

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Ginkgo biloba

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
30	(+)-CATECHIN	Tissue Culture				Jim Duke's personal files.
30	(+)-CATECHIN	Leaf				Jim Duke's personal files.
4	(+)-CATECHOL	Leaf				Jim Duke's personal files.
7	(+)-GALLOCATECHIN	Leaf				Jim Duke's personal files.
0	(+)-GALLOCATECHOL	Leaf				Jim Duke's personal files.
0	(+)-PINITOL	Pollen Or Spore		76.0		Jim Duke's personal files.
0	(+)-SESAMIN	Wood				Jim Duke's personal files.
0	(+)-SESAMIN	Heart Wood				Jim Duke's personal files.
0	(-)-EPI-GALLO-CATECHOL	Leaf				Jim Duke's personal files.
38	(-)-EPICATECHIN	Leaf				Jim Duke's personal files.
0	(-)-EPICATECHOL	Leaf				Jim Duke's personal files.
21	(-)-EPIGALLOCATECHIN	Leaf				Jim Duke's personal files.
0	(E)-ATLANTONE	Heart Wood				Jim Duke's personal files.
0	(Z)-ATLANTONE	Heart Wood				Jim Duke's personal files.
0	1,4-DIMETHYL-2,5-DIISOPROPYLBENZENE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	1,4-DIMETHYL-2,5-DIISOPROPYLBENZENE	Essential Oil				Jim Duke's personal files.
0	10,11-(E)-6-OXO-DIHYDROATLANTONE	Plant				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	10,11-(E)-DIHYDROATLANTONE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	10,11-(Z)-DIHYDROATLANTONE	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	10-HEPTACOSANOL	Leaf Wax				Chemical Constituents of Oriental Herbs (3 diff. books)
0	10-NONACOSANOL	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	13-NONACOSANOL	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	15-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	16-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	17-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	18-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	19-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	2,5,8-TRIMETHYLDIHYDRONAPHTHALENE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	2-CARBOXYARABINITOL	Leaf				Jim Duke's personal files.
0	2-HEXENAL	Plant				--
0	2-ISOPROPYLPHENOL	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	2-ISOPROPYLPHENOL	Essential Oil				Jim Duke's personal files.
0	20-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	21-BETULAPRENOL	Leaf				Jim Duke's personal files.
0	24ALPHA-ETHYLLATHOSTEROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	3'-O-METHYLMYRICETIN-3-RUTINOSIDE	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	3'-O-METHYLMYRICETRIN-3-O-GLUCOSIDE	Leaf				--
3	3,4-DIHYDROXYBENZOIC-ACID	Leaf				--
0	3-O-[2''-O-6''-O-BIS-(ALPHA-L-RHAMNOSYL)-BETA-D-GLUCOSYL]-ISORHAMNETIN	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	3-O-[2''-O-6''-O-BIS-(ALPHA-L-RHAMNOSYL)-BETA-D-GLUCOSYL-KAEMPFEROL	Leaf				--
0	3-O-[2''-O-6''-O-BIS-(ALPHA-L-RHAMNOSYL)-BETA-D-GLUCOSYL-QUERCETIN	Leaf				--
0	3-O-[2''-O-[6''-O-(P-(BETA-D-GLUCOSYLOXY)-TRANS-CINNAMOYL)-BETA-D-GLUCOSYL]-ALPHA-L-RHAMNOSYL-KAEMPFEROL	Leaf				--
0	3-O-[2''-O-[6''-O-(P-(BETA-D-GLUCOSYLOXY)-TRANS-CINNAMOYL)-BETA-D-GLUCOSYL]-ALPHA-L-RHAMNOSYL-QUERCETIN	Leaf				--
0	3-O-[2''-O-[6''-O-(P-HYDROXY-TRANS-CINNAMOYL)-BETA-D-GLUCOSYL]-ALPHA-L-RHAMNOSYL-7-O-(BETA-D-GLUCOSYL)-QUERCETIN	Leaf				--
0	3-O-[2''-O-[6''-O-(P-HYDROXY-TRANS-CINNAMOYL)-BETA-D-GLUCOSYL]-ALPHA-L-RHAMNOSYL-QUERCETIN	Leaf				--
0	3-O-[2''-O-[6''-O-(P-HYDROXY-TRANS-CINNAMOYL)-BETA-D-GLUCOSYL]-ALPHA-L-RHAMNOSYL-KAEMPFEROL	Leaf				--
0	4'-METHOXYPYRIDOXINE	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	4-4'-(PENTA-CIS-1-CIS-5-DIENE-1-5-DIYNYL)-DIPHENOL	Leaf		22.7		Jim Duke's personal files.
