

P Citrus aurantium

Common Name(s)

Bitter Orange, Petitgrain

How Used

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Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-AURAPTENAL	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	4-TERPINENOL	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	4-TERPINENOL	Pericarp	--	--	
8	4-TERPINEOL	Plant	--	--	
0	5-HYDROXYAURANETIN	Plant	--	--	
1	6,7-DIMETHOXYCOUMARIN	Fruit	--	--	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.
6	ACETALDEHYDE	Plant	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	ACETIC-ACID	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
16	ACETIC-ACID	Plant	--	--	
2	ALPHA-HUMULENE	Plant	--	--	
5	ALPHA-IONONE	Plant	--	--	
11	ALPHA-PHELLANDRENE	Leaf	1	20	-0.3001378339446704
28	ALPHA-PINENE	Leaf	1	1	-0.22447959885047528
28	ALPHA-PINENE	Plant	--	--	
13	ALPHA-TERPINENE	Leaf	1	1	-0.31184560399489664
23	ALPHA-TERPINEOL	Leaf	460	760	0.7438510443528464
23	ALPHA-TERPINEOL	Plant	--	--	
0	ALPHA-TERPINYL-ACETATE	Leaf	20	229	-0.5009027543729487
0	ALPHA-YLANGENE	Plant	--	--	
0	ANTHRANILIC-ACID-METHYL-ETHER	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ANTHRANILIC-ACID-METHYL-ETHER	Flower	4	26	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
112	ASCORBIC-ACID	Fruit	420	3947	-0.03907641517084457 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
112	ASCORBIC-ACID	Leaf	--	3000	-0.16555832480808047 Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
0	ASH	Fruit	5000	64000	0.18997447831637496 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	AURANETIN	Fruit	--	--	
0	AURANTIAMARIN	Fruit	--	--	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
0	AURANTIAMENE	Plant	--	--	
2	AURAPTEN	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	AUROPTENOL	Essential Oil	--	--	Chemical Constituents of Oriental Herbs (3 diff. books)
20	BENZOIC-ACID	Plant	--	--	
26	BERGAPTEN	Fruit	--	--	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.
53	BETA-CAROTENE	Fruit	1	27	-0.09861011559570874 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	BETA-COPAENE	Plant	--	--	
5	BETA-ELEMENE	Plant	--	--	
0	BETA-OCIMENE	Plant	--	--	
0	BETA-OCIMENE	Flower	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	BETA-OCIMENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	BETA-PINENE	Leaf	70	170	-0.17838109246360231	
13	BETA-PINENE	Plant	--	--		
0	BUTANOL	Plant	--	--		
4	CADINENE	Leaf	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
4	CADINENE	Plant	--	--		
28	CALCIUM	Fruit	18	4230	0.08623828803163008	
9	CAMPHENE	Plant	--	--		
9	CAMPHENE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CAPRINALDEHYDE	Plant	--	--		
0	CARBOHYDRATES	Fruit	97000	909000	0.67441948184124	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
19	CARVONE	Plant	--	--		
31	CARYOPHYLLENE	Plant	--	--		
18	CINNAMIC-ACID	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
18	CINNAMIC-ACID	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
1	CIS-3-HEXENOL	Leaf	1	1	
3	CIS-OCIMENE	Leaf	1	110	-0.6693017803090183
53	CITRAL	Plant	--	--	
2	CITRANTIN	Fruit	--	--	
23	CITRIC-ACID	Fruit	--	--	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
23	CITRIC-ACID	Plant	--	--	
20	CITRONELLAL	Plant	--	--	
0	CITRONELIC-ACID	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	CITRONELLOL	Plant	--	--	
12	COPPER	Fruit	4	10	-0.21939758331858253 Suziki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
57	COUMARIN	Fruit	--	--	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.
2	CRYPTOXANTHIN	Plant	--	--	
0	D-CITRONELIC-ACID	Plant	--	--	
19	D-LIMONENE	Plant	--	--	
0	D-LINALOL	Leaf	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	D-LINALOOL	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-NEROLIDOL	Plant	--	--	
0	D-NEROLIDOL	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DECANAL	Leaf	1	1	-0.7060822876535202
0	DECYL-ALDEHYDE	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DECYL-ALDEHYDE	Plant	--	--	
0	DECYLPELARGONATE	Plant	--	--	
8	DELTA-3-CARENE	Plant	--	--	
9	DELTA-CADINENE	Plant	--	--	
0	DELTA-LIMONENE	Fruit	--	--	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
7	DIPENTENE	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	DIPENTENE	Plant	--	--	
0	DL-LINALOL	Leaf	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
0	DL-LINALOOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DL-TERPINEOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	DODECANAL	Plant	--	--		
0	DODECEN-2-AL-(1)	Plant	--	--		
0	DUODECLYALDEHYDE	Plant	--	--		
0	DUODECYLALDEHYDE	Pericarp	--	--		
0	DUODECYLALDEHYDE	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EO	Leaf	--	3000	-0.7507396833089339	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EO	Flower	1000	5000	-0.256861435811866	
0	EO	Fruit	7000	25000	-0.33403661140306445	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
24	ETHANOL	Plant	--	--		
17	FARNESOL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
17	FARNESOL	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
0	FAT	Fruit	--	8000	-0.5801487332998083	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Seed	--	448600	0.9650452918648007	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
15	FIBER	Plant	3000	160000	-0.46435066688212184	
12	FORMALDEHYDE	Plant	--	--		
13	FORMIC-ACID	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
13	FORMIC-ACID	Pericarp	--	--		
13	FORMIC-ACID	Plant	--	--		
0	FURANOCOUMARINS	Pericarp	--	--		Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	FURFUROL	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	FURFUROL	Plant	--	--		
0	GAMMA-ELEMENE	Plant	--	--		
11	GAMMA-TERPINENE	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	GAMMA-TERPINENE	Pericarp	--	--		
11	GAMMA-TERPINENE	Plant	--	--		

