

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in Zea mays

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	(-)-TRANS-ISO-MENTH-5-EN-2-OL	Plant				--
0	1,1-DIPHENYL-ETHANE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	1,2,3-TRIMETHYL-BENZENE	Silk Stigma Style				--
0	1,2,4-TRIMETHYL-BENZENE	Silk Stigma Style				--
0	1,2-DIMETHOXY-BENZENE	Hull Husk				--
0	1,2-DIMETHOXY-BENZENE	Husk Essent. Oil				--
0	1,2-DIMETHYL-4-ETHYL-BENZENE	Silk Stigma Style				--
0	1,3-AMINO-PROPYL-PYRROLINIUM	Sprout Seedling				--
0	1,3-DIMETHYL-4-ETHYL-BENZENE	Silk Stigma Style				--
0	1,8-CINEOL	Silk Stigma Style				--
67	1,8-CINEOLE	Silk Stigma Style				--
0	1-(3-METHYL-2-FURYL)PROPANE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	1-ACETO-METHYL-NAPHTHONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	1-ACETO-NAPHTHONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	1-O-FERULOYL-BETA-D-GLUCOSE	Leaf				--
0	1-O-SINAPOYL-BETA-D-GLUCOSE	Leaf				--
0	1-P-HYDROXY-TRANS-CINNAMOYL)-GLYCEROL	Seed		45.0		--
0	1.2	Seed				--
0	10-OXO-OCTADEC-TRANS-11-EN-13-OLIDE	Seed		0.3		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2"-O-ALPHA-L-RHAMNOSYL-6-C-FUCOSYL-3'-METHOXY-LUTEOLIN	Silk Stigma Style		50.0		--
0	2"-O-ALPHA-L-RHAMNOSYL-6-C-FUCOSYL-LUTEOLIN	Silk Stigma Style		50.0		--
0	2"-O-ALPHA-L-RHAMNOSYL-6-C-QUINOVOSYL-LUTEOLIN	Silk Stigma Style		67.0		--
0	2'-O-ALPHA-RHAMNOSYL-6C-(6-DEOXO-XYLO-HEXOS-4-ULOSYL)-APIGENIN	Silk Stigma Style				--
0	2'-O-ALPHA-RHAMNOSYL-6C-(6-DEOXO-XYLO-HEXOS-4-ULOSYL)-APIGENIN	Plant				--
0	2'-O-ALPHA-RHAMNOSYL-6C-(6-DEOXO-XYLO-HEXOS-4-ULOSYL)-CHRYSOERIOL	Silk Stigma Style				--
0	2'-O-ALPHA-RHAMNOSYL-6C-(6-DEOXO-XYLO-HEXOS-4-ULOSYL)-CHRYSOERIOL	Plant				--
0	2(3)-BENZOXAZOLINONE	Sprout Seedling				--
0	2(H)-1-4-BENZOXAZIN-3(4H)-ONE	Sprout Seedling				--
0	2,3-DIHYDRO-2-PYRAN-2-CARBOXALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2,4-DIHYDROXY-6,7-DIMETHOXY-2H,1,4-BENZOXAZIN-3-ONE	Sprout Seedling				--
0	2,4-METHYLENE-CHOLESTEROL	Pollen Or Spore				--
0	2-(2,4-DIHYDROXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE	Sprout Seedling				--
0	2-(2,4-DIHYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H)	Plant				--
0	2-(2,4-DIHYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H)	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-(2,4-DIHYDROXY-7-METHOXY-1,4-BENZOXAZIN-3-ONE-BETA-D-GLUCOPYRANOSIDE	Sprout Seedling				--
0	2-(2-4-DIHYDROXY-7-METHOXY-1-4(2H)-BENZOXAZIN-3(4H9-ON)-BETA-D-GLUCOSIDIHYDROXY-7-METHOXY	Sprout Seedling				--
0	2-(2-HYDROXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE	Sprout Seedling				--
0	2-(2-HYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H)-ON-BETA-D-GLUCOSIDE	Sprout Seedling				--
0	2-(2-HYDROXY-7-METHOXY-1,4-BENZOXAZIN-3-ONE-BETA-D-GLUCOPYRANOSIDE	Root				--
0	2-(5-CHLORO-2-HYDROXY-7-METHOXY-(2H)-1,4-BENZOXAZIN-3-(4H)-ONE-BETA-D-GLUCOPYRANOSIDE	Root				--
0	2-(5-CHLORO-2-HYDROXY-7-METHOXY-1,4(2H)-BENZOXAZIN-3(4H0)-ONE-BETA-D-GLUCOPYRANOSIDE	Root				--
0	2-ACETO-NAPHTHONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-CARBOXYARABINITOL	Leaf		12.0	-0.852521567452154	Moore, B. D., Isidoro, E., Seemann, J. R. 1993. Distribution of 2-Carboxyarabinitol Among Plants. Phytochemistry 34 3: 703-707. Dept. Biochem. Univ. Nevada Reno 89557, USA.