0	4-HYDROXY-BENZOIC-ACID	Leaf				--
0	4-HYDROXYANACARDIC-ACID	Fruit				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4-HYDROXYGINKGOLIC-ACID	Fruit				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	4-O-METHYL-PYRIDOXINE	Leaf				--
0	4-O-METHYL-PYRIDOXINE	Seed				--
0	5'-METHOXYBILOBETIN	Leaf				Chemical Constituents of Oriental Herbs (3 diff. books)
0	5-6-EPOXYLUTEIN	Tissue Culture				Jim Duke's personal files.
0	6-(HEPTADECADIENYL)-SALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	6-(PENTACEC-CIS-ENYL)-SALICYLIC-ACID	Fruit				Jim Duke's personal files.
0	6-(PENTACEC-CIS-ENYL)-SALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	6-(PENTADEC-8-ENYL)-2,4-DIHYDROXYBENZOIC-ACID	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
0	6-(PENTADEC-8-ENYL)-RESORCYCLIC-ACID	Seed				Jim Duke's personal files.
1	6-(PENTADECYL)-SALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	6-(TRIDECE-8-ENYL)-RESORCYCLIC-ACID	Seed				Jim Duke's personal files.
0	6-(TRIDECYL)-SALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	6-(TRIDECYL)-SALICYLIC-ACID	Fruit				Jim Duke's personal files.
2	6-HEPTADECENYLSALICYLIC-ACID	Fruit				Jim Duke's personal files.
2	6-HEPTADECENYLSALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	6-HYDROXYKYNURENIC-ACID	Leaf				--
2	6-PENTADECENYLSALICYLIC-ACID	Leaf				Jim Duke's personal files.
0	8-HYDROXY-3-(6'-PENTADECENYL)-3-4-DIHYDRO-ISO-COUMARIN	Fruit				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	8-HYDROXY-3-HEPTADECYL-3-4-DIHYDRO-ISO-COUMARIN	Fruit				Jim Duke's personal files.
0	8-HYDROXY-3-TRIDECYL-3-4'-DIHYDRO-ISO-COUMARIN	Fruit				Jim Duke's personal files.
16	ACACETIN	Leaf				--
0	ACENAPHTHENE	Essential Oil				Jim Duke's personal files.
0	ACENAPHTHENE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
16	ACETIC-ACID	Pollen Or Spore				Jim Duke's personal files.
16	ACETIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	AFZELIN	Pollen Or Spore		141.0		--
3	ALANINE	Seed	2400.0	6745.0	-0.7251578440244862	USDA's Ag Handbook 8 and sequelae)
7	ALPHA-CAROTENE	Tissue Culture				Jim Duke's personal files.
0	ALPHA-HEXENAL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	ALPHA-HYDROXY-PALMITIC-ACID	Seed				--
5	ALPHA-IONONE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
15	ALPHA-LINOLENIC-ACID	Seed	210.0	468.0	-0.32164924804323036	USDA's Ag Handbook 8 and sequelae)
15	ALPHA-LINOLENIC-ACID	Leaf				Jim Duke's personal files.
0	ALPHA-SESAMIN	Wood		5000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
18	AMENTOFLAVONE	Leaf	3.8	5.0	-1.0	--
17	ANACARDIC-ACID	Fruit Epidermis				Jim Duke's personal files.
17	ANACARDIC-ACID	Testa				Jim Duke's personal files.
17	ANACARDIC-ACID	Seed				--
17	ANACARDIC-ACID	Plant				Jim Duke's personal files.
17	ANACARDIC-ACID	Leaf				--
17	ANACARDIC-ACID	Fruit				--
101	APIGENIN	Pollen Or Spore		109.0		Jim Duke's personal files.
101	APIGENIN	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	APIGENIN-3-O-GLUCOSIDE	Leaf				--
0	ARABINOSE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	ARACHIDIC-ACID	Pollen Or Spore				Jim Duke's personal files.
14	ARGININE	Seed	4200.0	11475.0	-0.5574710966820287	USDA's Ag Handbook 8 and sequelae)
112	ASCORBIC-ACID	Seed	150.0	545.0	-0.011266545914812775	--
112	ASCORBIC-ACID	Leaf				--
112	ASCORBIC-ACID	Fruit		640.0	-0.24469573012689724	Jim Duke's personal files.
0	ASH	Seed	14000.0	38000.0	-0.29717040195945654	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ASH	Leaf	11520.0	48000.0	-1.248319836630157	--
2	ASPARAGINE	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
3	ASPARTIC-ACID	Seed	5430.0	14815.0	-0.6901386529117167	USDA's Ag Handbook 8 and sequelae)
7	ASTRAGALIN	Leaf		18000.0	1.0	--
0	AUROXANTHIN	Tissue Culture				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	BEHENIC-ACID	Pollen Or Spore				Jim Duke's personal files.
