822268836079	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	FIBER	Seed	113000.0	123000.0	-0.09300759572615179	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	MUFA	Fruit	8700.0	9455.0	-0.11635628749295267	Revised USDA data received 1993.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	SALICYLATES	Fruit		75.0	-0.12168222884000186	Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	ALPHA-TERPINENE	Fruit	21.0	60.0	-0.12467700979131179	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.
8	STEARIC-ACID	Seed	1830.0	18300.0	-0.16834218160275924	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	METHYL-HEPTENONE	Plant	18.0	51.0	-0.18660125966624988	--
0	SFA	Fruit	6800.0	7390.0	-0.2169348019998841	Revised USDA data received 1993.
2	PALMITOLEIC-ACID	Fruit	200.0	650.0	-0.2266299178669845	Revised USDA data received 1993.
8	STEARIC-ACID	Fruit	600.0	650.0	-0.23611473454753784	Revised USDA data received 1993.
6	MYRISTIC-ACID	Fruit	300.0	325.0	-0.2538115654361021	Revised USDA data received 1993.
13	BETA-PINENE	Fruit	70.0	1094.0	-0.26279401706162475	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.
6	IRON	Fruit	42.0	66.0	-0.26568397107756236	--
13	PALMITIC-ACID	Fruit	840.0	6195.0	-0.2690925616143795	Revised USDA data received 1993.
11	NEROLIDOL	Fruit	448.0	1280.0	-0.27992970059610406	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.
27	LINOLEIC-ACID	Fruit	3100.0	3370.0	-0.30785428228838985	Revised USDA data received 1993.
0	SUGAR	Seed		50000.0	-0.33796445974687406	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
102	CAFFEIC-ACID	Fruit		2.0	-0.3385433113198586	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	CAMPHENE	Fruit	10.0	30.0	-0.33936437581442985	Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
4	PHOSPHORUS	Fruit	1600.0	2000.0	-0.3693459584082821	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
5	SABINENE	Seed Essent. Oil		21100.0	-0.38732143908896777	--
1	SODIUM	Seed	180.0	196.0	-0.4045824561803137	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
18	OLEIC-ACID	Fruit	8500.0	9240.0	-0.4095293861159601	Revised USDA data received 1993.
35	GERANIOL	Plant	49.0	140.0	-0.42560309181043426	--
12	STIGMASTEROL	Seed	60.0	80.0	-0.4285915570564291	--
5	SABINENE	Fruit Essent. Oil	27000.0	49000.0	-0.4324265291346702	--
2	COBALT	Fruit	0.4	0.8	-0.43826781025666195	--
47	BETA-SITOSTEROL	Seed	360.0	480.0	-0.44678266643949144	--
53	LINALOOL	Seed Essent. Oil		26000.0	-0.4608027687850245	--
18	OLEIC-ACID	Seed	41942.0	62600.0	-0.46449145602655795	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	BORON	Seed	1.0	14.0	-0.4796351890415661	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).
2	PHYTOSTEROLS	Seed	460.0	600.0	-0.4861647488503628	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
67	1,8-CINEOLE	Fruit Essent. Oil	342000.0	360000.0	-0.4996991087091834	--
4	PUFA	Fruit	4300.0	4675.0	-0.5048519402783854	Revised USDA data received 1993.
2	CAMPESTEROL	Seed	40.0	55.0	-0.5085407308824086	--
28	CALCIUM	Fruit	1300.0	1625.0	-0.5148924842800362	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Seed Essent. Oil		84600.0	-0.5175355633899679	--