0	2-ETHYL-1-CYCLOHEXEN-1-YL	Essential Oil		80000.0		--
0	2-ETHYL-HEX-AN-1-OL	Plant				--
0	2-ETHYL-HEX-AN-1-OL	Seed Essent. Oil				--
0	2-ETHYL-HEX-AN-1-OL	Husk Essent. Oil		10000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2-ETHYL-HEX-AN-1-OL	Silk Stigma Style				--
0	2-METHYL-BUTAN-1-AL	Silk Stigma Style				--
0	2-METHYL-BUTAN-1-OL	Silk Stigma Style				--
0	2-METHYL-NAPHTHALENE	Silk Essent. Oil				--
0	2-METHYL-NAPHTHALENE	Seed Essent. Oil				--
0	2-METHYL-NAPHTHALENE	Silk Stigma Style				--
0	2-METHYL-NAPHTHALENE	Husk Essent. Oil				--
0	2-METHYL-PENT-2-EN-1-AL	Leaf				--
0	2-METHYL-PENT-2-EN-1-AL	Silk Stigma Style				--
0	2-METHYL-PENTAN-3-ONE	Silk Stigma Style				--
0	2-METHYL-PROPAN-1-OL	Silk Stigma Style				--
0	2-O-CAFFELOYLHYDROXY-CITRIC-ACID	Shoot				--
0	2-O-FERULOYL-HYDROXY-CITRIC-ACID	Shoot				--
0	2-O-P-COUMAROYL-HYDROXY-CITRIC-ACID	Shoot				--
0	2-PENTYL-FURAN	Plant				--
0	2-PENTYL-FURAN	Essential Oil		10000.0		--
0	2-PENTYL-FURAN	Silk Essent. Oil		3000.0		--
0	2-PENTYL-FURAN	Seed Essent. Oil		10000.0		--
0	2-PENTYL-FURAN	Silk Stigma Style				--
0	2-PENTYL-FURAN	Husk Essent. Oil		29000.0		--
0	2-PHENYLALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	2-THIOPHENE-ACETALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	24-ETHYL-CHOLESTEROL	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	24-ETHYLIDENE-LOPHENOL	Shoot				--
0	24-METHYL-23-DEHYDRO-CHOLESTEROL	Seed Oil				--
0	24-METHYL-CHOLESTEROL	Root				--
5	24-METHYLENE-CYCLOARTANOL	Shoot				--
0	24-METHYLENE-CYCLOARTENOL	Plant				Stitt, Paul. Why George should eat broccoli.