20	BENZOIC-ACID	Plant				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
53	BETA-CAROTENE	Seed	1.0	4.0	-0.17927152633495164	--
53	BETA-CAROTENE	Tissue Culture				Jim Duke's personal files.
53	BETA-CAROTENE	Leaf	7.2	30.0	-1.007290752841	--
13	BETA-EUDES MOL	Heart Wood				Jim Duke's personal files.
13	BETA-EUDES MOL	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
13	BETA-IONONE	Essential Oil				Jim Duke's personal files.
13	BETA-IONONE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
47	BETA-SITOSTEROL	Seed				Jim Duke's personal files.
47	BETA-SITOSTEROL	Pollen Or Spore				Jim Duke's personal files.
47	BETA-SITOSTEROL	Leaf				Jim Duke's personal files.
0	BETULAPRENOLS	Plant				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
4	BIFLAVONES	Leaf				--
13	BILOBALIDE	Root				Jim Duke's personal files.
13	BILOBALIDE	Shoot				Jim Duke's personal files.
13	BILOBALIDE	Plant				Jim Duke's personal files.
13	BILOBALIDE	Leaf	0.25	330.0		--
0	BILOBALIDE-A	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	BILOBANONE	Leaf				Jim Duke's personal files.
0	BILOBANONE	Heart Wood				Jim Duke's personal files.
0	BILOBANONE	Wood		20000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	BILOBETIN	Leaf	8.0	19000.0		--
5	BILOBOL	Seed				--
5	BILOBOL	Fruit				Jim Duke's personal files.
5	BILOBOL	Testa				Jim Duke's personal files.
6	BUTYRIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
28	CALCIUM	Seed	20.0	230.0	-0.7192814043300865	--
28	CALCIUM	Leaf	2640.0	11000.0	-0.5081650418038481	--
4	CALCIUM-OXALATE	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
2	CAMPESTEROL	Seed				Jim Duke's personal files.
1	CAPROIC-ACID	Fruit				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
5	CAPRYLIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	CARBOHYDRATES	Seed	381000.0	838400.0	1.2518645496771927	--
3	CARDANOL	Fruit				--
3	CARDANOL	Testa				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	CARDANOL	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
0	CARDANOLS	Leaf				--
4	CARDOL	Fruit				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	CERYL-ALCOHOL	Twig				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	CHOLINE	Leaf				Jim Duke's personal files.
24	CHROMIUM	Leaf	0.7	2.9	-0.39890184230621223	--
0	CIS-NEOXANTHIN	Tissue Culture				Jim Duke's personal files.
0	CIS-VIOLAXANTHIN	Tissue Culture				Jim Duke's personal files.
23	CITRIC-ACID	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
23	CITRIC-ACID	Pollen Or Spore				Jim Duke's personal files.
2	COBALT	Leaf				--
12	COPPER	Seed	3.0	6.0	-0.7995157719201157	USDA's Ag Handbook 8 and sequelae)
13	CYSTEINE	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
2	CYSTINE	Seed	230.0	630.0	-1.7530921610405406	USDA's Ag Handbook 8 and sequelae)
4	D-CATECHIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	D-GALLOCATECHIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-GLUCARIC-ACID	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
5	DAUCOSTEROL	Leaf				Jim Duke's personal files.
0	DI-TRANS-POLY-CIS-OCTADECAPRENOL	Leaf		2660.0		--
0	DIHYDRO-GINKGOLIC-ACID	Fruit				Jim Duke's personal files.
0	DNA	Flower	32700.0	35700.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	DOCOSAN-1-OL	Pollen Or Spore		445.0		Jim Duke's personal files.
0	DOCOSANOL	Pollen Or Spore				Chemical Constituents of Oriental Herbs (3 diff. books)
0	DOLICHOL	Leaf				Jim Duke's personal files.
2	ELEMOL	Heart Wood				Jim Duke's personal files.
2	ELEMOL	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	EO	Wood		50000.0	0.1710888075673346	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	EPIGALLOCATECHOL	Leaf				Jim Duke's personal files.
5	ERGOSTEROL	Seed				Jim Duke's personal files.
0	FAT	Seed	16000.0	38020.0	-1.1976264322692631	--
0	FAT	Leaf	5520.0	23000.0	-0.666792373215361	--
15	FIBER	Seed	5000.0	13000.0	-0.961586382822488	--
0	FIBER(CRUDE)	Leaf		100000.0	-0.7146241028272484	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FIBER(DIETARY)	Leaf		350000.0	-0.29464124786862994	--
0	FLAVONOIDS	Leaf				Jim Duke's personal files.
0	FLAVOXANTHIN	Tissue Culture				Jim Duke's personal files.
13	FORMIC-ACID	Pollen Or Spore				Jim Duke's personal files.
13	FORMIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	FRUCTOSE	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	GADOLEIC-ACID	Seed	100.0	223.0	-0.6995055326721517	USDA's Ag Handbook 8 and sequelae)
1	GALACTOSE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
22	GAMMA-AMINOBUTYRIC-ACID	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
2	GAMMA-CAROTENE	Tissue Culture				Jim Duke's personal files.
0	GAMMA-EUDESOL	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	GAMMA-EUDESOL	Heart Wood				Jim Duke's personal files.