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
11	GAMMA-TERPINENE	Leaf	50	110	-0.15983052104707215
13	GERANIAL	Leaf	1	1	-0.4060621023305319
13	GERANIAL	Plant	--	--	
0	GERANIC-ACID	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
35	GERANIOL	Plant	--	--	
35	GERANIOL	Leaf	200	350	-0.06791028766181946 List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	GERANYL-ACETATE	Fruit	--	--	Chemical Constituents of Oriental Herbs (3 diff. books)
5	GERANYL-ACETATE	Leaf	261	261	0.3570910203674803 Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	GERANYL-OXIDE	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	GERANYL-OXIDE	Plant	--	--	
0	GUM	Plant	--	--	
31	HESPERIDIN	Fruit	700	2500	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
31	HESPERIDIN	Leaf	--	--	
31	HESPERIDIN	Flower	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
3	HEXANOL	Plant	--	--	
0	INDOL	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	INDOLE	Plant	--	--	
6	IRON	Fruit	3	260	0.5038617420819682
0	ISOHESPERIDIN	Fruit	--	--	Watt, J.M. and Breyer-Brandwijk, M.G. 1962. The Medicinal and Poisonous Plants of Southern and Eastern Africa. E. & S. Livingstone, Ltd. Edinburg & London. 1457 pp.
0	ISOLIMONIC-ACID	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	ISOSCUTELLAREIN	Plant	--	--	
0	ISOSINENSETIN	Plant	--	--	
0	ISOTETRAMETHYLETHER	Plant	--	--	
8	JASMONE	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	L-CAMPHENE	Flower	--	--	
0	L-LINALOL	Plant	--	--	
0	L-LINALOOL	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	L-LINALYL-ACETATE	Fruit	--	--	Chemical Constituents of Oriental Herbs (3 diff. books)

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference	Citation
0	L-LINALYL-ACETATE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	L-STACHYDRINE	Leaf	--	1000	1	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LAURIC-ALDEHYDE	Plant	--	--		
60	LIMONENE	Leaf	70	110	-0.3320641434683265	
60	LIMONENE	Plant	1000	8000	4.430891974366298	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	LIMONIN	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	LIMONIN	Plant	--	--		
0	LINALOL	Leaf	1990	2795	1.2129300722231442	
53	LINALOOL	Leaf	1990	2795	1.288060378681955	
7	LINALYL-ACETATE	Leaf	4429	5500	0.46478491571028424	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
7	LINALYL-ACETATE	Flower	80	520	-0.45159116756655254	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
65	MAGNESIUM	Fruit	800	1730	-0.18510138251654518	Suziki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
15	MALIC-ACID	Plant	--	--	
14	MANGANESE	Fruit	--	8	-0.3507865335531638 Suzuki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
3	MANNOSE	Plant	--	--	
2	METHANOL	Plant	--	--	
2	METHYL-ANTHRANILATE	Flower	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
22	MYRCENE	Leaf	130	550	0.025793360942901168
22	MYRCENE	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
22	MYRCENE	Plant	--	--	
56	NARINGENIN	Plant	--	--	
12	NARINGIN	Fruit	--	--	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.
6	NEOHESPERIDIN	Fruit	--	--	
0	NEOHESPERIDOSE	Pericarp	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
4	NERAL	Leaf	1	1	-0.386496325306488
4	NERAL	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
10	NEROL	Leaf	100	150	0.2210563851407086	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
10	NEROL	Plant	--	--		
11	NEROLIDOL	Plant	--	--		
5	NERYL-ACETATE	Fruit	--	--		Chemical Constituents of Oriental Herbs (3 diff. books)
5	NERYL-ACETATE	Leaf	55	755	0.9027789321499269	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
39	NIACIN	Fruit	3	24	-0.49059008618146793	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
8	NOBILETIN	Fruit	--	--		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.
8	NOBILETIN	Plant	--	--		
2	NOMILIN	Plant	--	--		
0	NONANOL	Plant	--	--		
0	NONANOL	Pericarp	--	--		
0	NONANOL	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	NONYL-ALDEHYDE	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	NONYL-ALDEHYDE	Pericarp	--	--	
0	NONYL-ALDEHYDE	Plant	--	--	
3	NOOTKATONE	Plant	--	--	
0	OCTALDEHYDE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTALDEHYDE	Pericarp	--	--	
0	OCTANOL	Pericarp	--	--	
0	OCTANOL	Plant	--	--	
0	OCTANOL	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTYL-ACETATE	Plant	--	--	
16	P-CYMENE	Leaf	100	270	-0.17579834905797595
16	P-CYMENE	Plant	--	--	
0	P-CYMOL	Plant	--	--	
13	PALMITIC-ACID	Plant	--	--	
24	PECTIN	Plant	--	--	
24	PECTIN	Pericarp	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	PELARGONALDEHYDE	Pericarp	--	--	