13	PALMITIC-ACID	Seed	5828.0	8400.0	-0.5262817939159874	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
23	TERPINEN-4-OL	Seed Essent. Oil		13000.0	-0.5404286322399808	--
2	PHYTOSTEROLS	Fruit	460.0	500.0	-0.5737684759640957	Revised USDA data received 1993.
16	P-CYMENE	Root Essent. Oil		7000.0	-0.5801460208228617	--
15	RIBOFLAVIN	Seed	1.0	2.0	-0.5841625019907875	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	ALPHA-PINENE	Seed Essent. Oil	6900.0	17000.0	-0.6246262641585064	--
11	GAMMA-TERPINENE	Fruit	49.0	140.0	-0.6255612447127588	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
28	ALPHA-PINENE	Fruit Essent. Oil	12000.0	16000.0	-0.6371982242858282	--
0	ALPHA-THUJENE	Root Essent. Oil		11000.0	-0.638798325513007	--
13	ALPHA-TERPINENE	Root Essent. Oil		7000.0	-0.6459900875555472	--
13	BETA-PINENE	Seed Essent. Oil	3800.0	26000.0	-0.661153509784313	--
25	P-COUMARIC-ACID	Fruit		19.0	-0.682898261666777	--
0	LINALOOL-ACETATE	Seed Essent. Oil		16000.0	-0.7015834378873093	--
22	MYRCENE	Fruit Essent. Oil	14000.0	19000.0	-0.7123427236991273	--
0	LINOLENIC-ACID	Fruit	1200.0	1305.0	-0.7476429173800373	Revised USDA data received 1993.
27	LINOLEIC-ACID	Seed	7035.0	10500.0	-0.82786857321412	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	BETA-PINENE	Root Essent. Oil		28000.0	-0.8323706430172229	--
0	GERANIOL-ACETATE	Seed Essent. Oil		7000.0	-0.843229874438314	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
41	CAMPHOR	Fruit	7.0	20.0	-0.8661900913537282	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	FAT	Seed	67000.0	100000.0	-0.8711556020733713	--
4	PHOSPHORUS	Seed	1780.0	1941.0	-0.90174516903946	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
39	NIACIN	Seed	11.0	12.0	-0.9245464566376991	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
16	P-CYMENE	Fruit Essent. Oil		5000.0	-0.9962725072187498	--
10	NEROL	Seed Essent. Oil		3000.0	-1.0	--
5	SABINENE	Root Essent. Oil		384000.0	-1.0	--
11	GAMMA-TERPINENE	Root Essent. Oil		33000.0	-1.0	--
0	PROTEIN	Seed	108000.0	118000.0	-1.0300659888675268	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	THIAMIN	Seed	1.0	2.0	-1.0937002421726418	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
60	LIMONENE	Fruit Essent. Oil		25000.0	-1.1610447246264288	--
35	GERANIOL	Seed Essent. Oil		5000.0	-1.2760191391363693	--
0	ALPHA-TERPINYL-ACETATE	Seed Essent. Oil				--
0	TERPINEOL-FORMIATE	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	N-PENTACOSANE	Seed				--
19	CARVONE	Fruit Essent. Oil				--
1	DODECANOIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
8	STEARIC-ACID	Seed Oil				--
0	(+)-LIMONENE	Root Essent. Oil		214000.0		--
6	MYRISTIC-ACID	Seed Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-TERPINEOL ACETATE	Seed				--
0	METHYL-HEPTANONE	Fruit				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	N-NONACOSENE	Seed				--
5	CAPRYLIC-ACID	Seed Oil				--
20	CITRONELLAL	Plant				--
3	DECANOIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
9	SINAPIC-ACID	Leaf				--
0	(+)-LIMONENE	Fruit Essent. Oil				--
0	BISABOLENE	Seed				--
5	MYRTENAL	Fruit Essent. Oil				--
15	ASCARIDOLE	Fruit				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	HEPTANONE	Fruit				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	N-NONACOSANE	Seed				--
3	CAPRIC-ACID	Seed Oil				--
0	CIS-P-MENTH-2-EN-1-OL	Fruit	525.0	1500.0		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.
0	CITRONELLIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	P-MENTHENE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	1,4-CINEOLE	Seed Essent. Oil				--
0	3-TRIDECANE	Fruit				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.
5	NERYL-ACETATE	Fruit				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.
6	EUGENYL-ACETATE	Seed				--
0	NERYLIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	N-HEPTACOSENE	Seed				--
9	CAMPHENE	Seed Essent. Oil				--
6	BUTYRIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	P-MENTH-TRANS-2-EN-1-OL	Seed Essent. Oil				--
0	BETA-SITOSTENONE	Seed				--
0	DELTA-TERPINEOL	Fruit Essent. Oil				--
0	2-UNDECANE	Fruit				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.