0	24-METHYLENE-LOPHENOL	Shoot				--
0	28-NORCASTASTERONE	Seed				--
0	3'-METHOXYMAYSIN	Silk Stigma Style				--
0	3'-NUCLEOTIDASE	Tissue Culture				--
0	3'-O-METHYL-MAYSIN	Silk Stigma Style				--
0	3,7-DIHYDROXY-INDOLIN-2-ONE-3-ACETIC-ACID-7'-O-BETA-D-GLUCOSIDE	Plant				--
0	3-7-DIHYDROXY-INDOLIN-2-ONE-3-ACETIC ACID 7'-O-BETA-GLUCOSIDE	Seed		1.2		--
0	3-FERULOYLQUINIC-ACID	Leaf				--
0	3-METHYL-BUTAN-1-OL	Silk Stigma Style				--
0	3-METHYL-INDOLE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	3-O-CAFFEYOYLQUINIC-ACID	Plant				--
0	3-O-COUMARYLQUINIC-ACID	Plant				--
0	4-ACETYL-BENZOXAZOLIN-2-ONE	Fruit		27.0		--
0	4-ETHYL-GUAIACOL	Seed				--
0	4-ETHYLPHENOL	Seed				--
0	4-HYDROXY-BENZOIC-ACID	Tissue Culture				--
3	4-HYDROXYBENZALDEHYDE	Cob				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	4-METHYL-GUAIACOL	Seed				--
0	4-VINYL-4-DEETHYL-CHLOROPHYLL-A	Plant				--
4	4-VINYL-GUAIACOL	Seed				--
0	4-VINYL-PHENOL	Seed				--
0	5,6-DIHYDRO-2-PYRAN-2-CARBOXALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	5-DEHYDRO-AVENASTEROL	Seed				--
0	5-DEHYDRO-AVENASTEROL	Seed Oil				--
0	5-HYDROXY-TRANS-FERULIC-ACID	Plant				--
1	5-O-CAFFEYLQUINIC-ACID	Plant				--
0	5-O-COUMARYLQUINIC-ACID	Plant				--
0	5-O-FERULOYLQUINIC-ACID	Plant				--
0	6,10,14-TRIMETHYL-PENTADECAN-2-ONE	Shoot				--
0	6,7-DIMETHOXY-2-BENZOXAZOLIN-2-ONE	Plant				--
0	6,7-DIMETHOXY-BENZOXAZOLIN-2-ONE	Plant				--
0	6-DEOXOCASTASTERONE	Seed				--
0	6-METHOXY-2-(3)-BENZOXAZOLINONE	Shoot				--
0	6-METHOXY-BENZOXAZOLIN-2-ONE	Plant				--
0	6-METHOXY-BENZOXAZOLIN-2-ONE	Sprout Seedling				--
0	6-METHOXY-BENZOXAZOLIN-2-ONE	Shoot				--
0	7-DEHYDRO-AVENASTEROL	Seed Oil				--
0	7-DEHYDRO-AVENASTEROL	Seed				--
0	8-HYDROXY-QUINOL-2-ONE-4-CARBOXYLIC-ACID-8'-O-BETA-D-GLUCOSIDE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	8-HYDROXY-QUINOL-2-ONE-4-CARBOXYLIC-ACID-8'-O-BETA-D-GLUCOSIDE	Seed		0.0		--
0	ABSCISIC-ACID	Flower				--
0	ABSCISSIN-II	Seed				--
0	ACETOIN	Plant				--
1	ACONITIC-ACID	Shoot		600.0		--
1	ACONITIC-ACID	Root				--
11	ADENINE	Seed				--
28	ADENOSINE	Leaf				--
28	ADENOSINE	Seed				--
0	AFLATOXIN	Plant				--
0	AFLATOXIN B-1	Plant				--
3	ALANINE	Seed	2950.0	12272.0	0.44977179228929015	USDA's Ag Handbook 8 and sequelae)
0	ALDOBIOURONIC-ACID	Plant				--
0	ALKALOIDS	Silk Stigma Style		500.0		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
12	ALLANTOIN	Embryo				--
12	ALLANTOIN	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	ALPHA-AMYLASE	Plant				--
10	ALPHA-AMYRIN	Plant				--
7	ALPHA-CAROTENE	Seed	0.5	2.5		--
0	ALPHA-COPAENE	Leaf				--
0	ALPHA-GLUCOSIDASE	Plant				--
15	ALPHA-LINOLENIC-ACID	Seed	160.0	666.0	-0.3177446681679559	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-MUUROLENE	Leaf				--
0	ALPHA-MUUROLENE	Plant				--
28	ALPHA-PINENE	Husk Essent. Oil				--
0	ALPHA-SITOSTEROL	Plant				--
23	ALPHA-TERPINEOL	Silk Stigma Style				--
32	ALPHA-TOCOPHEROL	Seed Oil				--
32	ALPHA-TOCOPHEROL	Seed				--