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PELARGONALDEHYDE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PELARGONIC-ACID	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PELARGONIC-ACID	Pericarp	--	--	
0	PELARGONIC-ACID	Plant	--	--	
0	PENTANOL	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PENTANOL	Pericarp	--	--	
0	PENTANOL	Plant	--	--	
4	PELLANDRENE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
4	PELLANDRENE	Pericarp	--	--	
4	PELLANDRENE	Plant	--	--	
26	PHENOL	Plant	--	--	
0	PHENYL-ETHYL-ALCOHOL	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	PHENYLACETIC-ACID	Flower	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
2	PHENYLACETIC-ACID	Plant	--	--	
0	PHENYLETHANOL	Flower	--	--	
4	PHOSPHORUS	Fruit	120	1600	-0.4908418737652641 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
14	POTASSIUM	Fruit	1020	13800	-0.36420230977490436
0	PROTEIN	Fruit	6000	56000	-0.7171711920861981 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	PYRROL	Leaf	--	--	
0	PYRROLE	Plant	--	--	
0	PYRROLE	Leaf	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
2	RHOIFOLIN	Plant	--	--	J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
15	RIBOFLAVIN	Fruit	1	3	-0.4303249009534089 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
4	RUTOSIDE	Pericarp	--	--	Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
5	SABINENE	Plant	--	--	
5	SABINENE	Leaf	1	40	-0.23572328048185884
5	SABINENE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	SABINENE	Pericarp	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference Citation
3	SESELIN	Root	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	SINENSETIN	Pericarp	--	--	
2	SINENSETIN	Plant	--	--	
2	SINENSETIN	Plant	--	--	Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	SINENSETIN	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	SODIUM	Fruit	54	116	-0.1729506367339856 Suziki, A., Morimoto, I., and Okitsu, T., Elution of Metals from Crude Drugs, Shoykugaku Zasshi 36(3):190-195.
6	STACHYDRINE	Leaf	--	1000	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	TANGERETIN	Plant	--	--	
15	TANGERETIN	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
15	TANGERETIN	Pericarp	--	--	
41	TANNIC-ACID	Plant	--	--	
35	TANNIN	Fruit	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TERPENYL-ACETATE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TERPENYL-ACETATE	Pericarp	--	--	
0	TERPENYL-ACETATE	Plant	--	--	
23	TERPINEN-4-OL	Leaf	50	80	-0.29464326118547207
9	TERPINOLENE	Pericarp	--	--	
9	TERPINOLENE	Leaf	1	10	-0.2193558436556226
9	TERPINOLENE	Plant	--	--	
9	TERPINOLENE	Hull Husk	--	--	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	TETRA-O-METHYL-SCUTELLAREIN	Plant	--	--	
31	THIAMIN	Fruit	1	6	0.08541669233982067 CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
71	THYMOL	Leaf	1	1	-0.41949505884088445
0	TRANS-HEXEN-2-AL-1	Plant	--	--	
0	TRANS-OCIMENE	Leaf	1	332	0.2100490915838046
22	UMBELLIFERONE	Plant	--	--	
2	UNDECANAL	Plant	--	--	
0	VALENCENE	Plant	--	--	

Chemical Plant Part		Low PPM	High PPM	StdDev	Reference	Citation
2	VIOLAXANTHIN	Pericarp	--	--		
2	VIOLAXANTHIN	Plant	--	--		
2	VIOLAXANTHIN	Hull Husk	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	WATER	Fruit	857000	892000	0.5279640631955985	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
5	ZEAXANTHIN	Fruit	--	--		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
77	ZINC	Fruit	--	16	-0.4302746084448067	