14	GAMMA-TOCOPHEROL	Leaf		140.0		Jim Duke's personal files.
0	GINGOLIDE-C	Leaf				Jim Duke's personal files.
11	GINKGETIN	Leaf	12.0	4600.0		--
11	GINKGETIN	Fruit				--
0	GINKGO-FLAVONE-GYLCOSIDES	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GINKGO-POLYPRENOL-120	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-15	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-16	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-17	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-18	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-19	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-20	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-21	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-22	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-85	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-90	Leaf				Jim Duke's personal files.
0	GINKGO-POLYPRENOL-95	Leaf				Jim Duke's personal files.
0	GINKGO-POLYSACCHARIDE-GF-1	Leaf				Jim Duke's personal files.
0	GINKGO-POLYSACCHARIDE-GF-2-A	Leaf				Jim Duke's personal files.
0	GINKGO-POLYSACCHARIDE-GF-2-B	Leaf				Jim Duke's personal files.
0	GINKGO-POLYSACCHARIDE-GF-3	Leaf				Jim Duke's personal files.
7	GINKGOIC-ACID	Fruit				--
0	GINKGOL	Leaf				Jim Duke's personal files.
0	GINKGOL	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	GINKGOLIC-ACID	Leaf				Jim Duke's personal files.
7	GINKGOLIC-ACID	Fruit				--
10	GINKGOLIDE-A	Shoot				Jim Duke's personal files.
10	GINKGOLIDE-A	Sprout Seedling				Jim Duke's personal files.
10	GINKGOLIDE-A	Tissue Culture				Jim Duke's personal files.
10	GINKGOLIDE-A	Plant				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
10	GINKGOLIDE-A	Leaf	0.05	300.0		--
10	GINKGOLIDE-A	Root Bark		100.0		--
10	GINKGOLIDE-A	Root				Jim Duke's personal files.
0	GINKGOLIDE-ACID	Fruit				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
12	GINKGOLIDE-B	Root Bark				--
12	GINKGOLIDE-B	Root				Jim Duke's personal files.
12	GINKGOLIDE-B	Shoot				Jim Duke's personal files.
12	GINKGOLIDE-B	Sprout Seedling				Jim Duke's personal files.
12	GINKGOLIDE-B	Plant				Jim Duke's personal files.
12	GINKGOLIDE-B	Tissue Culture				Jim Duke's personal files.
12	GINKGOLIDE-B	Leaf	0.05	2500.0		Jim Duke's personal files.
4	GINKGOLIDE-C	Sprout Seedling				Jim Duke's personal files.
4	GINKGOLIDE-C	Plant				Jim Duke's personal files.
4	GINKGOLIDE-C	Leaf	0.05	120.0		Jim Duke's personal files.
4	GINKGOLIDE-C	Root Bark				--
4	GINKGOLIDE-C	Root				Jim Duke's personal files.
4	GINKGOLIDE-C	Shoot				Jim Duke's personal files.
1	GINKGOLIDE-J	Root				Jim Duke's personal files.
1	GINKGOLIDE-J	Shoot				Jim Duke's personal files.
1	GINKGOLIDE-J	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	GINKGOLIDE-M	Root Bark				Chemical Constituents of Oriental Herbs (3 diff. books)
17	GINKGOLIDES	Leaf		1000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GINKGOTOXIN	Seed				Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.