32	ALPHA-TOCOPHEROL	Oil	90.0	257.0	-0.32062252332922786	--
32	ALPHA-TOCOPHEROL	Fruit				--
0	ALPHA-YLANGENE	Seed Essent. Oil		17000.0		--
0	ALPHA-YLANGENE	Essential Oil		17000.0		--
0	ALPHA-YLANGENE	Husk Essent. Oil				--
0	ALPHA-YLANGENE	Leaf				--
0	ALPHA-ZEACAROTENE	Plant				--
0	ALPHA-ZEIN	Seed				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	ALUMINUM	Leaf				--
5	ALUMINUM	Silk Stigma Style		213.0		--
5	ALUMINUM	Seed	1.0	275.0	0.09410564288080694	--
0	AMINO-ACIDS	Fruit				--
0	AMINO-ADIPIC-ACID	Plant				--
0	AMMONIA	Seed		10030.0	1.1562118467881217	--
0	AMMONIA(NH3)	Seed		1030.0	-1.0102264913910184	--
0	ANILINE	Seed				--
1	ANTHERAXANTHIN	Leaf				--
6	ANTHRANILIC-ACID	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ANTHRANILIC-ACID-BETA-D-GLUCOSIDE	Leaf				--
0	APIFOROL	Silk Stigma Style				--
0	APIGENIDIN	Silk Stigma Style				--
0	APIGENIN-GLYCOSIDE	Plant				--
0	APS-SULFOTRANSFERASE	Leaf				--
0	ARABINOSE	Plant				--
0	ARACHIDIC-ACID	Plant				--
14	ARGININE	Seed	1310.0	5450.0	-0.8125917351666905	USDA's Ag Handbook 8 and sequelae)
2	ARSENIC	Seed	0.001	0.211	1.5951685300488623	--
112	ASCORBIC-ACID	Silk Stigma Style		11.0		--
112	ASCORBIC-ACID	Seed	0.0	85.0	-0.28742699640223446	--
0	ASH	Silk Stigma Style		33000.0	-1.0	--
0	ASH	Seed	10000.0	90000.0	1.266866356182442	--
3	ASPARTIC-ACID	Seed	2440.0	10150.0	-1.1042764584247933	USDA's Ag Handbook 8 and sequelae)
7	ASTRAGALIN	Pollen Or Spore				--
0	BARIUM	Seed	0.0	14.0	-0.2565348698369248	--
0	BAZZANENE	Root				--
24	BENZALDEHYDE	Shoot				--
24	BENZALDEHYDE	Husk Essent. Oil				--
24	BENZALDEHYDE	Silk Essent. Oil		1000.0		--
0	BENZOTHIAZOLE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BENZOAZIONE	Sprout Seedling				--
0	BENZYL-AMINE	Seed		3.4		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	BENZYL-FORMATE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	BETA-AMYLASE	Plant				--
9	BETA-AMYRIN	Shoot				--
53	BETA-CAROTENE	Silk Stigma Style		0.0		--
53	BETA-CAROTENE	Seed	0.5	2.5	-0.27303542142102893	--
0	BETA-CARYOPHYLLENE	Root				--
0	BETA-COPAENE	Leaf				--
2	BETA-CRYPTOXANTHIN	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
13	BETA-IONONE	Plant				--
13	BETA-IONONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
13	BETA-IONONE	Silk Stigma Style				--
13	BETA-IONONE	Silk Essent. Oil		1000.0		--
13	BETA-IONONE	Husk Essent. Oil		12000.0		--
13	BETA-PINENE	Silk Essent. Oil		3000.0		--
47	BETA-SITOSTEROL	Shoot				--
47	BETA-SITOSTEROL	Seed		1200.0	-0.17049741772155916	--
47	BETA-SITOSTEROL	Silk Stigma Style		1300.0		--
47	BETA-SITOSTEROL	Seed Oil				--
0	BETA-ZEACAROTENE	Plant				--
0	BETA-ZEIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
14	BETAINE	Silk Stigma Style				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
14	BETAINE	Shoot		234.0	-0.18096389196058713	--
14	BETAINE	Root		59.0	-0.3636422915694051	--
4	BIOTIN	Cob	0.02	0.06		--
0	BIPHENYL	Silk Stigma Style				--
0	BISABOLOL	Essential Oil		90000.0		--