7	LAURIC-ACID	Seed Oil				--
11	ALPHA-PHELLANDRENE	Fruit				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	N-HEPTACOSANE	Seed				--
1	CHOLESTEROL	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACETIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	P-MENTH-CIS-2-EN-1-OL	Seed Essent. Oil				--
3	BETA-TERPINEOL	Seed Essent. Oil				--
0	METHYL-HEPTENONE	Seed Essent. Oil				--
0	HUMULENE-OXIDE	Fruit Essent. Oil				--
0	DELTA-LIMONENE	Seed Essent. Oil		26000.0		--
0	DESMOSTEROL	Seed				--
0	ALPHA-COPAENE	Seed				--
0	(+)-ALPHA-TERPINEOL	Seed				--
0	N-HENTRIACTANE	Seed				--
35	BORNEOL	Seed Essent. Oil				--
0	CARDIOLIPIN	Seed				--
7	LINALYL-ACETATE	Fruit	1197.0	8000.0		--
1	PENTADECANOIC-ACID	Seed Oil				--
0	METHYL-HEPTENONE	Fruit Essent. Oil	300.0	1000.0		--
2	HUMULENE	Fruit Essent. Oil				--
0	N-TRITRIACONTENE	Seed				--
7	CYANIDIN	Leaf				--
0	DELTA-5,7,22-CHOLESTATRIENOL	Seed				--
0	7-ERGOSTEROL	Seed				--
24	VANILLIC-ACID	Leaf				--
1	PHYTOL	Seed				--
0	N-HENTRIACONTENE	Seed				--
0	BETA-CARYOPHYLLENE	Fruit Essent. Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-HEPTENONE	Seed	18.0	51.0		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.
13	PALMITIC-ACID	Seed Oil				--
16	P-CYMENE	Seed Essent. Oil				--
30	MENTHONE	Seed Essent. Oil		57700.0		--
0	N-TRITRIACONTANE	Seed				--
0	D-PHI-TERPINYL-ACETATE	Seed				Chemical Constituents of Oriental Herbs (3 diff. books)
2	TERPINEOL-ACETATE	Seed Essent. Oil		382000.0		--
0	ARACHIDIC-ACID	Seed Oil				--
18	OLEIC-ACID	Seed Oil				--
14	GAMMA-TOCOPHEROL	Seed				--
0	ALPHA-YLANGENE	Seed				--
13	BETA-PINENE	Fruit Essent. Oil				--
27	LINOLEIC-ACID	Seed Oil				--
35	GERANIOL	Fruit Essent. Oil		12000.0		--
0	N-TRICOSENE	Seed				--
0	D-ALPHA-TERPINYL-ACETATE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
2	HEXANOIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	1,4-CINEOLE	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	OCTAN-1-OL	Fruit Essent. Oil				--
25	P-COUMARIC-ACID	Leaf				--
32	ALPHA-TOCOPHEROL	Seed				--
0	3-(BUT-CIS-1-ENYL)-PYRIDINE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	N-TRICOSANE	Seed				--
0	HEPTANOIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	PHOSPHATIDYL-INOSITOL	Seed				--
5	NERYL-ACETATE	Seed Essent. Oil				--
1	PERILLIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	LINALOOL-ACETATE	Fruit Essent. Oil	26000.0	31000.0		--
0	TRANS-P-MENTH-2-EN-1-OL	Fruit				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	N-PENTACOSENE	Seed				--
31	CARYOPHYLLENE	Fruit Essent. Oil				--
0	GERANIC-ACID	Fruit				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TERPENYL-ACETATE	Fruit Essent. Oil		377000.0		--
0	PHOSPHATIDYL-ETHANOLAMINE	Seed				--
0	LYSOPHOSPHATIDYLCHOLINE	Seed				--
0	4-HYDROXY-BENZOIC-ACID	Leaf				--
11	NEROLIDOL	Seed Essent. Oil		12000.0		--
1	N-HEPTANE	Seed Essent. Oil		17900.0		--