3	GINNOL	Fruit				--
3	GINNOL	Pollen Or Spore		463.0		Jim Duke's personal files.
3	GINNOL	Leaf		1260.0		Jim Duke's personal files.
0	GINNON	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	GINNONE	Leaf				Jim Duke's personal files.
3	GLUCOMANNAN	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
7	GLUCOSE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
8	GLUTAMIC-ACID	Seed	8360.0	22840.0	-0.7962775692479128	USDA's Ag Handbook 8 and sequelae)
12	GLYCINE	Seed	2320.0	6325.0	-0.6690108388262893	USDA's Ag Handbook 8 and sequelae)
0	HEPTADECA-3-6-9-TRIEN-1-OL	Essential Oil				Jim Duke's personal files.
0	HEX-CIS-3-EN-1-OL	Essential Oil				Jim Duke's personal files.
0	HEX-CIS-4-EN-1-OL	Essential Oil				Jim Duke's personal files.
0	HEX-TRANS-2-EN-1-AL	Leaf				Jim Duke's personal files.
0	HEX-TRANS-4-EN-1-OL	Essential Oil				Jim Duke's personal files.
0	HEXACOSAN-1-OL	Leaf				Jim Duke's personal files.
0	HEXACOSANOL-1	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEXEN-1-AL	Leaf				Jim Duke's personal files.
7	HISTIDINE	Seed	1020.0	2785.0	-0.8876875742517191	USDA's Ag Handbook 8 and sequelae)
1	HOMOSERINE	Seed				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	HYDROGINKGOLIC-ACID	Fruit				Chemical Constituents of Oriental Herbs (3 diff. books)
0	HYDROGINKGOLIC-ACID	Leaf				Jim Duke's personal files.
0	INGNOCERIC-ACID	Pollen Or Spore				Jim Duke's personal files.
0	IPURANOL	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	IRON	Seed	10.0	26.0	-0.5798269910065945	--
6	IRON	Leaf	2.0	8.0	-0.9003002405301712	--
0	ISOGINKGETIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	ISOLEUCINE	Seed	2090.0	5700.0	-0.6114097088220455	USDA's Ag Handbook 8 and sequelae)
22	ISOQUERCITRIN	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	ISORHAMNETIN	Leaf				--
0	ISORHAMNETIN-3-O-GLUCOSIDE	Leaf				--
0	ISORHAMNETIN-3-O-RUTINOSIDE	Leaf				--
75	KAEMPFEROL	Leaf				--
0	KAEMPFEROL-2-6-DIRHAMNOSYL-GLUCOSIDE	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	KAEMPFEROL-3-O-RUTINOSIDE	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	KAEMPFEROL-3-O-(2'-6-DIRHAMNOPYRANOSYL-BETA-D-GLUCOPYRANOSIDE	Leaf		22.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-(2'-O-BETA-D-GLUCOPYRANOSYL)-ALPHA-L-RHAMNOPYRANOSIDE	Leaf		5.3		Jim Duke's personal files.
0	KAEMPFEROL-3-O-(3'-P-COUMAROYL-GLUCOSYL-BETA(1-4)-RHAMNOSIDE)	Leaf		25000.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-(6'''-P-COUMAROYL-GLUCOPYRANOSYL-BETA-1-4-RHAMNOPYRANOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-(6'''-P-COUMAROYL-GLUCOSYL(1-2)RHAMNOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-(6'-O-P-COUMAROYL-BETA-D-GLUCOPYRANOSYL(1-2)ALPHA-L-RHAMNOPYRANOSIDE	Leaf		200.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-(ALPHA-RHAMNOSYL(1-2)ALPHA-RHAMNOSYL(1-6))BETA-D-GLUCOSIDE	Leaf		700.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-2'-6'-DI-O-RHAMNOPYRANOSYL-GLUCOPYRANOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-ALPHA(6'''-P-COUMAROYL-GLUCOSYL-BETA-1,4-RHAMNOSIDE)	Plant				--
0	KAEMPFEROL-3-O-ALPHA-(6'''-P-COUMAROYL-GLUCOSYL-BETA-1-2-RHAMNOSIDE)	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-ALPHA-L-RHAMNO-GLUCOAROYL-GLUCOSYL-BETA-1-4-RHAMNOSIDE)	Leaf		580.0		Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	KAEMPFEROL-3-O-ALPHA-L-[BETA-D-GLUCOPYRANOSYL(1-2)RHAMNOPYRANOSIDE]	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-BETA-D-RUTINOSIDE	Leaf		1000.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-COUMAROYL-GLUCORHAMNOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-P-COUMAROYL-GLUCORHAMNOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-RHAMNOSIDE	Leaf				--
0	KAEMPFEROL-3-O-RHAMNOSYL(1-2)RHAMNOSYL(1-6)GLUCOSIDE	Leaf				Jim Duke's personal files.
0	KAEMPFEROL-3-O-RUTINOSIDE	Leaf	40.0	130.0		Jim Duke's personal files.
0	KAEMPFEROL-3-O-[2'-O-6'''-O{P-(7'''-O-BETA-D-GLUCOPYRANOSYL)-COUMAROYL}-BETA-D-GLUCOPYRANOSYL]-ALPHA-L-RHAMNOPYRANOSIDE	Leaf		3.1		Jim Duke's personal files.
0	KAEMPFEROL-3-O-[6'''-O-P-COUMAROYL-BETA-D-GLUCOSYL-(1-2)-ALPHA-L-RHAMNOSIDE]	Leaf				Jim Duke's personal files.
4	KAEMPFEROL-3-RHAMNOGLUCOSIDE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	KAEMPFEROL-7-O-GLUCOSIDE	Leaf				--
0	KAEMPFEROL-COUMAROYL-GLUCORHAMNOSIDE	Leaf				Jim Duke's personal files.
0	KILOCALORIES	Seed	1820.0	3975.0	-0.6916855702845792	USDA's Ag Handbook 8 and sequelae)
0	KYURENIC-ACID	Leaf				--
0	L-EPICATECHIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	L-EPIGALLOCATECHIN	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