4	BORON	Seed	0.0	15.0	-0.4322002310973592	--
0	BUTAN-1-OL	Silk Stigma Style				--
0	BUTENYL-ISOTHIOCYANATE	Seed				--
2	CADAVERINE	Plant				--
3	CADMIUM	Seed	0.0	1.0	0.16237947527784696	--
102	CAFFEIC-ACID	Shoot		0.7	-0.7034493867354843	--
102	CAFFEIC-ACID	Sprout Seedling				--
0	CAFFEIC-ACID-ESTER	Leaf				--
28	CALCIUM	Silk Stigma Style		2520.0		--
28	CALCIUM	Seed	10.0	181.0	-0.7282806437807207	--
1	CALMODULIN	Pollen Or Spore		45.0		--
1	CALMODULIN	Seed				--
0	CAMPESTANOL FERULATE	Fruit				--
0	CAMPESTANOL-P-COUMARATE	Fruit				--
2	CAMPESTEROL	Seed		320.0	0.03885369220474866	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
2	CAMPESTEROL	Seed Oil				--
2	CAMPESTEROL	Shoot				--
0	CARBOHYDRATE	Silk Stigma Style		825000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CARBOHYDRATE	Seed	190209.0	838000.0	1.245405531356948	--
0	CARBOHYDRATES	Silk Stigma Style		825000.0	1.0	--
0	CARBOHYDRATES	Seed	190209.0	838000.0	1.250274868867074	--
0	CAROTENE	Leaf				--
37	CARVACROL	Silk Stigma Style	144.0	216.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
37	CARVACROL	Seed				--
37	CARVACROL	Seed Essent. Oil				--
31	CARYOPHYLLENE	Husk Essent. Oil				--
31	CARYOPHYLLENE	Leaf				--
0	CASTASTERONE	Seed				--
0	CASTASTERONE	Pollen Or Spore		0.12		--
1	CELLULOSE	Plant				--
2	CHELIDONIC-ACID	Shoot				--
2	CHELIDONIC-ACID	Root				--
0	CHITINASE A	Seed				--
0	CHITINASE B	Seed				--
7	CHLORINE	Fruit		330.0	-0.4646995262356249	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
77	CHLOROGENIC-ACID	Silk Stigma Style				--
77	CHLOROGENIC-ACID	Leaf				--
1	CHOLESTEROL	Seed				--
1	CHOLESTEROL	Shoot				--
1	CHOLESTEROL	Root				--
20	CHOLINE	Seed		430.0	-1.1693297391425415	--
20	CHOLINE	Root		36.0	-0.4093082994350739	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	CHOLINE	Shoot		85.0	-0.6541437736274379	--
24	CHROMIUM	Silk Stigma Style		13.0		--
24	CHROMIUM	Seed	0.0	1.65	-0.442125919797465	--
0	CHRYSANTHEMIN	Pericarp				--
0	CHRYSANTHEMIN	Seed				--
0	CHRYSANTHEMIN	Leaf				--
1	CINNAMIC-ACID-ETHYL-ESTER	Silk Stigma Style				--
15	CITRONELLOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	COBALT	Silk Stigma Style		64.0		--
2	COBALT	Fruit	0.01	0.8	-0.43826781025666195	--
4	COIXOL	Plant				--
12	COPPER	Fruit	0.0	20.0	0.5588968590110831	--
0	COUMARIC-ACID-ESTER	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
57	COUMARIN	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
10	CROCETIN	Leaf				--
2	CRYPTOXANTHIN	Plant				--
0	CUBEBENOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	CYANIDIN	Leaf				--
7	CYANIDIN	Silk Stigma Style				--
0	CYANIDIN-3-(6'-MALONYL-GLUCOSIDE)	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CYANIDIN-3-DIMALONYL-GLUCOSIDE	Leaf				--
0	CYANIDIN-3-GALACTOSIDE	Leaf				--
0	CYANIDIN-3-GALACTOSIDE-P-COUMARIC-ACID-ESTER	Plant				--
0	CYANIDIN-3-MONOSIDE	Plant				--
5	CYANIN	Cob				--
7	CYCLOARTENOL	Shoot				--
7	CYCLOARTENOL	Root				--
3	CYCLOEUCALENOL	Shoot				--
1	CYCLOSADOL	Seed Oil				--
1	CYCLOSADOL	Seed				--
0	CYCLOSATIVENE	Leaf				--
0	CYSTATHIONE	Plant				--
2	CYSTINE	Seed	260.0	1082.0	-1.438643753064175	USDA's Ag Handbook 8 and sequelae)
0	CYTOCHROME-C	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	D-GLUCURONIC-ACID	Plant				--
5	DAUCOSTEROL	Silk Stigma Style		440.0		--
0	DEC-TRANS-2-CIS-4-DIEN-1-AL	Plant				--
0	DEC-TRANS-2-CIS-4-DIEN-1-AL	Silk Essent. Oil		7000.0		--
0	DEC-TRANS-2-EN-1-AL	Silk Essent. Oil		3000.0		--
0	DEC-TRANS-2-EN-1-AL	Husk Essent. Oil				--
0	DEC-TRANS-2-TRANS-4-DIEN-1-AL	Silk Essent. Oil	6000.0	20000.0		--
0	DEC-TRANS-2-TRANS-4-DIEN-1-AL	Husk Essent. Oil		37000.0		--
0	DEC-TRANS-2-TRANS-4-DIEN-1-AL	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DECA-TRANS-2,TRANS-4-DIEN-1-AL	Seed Essent. Oil				--
0	DECA-TRANS-2,TRANS-4-DIEN-1-AL	Husk Essent. Oil		37000.0		--
0	DECA-TRANS-2,TRANS-4-DIEN-1-AL	Silk Stigma Style				--
0	DECA-TRANS-2-CIS-4-DIEN-1-AL	Husk Essent. Oil		13000.0		--
0	DECA-TRANS-2-CIS-4-DIEN-1-AL	Seed Essent. Oil				--
0	DECA-TRANS-2-CIS-4-DIEN-1-AL	Silk Stigma Style				--
0	DECA-TRANS-2-TRANS-4-TRANS-7-TRIEN-1-AL	Husk Essent. Oil				--
0	DECA-TRANS-2-TRANS-4-TRANS-7-TRIEN-1-AL	Husk Essent. Oil		37000.0		--
0	DECA-TRANS-2-TRANS-7-TRIEN-1-AL	Plant				--
1	DECAN-1-AL	Husk Essent. Oil		24000.0		--
1	DECAN-1-AL	Silk Essent. Oil	10000.0	90000.0		--
0	DECAN-1-OL	Silk Stigma Style				--
0	DECAN-2-OL	Seed Essent. Oil		15000.0		--
0	DECAN-2-OL	Silk Stigma Style				--
0	DECAN-2-OL	Essential Oil		15000.0		--
0	DECAN-2-OL	Husk Essent. Oil				--
0	DECAN-2-ONE	Seed Essent. Oil				--
0	DECAN-2-ONE	Husk Essent. Oil				--
0	DECAN-2-ONE	Essential Oil				--
0	DELTA-AMINO-LEVULINIC-ACID	Sprout Seedling				--
9	DELTA-CADINENE	Leaf				--
0	DEOXY-RIBONUCLEASE	Tissue Culture				--
0	DIAMINO-PROPANE	Sprout Seedling				--
2	DIETHYL-AMINE	Seed				--
0	DIGALACTOSYL-DIGLYCERIDE	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDRO-PHASEIC-ACID	Flower				--
0	DIHYDROSITOSTEROL	Plant				--
0	DIMBOA-GLUCOSIDE	Leaf				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	DIMETHYL-AMINE	Seed	1.1	3.5	-0.32293776451998035	--
0	DIOXYCINNAMIC-ACID	Plant				--
0	DODECAN-1-AL	Silk Essent. Oil				--
0	DODECAN-1-AL	Husk Essent. Oil				--
0	ENT-17-HYDROXY-KAUR-15-EN-19-OIC ACID	Shoot				--
0	ENT-KAUR-15-EN-17-BETA-OL	Shoot				--
0	EO	Silk Stigma Style	800.0	1200.0	-1.0	--
5	ERGOSTEROL	Silk Stigma Style				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
5	ERGOSTEROL	Root				--
8	ESTRONE	Seed Oil		0.04		--
24	ETHANOL	Silk Stigma Style				--
6	ETHYL-ACETATE	Silk Stigma Style				--
6	ETHYL-ACETATE	Shoot				--
0	ETHYL-AMINE	Seed		2.4	0.24942329796316184	--
0	ETHYL-AMINE	Sprout Seedling				--
0	ETHYL-METHYL-AMINE	Seed				--
1	ETHYL-PHENYLACETATE	Silk Essent. Oil	250000.0	740000.0		--
76	EUGENOL	Seed				--
0	FAT	Silk Stigma Style	25000.0	43000.0	-1.0	--
0	FAT	Seed	10480.0	54579.0	-1.1104042561283503	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	FERREDOXIN	Leaf		37.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