8	LACTIC-ACID	Pollen Or Spore				Jim Duke's personal files.
0	LARICITRIN-3-O-RUTINOSIDE	Leaf				Jim Duke's personal files.
7	LAURIC-ACID	Pollen Or Spore				Jim Duke's personal files.
2	LEUCINE	Seed	3160.0	8620.0	-0.8099200212559403	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Seed	5780.0	12889.0	-0.8073993840380734	USDA's Ag Handbook 8 and sequelae)
27	LINOLEIC-ACID	Leaf				Jim Duke's personal files.
0	LINOLENIC-ACID	Fruit				Jim Duke's personal files.
0	LINOLENIC-ACID	Seed				Jim Duke's personal files.
0	LINOLENIC-ACID	Leaf		452000.0	2.995693474983614	Jim Duke's personal files.
15	LUTEIN	Tissue Culture				Jim Duke's personal files.
15	LUTEIN	Leaf				Jim Duke's personal files.
0	LUTEIN-ESTER	Leaf				Jim Duke's personal files.
78	LUTEOLIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	LUTEOLIN-3-O-GLUCOSIDE	Leaf				--
4	LYSINE	Seed	2060.0	5640.0	-0.8748533155304336	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Leaf	240.0	1000.0	-1.2069561543337646	--
65	MAGNESIUM	Seed	270.0	605.0	-0.9249547994302867	USDA's Ag Handbook 8 and sequelae)
15	MALIC-ACID	Pollen Or Spore				Jim Duke's personal files.
14	MANGANESE	Leaf	0.7	3.0	-0.4548985090553243	--
14	MANGANESE	Seed	1.0	3.0	-0.6293316926390775	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MANNAN	Leaf		34000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	MANNOSE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
15	METHIONINE	Seed	550.0	1520.0	-0.7216701395403058	USDA's Ag Handbook 8 and sequelae)
13	MUFA	Seed	6190.0	13815.0	-0.6916668126130565	USDA's Ag Handbook 8 and sequelae)
34	MYRICETIN	Leaf				--
0	MYRICETIN-3-O-RUTINOSIDE	Leaf				--
6	MYRISTIC-ACID	Pollen Or Spore				Jim Duke's personal files.
6	MYRISTIC-ACID	Seed	60.0	133.0	-0.29426213257444195	USDA's Ag Handbook 8 and sequelae)
0	N-ALPHA-HYDROXY-PALMITOYL-GLUCOSYL-OCTADECASPHINGADIENE	Seed				Jim Duke's personal files.
0	N-HEPTACOSANE	Leaf		381000.0		Jim Duke's personal files.
0	N-PENTACOSANE	Leaf		174000.0		Jim Duke's personal files.
0	N-TRICOSANE	Leaf		125000.0		Jim Duke's personal files.
2	NEOXANTHIN	Leaf				Jim Duke's personal files.
39	NIACIN	Seed	12.0	134.0	2.727415188315172	--
39	NIACIN	Leaf	84.0	350.0	3.071296935479944	--
2	NONACOSANE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	OCTACOSAN-1-OL	Leaf				Jim Duke's personal files.
0	OCTACOSANOL-1	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
18	OLEIC-ACID	Seed	5120.0	11418.0	-0.8852375473786731	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
18	OLEIC-ACID	Leaf				Jim Duke's personal files.
25	OPCS	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
25	P-COUMARIC-ACID	Pollen Or Spore				Chemical Constituents of Oriental Herbs (3 diff. books)
16	P-CYMENE	Essential Oil				Jim Duke's personal files.
16	P-CYMENE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
13	P-HYDROXY-BENZOIC-ACID	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
13	P-HYDROXY-BENZOIC-ACID	Leaf				Jim Duke's personal files.
0	P-TOLYL-PROPYLENE	Essential Oil				Jim Duke's personal files.
0	P-TOLYL-PROPYLENE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
13	PALMITIC-ACID	Fruit				Jim Duke's personal files.
13	PALMITIC-ACID	Pollen Or Spore				Jim Duke's personal files.
13	PALMITIC-ACID	Leaf		251000.0	4.4947785234866116	Jim Duke's personal files.
13	PALMITIC-ACID	Seed	2880.0	6422.0	-0.5670943519713945	--
2	PALMITOLEIC-ACID	Seed	790.0	1761.0	-0.256195566417164	USDA's Ag Handbook 8 and sequelae)
11	PANTOTHENIC-ACID	Seed	1.0	4.0	-1.3347125379851006	USDA's Ag Handbook 8 and sequelae)
0	PENTOSANS	Seed		16000.0	-1.3063116491987934	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PENTOSANS	Leaf		55000.0	-1.0	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	PHENYLALANINE	Seed	1710.0	4660.0	-0.8216455270835238	USDA's Ag Handbook 8 and sequelae)