61	FERULIC-ACID	Sprout Seedling				--
61	FERULIC-ACID	Seed	6.0	27.0	-0.39634822822137994	--
61	FERULIC-ACID	Leaf				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FERULOYLQUINIC-ACID	Sprout Seedling				--
15	FIBER	Silk Stigma Style		81000.0	1.0	--
0	FIXED-OIL	Seed				--
0	FLUORENE	Silk Stigma Style				--
15	FOLACIN	Seed	0.142	0.4	-0.9100137393533284	--
15	FOLACIN	Fruit	1.0	2.0	-0.019192793995839758	--
23	FOLIC-ACID	Seed	0.142	0.4	-0.3564545774203745	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	FRIEDELIN	Shoot				--
8	FRUCTOSE	Fruit	1000.0	4000.0	-0.878981825433364	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	FUCOSE	Root				--
6	FURFURAL	Shoot				--
6	FURFURAL	Plant				--
1	GALACTOSE	Plant				--
0	GALACTOXYLASE	Plant				--
62	GALLIC-ACID	Tissue Culture				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	GAMMA-CAROTENE	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
2	GAMMA-NONALACTONE	Silk Stigma Style				--
0	GAMMA-SITOSTEROL	Plant				--
14	GAMMA-TOCOPHEROL	Oil		752.0	1.413007494257776	--
0	GEOSMIN	Husk Essent. Oil		2000.0		--
0	GEOSMIN	Silk Stigma Style				--
0	GEOSMIN	Seed Essent. Oil		4000.0		--
0	GEOSMIN	Plant				--
0	GEOSMIN	Essential Oil		4000.0		--
13	GERANIAL	Husk Essent. Oil				--
13	GERANIAL	Hull Husk				--
35	GERANIOL	Silk Stigma Style				--
2	GERANYL-ACETONE	Seed				--
2	GERANYL-ACETONE	Seed Essent. Oil				--
2	GERANYL-ACETONE	Husk Essent. Oil				--
0	GIBBERELLINS	Flower				--
0	GLOBULIN	Seed	4500.0	6000.0	-1.0	--
7	GLUCOSE	Fruit	2000.0	5000.0	-0.8420433042200329	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
7	GLUCOSE	Sprout Seedling				--
8	GLUTAMIC-ACID	Seed	6360.0	26457.0	-0.6436731379916952	USDA's Ag Handbook 8 and sequelae)
0	GLUTAMIC-ACID-DECARBOXYLASE	Plant				--
7	GLUTATHIONE	Fruit				--
7	GLUTATHIONE	Root				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
7	GLUTATHIONE	Seed	54.0	169.0		Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	GLUTELIN	Fruit	14685.0	67325.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	GLUTEN	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
8	GLYCEROL	Plant				--
12	GLYCINE	Seed	1270.0	5283.0	-0.8196658866632359	USDA's Ag Handbook 8 and sequelae)
4	GLYCOLIC-ACID	Silk Stigma Style				--
18	GUAIACOL	Seed				--
6	GUANIDINE	Plant				--
0	GUM	Silk Stigma Style		38000.0		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	HEMICELLULOSE	Cob				--
0	HEPT-4-EN-2-OL	Silk Stigma Style				--
0	HEPT-4-EN-2-OL	Seed Essent. Oil		120000.0		--
0	HEPT-4-EN-2-OL	Husk Essent. Oil		64000.0		--
0	HEPT-4-EN-2-ONE	Essential Oil		15000.0		--
0	HEPT-4-EN-2-ONE	Seed Essent. Oil		15000.0		--
0	HEPT-4-EN-OL	Essential Oil		120000.0		--
0	HEPT-4-EN-OL	Plant				--
0	HEPT-CIS-4-EN-2-OL	Leaf				--
0	HEPT-CIS-4-EN-2-OL	Silk Essent. Oil		10000.0		--
0	HEPT-CIS-4-EN-2-ONE	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	HEPT-TRANS-2-EN-1-AL	Silk Stigma Style				--