4	PHOSPHORUS	Seed	1240.0	3268.0	-0.5510734530365442	--
4	PHOSPHORUS	Leaf	1440.0	6000.0	0.1892389688834186	--
5	PINITOL	Leaf				--
0	POPULNIN	Pollen Or Spore		119.0		Jim Duke's personal files.
0	POPULNIN	Leaf		1.5		Jim Duke's personal files.
0	POPULNIN	Plant				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	POTASSIUM	Leaf	2880.0	12000.0	-0.8100334258677413	--
14	POTASSIUM	Seed	5100.0	11394.0	-0.10342639043560727	--
34	PROANTHOCYANIDINS	Leaf				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
11	PROCYANIDIN	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
1	PRODELPHINIDIN	Leaf				--
0	PROLINE	Seed	3470.0	9475.0	-0.3655832299835854	USDA's Ag Handbook 8 and sequelae)
6	PROPIONIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	PROTEIN	Leaf	21600.0	90000.0	-1.2155220974066152	--
0	PROTEIN	Seed	43200.0	131000.0	-0.9144242564530036	--
0	PROTEIN-H	Seed				Jim Duke's personal files.
43	PROTOCATECHUIC-ACID	Leaf				Jim Duke's personal files.
43	PROTOCATECHUIC-ACID	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	PUFA	Seed	6180.0	13795.0	-0.7009231111054428	USDA's Ag Handbook 8 and sequelae)
1	PYRUVIC-ACID	Pollen Or Spore				Jim Duke's personal files.
176	QUERCETIN	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
176	QUERCETIN	Tissue Culture				Jim Duke's personal files.
0	QUERCETIN-3-O-RUTINOSIDE	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	QUERCETIN-3-O-(2'-O-BETA-D-GLUCOPYRANOSYL)-ALPHA-L-RHAMNOPYRANOSIDE	Leaf		2.8		Jim Duke's personal files.
0	QUERCETIN-3-O-(6'''-O-P-COUMAROYL-BETA-D-GLUCOPYRANOSYL(1-2)ALPHA-L-RHAMNOPYRANOSIDE)	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-(6'''-P-COUMAROYL-GLUCOPYRANOSYL-BETA-1-4-RHAMNOPYRANOSIDE)	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-(6'''-P-COUMAROYL-GLUCOSYL(1-2)RHAMNOSIDE)	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-(6'''-P-COUMAROYL-GLUCOSYL-BETA(1-4)RHAMNOSIDE)	Leaf		21000.0		Jim Duke's personal files.
0	QUERCETIN-3-O-(ALPHA-RHAMNOSYL-(1-2)-ALPHA-RHAMNOSYL-(1-6))-BETA-GLUCOSIDE	Leaf		8000.0		Jim Duke's personal files.
0	QUERCETIN-3-O-(ALPHA-RHAMNOSYL-(1-2)-ALPHA-RHAMNOSYL-(1-6))-BETA-D-GLUCOSIDE)	Leaf		700.0		Jim Duke's personal files.
0	QUERCETIN-3-O-2'-6'-DI-O-RHAMNOPYRANOSYL-GLUCOPYRANOSIDE	Leaf				Jim Duke's personal files.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-3-O-ALPHA(6'''-P-COUMAROYL-GLUCOSYL-BETA-1,4-RHAMNOSIDE)	Plant				--
0	QUERCETIN-3-O-ALPHA(6'''-P-COUMAROYL-GLUCOSYL-BETA-1,4-RHAMNOSIDE)	Leaf		20.0		Jim Duke's personal files.
0	QUERCETIN-3-O-ALPHA-(6'''-P-COUMAROYL-GLUCOSYL-BETA-1-2-RHAMNOSIDE)	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-ALPHA-L-RHAMNO-GLUCOSIDE	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-COUMAROYL-GLUCORHAMNOSIDE	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-P-COUMAROYL-GLUCORHAMNOSIDE	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-RHAMNOSYL(1-2)RHAMNOSYL(1-6)GLUCOSIDE	Leaf				Jim Duke's personal files.
0	QUERCETIN-3-O-[2'-O-6'''-O-P-COUMAROYL)-BETA-D-GLUCOPYRANOSYL]-ALPHA-L-RHAMNOPYRANOSYL-7-O-BETA-D-GLUCOSIDE	Leaf		40.0		Jim Duke's personal files.
0	QUERCETIN-3-O-[2'-O-6'''-O-{P-(7'PYRANOSIDE'-O-BETA-D-GLUCOPYRANOSYL)-COUMAROYL)-BETA-D-GLUCOPYRANOSYL]-ALPHA-L-RHAMNOFY	Leaf		4.4		Jim Duke's personal files.
0	QUERCETIN-3-O-[6'''-O-P-COUMAROYL-BETA-D-GLUCOSYL-(1-2)-ALPHA-L-RHAMNOSIDE]	Leaf				Jim Duke's personal files.
4	QUERCETIN-3-RHAMNOGLUCOSIDE	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
44	QUERCITRIN	Leaf		0.5	-0.6243960698019103	Jim Duke's personal files.
1	QUINIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	RAFFINOSE	Wood	10000.0	20000.0		Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
1	RAFFINOSE	Flower		40000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
15	RIBOFLAVIN	Leaf	0.3	1.2	-0.17223654048552425	--
15	RIBOFLAVIN	Seed	1.0	3.0	-0.20090831129253928	--
87	RUTIN	Leaf	6.0	30000.0	0.8579223754965293	Jim Duke's personal files.
87	RUTIN	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
3	SCIADOPITYSIN	Leaf				--
60	SELENIUM	Leaf	0.5	2.0	-0.22887772529853118	--
0	SEQUOJAFLAVONE	Leaf				--
0	SEQUOYITOL	Pollen Or Spore		31.0		Jim Duke's personal files.
0	SEQUOYITOL	Leaf				--
1	SERINE	Seed	2900.0	7935.0	-0.5058246480060101	USDA's Ag Handbook 8 and sequelae)
0	SFA	Seed	3190.0	7120.0	-0.5084786953438746	USDA's Ag Handbook 8 and sequelae)
14	SHIKIMIC-ACID	Leaf				--
4	SILICON	Leaf	0.5	2.0	-0.40724322979061855	--
0	SITOSTEROL	Leaf				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	SODIUM	Seed	70.0	160.0	-0.4617295086785716	--
1	SODIUM	Leaf	72.0	300.0	-0.5940028377357823	--
0	SPINASTEROL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
5	STARCH	Seed	407400.0	680000.0	1.497636661907824	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	STEARIC-ACID	Pollen Or Spore				Jim Duke's personal files.
8	STEARIC-ACID	Seed	160.0	357.0	-0.5576443525355296	USDA's Ag Handbook 8 and sequelae)
12	STIGMASTEROL	Pollen Or Spore				--
12	STIGMASTEROL	Leaf				Jim Duke's personal files.
7	SUCCINIC-ACID	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
7	SUCCINIC-ACID	Pollen Or Spore				Jim Duke's personal files.
14	SUCROSE	Wood	10000.0	20000.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
14	SUCROSE	Seed		3600.0	-0.6466733517479153	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	SYRINGETIN-3-O-RUTINOSIDE	Leaf		1.4		--
35	TANNIN	Leaf				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	TERPENE-TRILACTONES	Leaf		2660.0		--
31	THIAMIN	Seed	2.0	5.0	-0.37795068225120004	USDA's Ag Handbook 8 and sequelae)
0	THIAMINE	Leaf	0.5	2.0	-0.7799775759670321	--
4	THREONINE	Seed	2680.0	7300.0	-0.18733331249617388	USDA's Ag Handbook 8 and sequelae)
71	THYMOL	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gokeikagaku Kaishi 61(9): 1119-1122.
0	TRANS-LINALOL-OXIDE	Wood				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TRANS-LINALOOL-OXIDE	Essential Oil				Jim Duke's personal files.
0	TRANS-LINALOOL-OXIDE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	TRANS-NEOXANTHIN	Tissue Culture				Jim Duke's personal files.
0	TRANS-VIOLAXANTHIN	Tissue Culture				Jim Duke's personal files.
0	TRICETIN	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
29	TRYPTOPHAN	Seed	710.0	1940.0	-0.4723632597485982	USDA's Ag Handbook 8 and sequelae)
8	TYROSINE	Seed	610.0	1665.0	-1.407563246247056	USDA's Ag Handbook 8 and sequelae)
0	UROSHIOLS	Leaf				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.
1	VALERIANIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
3	VALINE	Seed	2830.0	7730.0	-0.5273131819394478	USDA's Ag Handbook 8 and sequelae)
24	VANILLIC-ACID	Plant				Tyler, V.E.. 1982. The Honest Herbal. George F. Stickley Co., Philadelphia PA. 263 pp.
24	VANILLIC-ACID	Leaf				Jim Duke's personal files.
2	VIOLAXANTHIN	Leaf				Jim Duke's personal files.
0	WATER	Seed	124000.0	552000.0	1.2448308751035961	USDA's Ag Handbook 8 and sequelae)
0	WATER	Leaf		760000.0	-0.2376635252867174	--
0	WAX	Leaf	7000.0	10000.0	0.5100293229805821	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	XYLOSE	Wood				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
0	Z,Z,4,4'-(1,4-PENTADIEN-1,5-DIYL)DIPHENOL	Leaf				Kameoka, H. and Nakai, K. 1987. Components of essential oil from the root of Glycyrrhiza-glabra. Nippon Gogeikagaku Kaishi 61(9): 1119-1122.
5	ZEAXANTHIN	Tissue Culture				Jim Duke's personal files.
77	ZINC	Seed	3.0	8.0	-1.054186300875964	USDA's Ag Handbook 8 and sequelae)
77	ZINC	Leaf	0.6	2.3	-0.5126529515217503	--