0	HEPT-TRANS-2-EN-1-AL	Husk Essent. Oil				--
0	HEPTA-TRANS-2-CIS-4-DIEN-1-AL	Silk Essent. Oil		3000.0		--
0	HEPTA-TRANS-2-CIS-4-DIEN-1-AL	Husk Essent. Oil	19000.0	21000.0		--
0	HEPTA-TRANS-2-EN-1-AL	Silk Essent. Oil		5000.0		--
0	HEPTA-TRANS-2-TRANS-4-DIEN-1-AL	Silk Essent. Oil		3000.0		--
0	HEPTAN-1-AL	Husk Essent. Oil		10000.0		--
0	HEPTAN-1-AL	Plant				--
0	HEPTAN-1-AL	Silk Essent. Oil	20000.0	50000.0		--
0	HEPTAN-1-OL	Silk Essent. Oil	20000.0	30000.0		--
0	HEPTAN-1-OL	Seed Essent. Oil				--
0	HEPTAN-2-OL	Silk Essent. Oil	10000.0	20000.0		--
0	HEPTAN-2-OL	Seed Essent. Oil		250000.0		--
0	HEPTAN-2-OL	Plant				--
0	HEPTAN-2-OL	Husk Essent. Oil		56000.0		--
0	HEPTAN-2-OL	Silk Stigma Style				--
0	HEPTAN-2-OL	Essential Oil	15000.0	250000.0		--
0	HEPTAN-2-ONE	Seed Essent. Oil		15000.0		--
0	HEPTAN-2-ONE	Husk Essent. Oil				--
0	HEPTAN-2-ONE	Leaf				--
0	HEX-1-EN-3-OL	Silk Stigma Style				--
0	HEX-CIS-3-EN-1-AL	Leaf				--
0	HEX-CIS-3-EN-1-OL	Silk Stigma Style				--
0	HEX-CIS-3-EN-1-OL	Leaf				--
0	HEX-CIS-3-EN-1-OL	Shoot				--
0	HEX-CIS-3-EN-1-OL	Silk Essent. Oil		5000.0		--
0	HEX-CIS-3-EN-1-OL	Husk Essent. Oil		52000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	HEX-CIS-3-EN-1-YL-ACETATE	Leaf				--
0	HEX-TRANS-2-EN-1-AL	Plant				--
0	HEX-TRANS-2-EN-1-AL	Husk Essent. Oil		68000.0		--
0	HEX-TRANS-2-EN-1-AL	Silk Stigma Style				--
0	HEX-TRANS-2-EN-1-AL	Leaf				--
0	HEX-TRANS-2-EN-1-OL	Silk Stigma Style				--
0	HEX-TRANS-2-TRANS-4-DIEN-1-AL	Silk Essent. Oil		3000.0		--
0	HEX-TRANS-3-EN-1-OL	Silk Essent. Oil				--
0	HEX-TRANS-3-EN-1-OL	Silk Stigma Style				--
0	HEXA-TRANS-2-TRANS-4-DIEN-1-AL	Silk Stigma Style				--
0	HEXADECENOIC-ACID	Seed				--
0	HEXAN-1-AL	Seed Essent. Oil				--
0	HEXAN-1-AL	Husk Essent. Oil		50000.0		--
0	HEXAN-1-AL	Hull Husk				--
0	HEXAN-1-AL	Shoot				--
0	HEXAN-1-AL	Leaf				--
0	HEXAN-1-AL	Plant				--
0	HEXAN-1-AL	Silk Essent. Oil	2000.0	10000.0		--
0	HEXAN-1-OL	Seed Essent. Oil				--
0	HEXAN-1-OL	Plant				--
0	HEXAN-1-OL	Husk Essent. Oil		62000.0		--
0	HEXAN-1-OL	Silk Essent. Oil	2000.0	10000.0		--
0	HEXAN-1-OL	Leaf				--
0	HEXAN-1-OL	Silk Stigma Style				--
0	HEXAN-2-OL	Silk Stigma Style				--
0	HEXAN-2-ONE	Seed Essent. Oil				--
0	HEXAN-2-ONE	Essential Oil				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	HEXAN-2-ONE	Husk Essent. Oil				--
0	HEXENYL-ISOTHIOCYANATE	Seed				--
7	HISTIDINE	Embryo				--
7	HISTIDINE	Seed	890.0	3702.0	-0.6439051932934873	USDA's Ag Handbook 8 and sequelae)
8	HORDENINE	Silk Stigma Style				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	HYDROXAMIC-ACID	Leaf				--
15	INDOLE	Shoot				--
15	INDOLE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	INDOLE-3-ACETIC-ACID	Root				--
7	INDOLE-3-ACETIC-ACID	Cotyledon				--
7	INDOLE-3-ACETIC-ACID	Seed				--
7	INDOLE-3-ACETIC-ACID	Juice				--
0	INDOLE-3-ACETIC-ACID-CELLULOSIGLUCAN	Seed				--
0	INDOLE-3-ACETIC-ACID-METHYL-ESTER	Seed				--
0	INDOLE-3-ACETIC-ACID-MYOINOSITOL	Seed				--
3	INDOLE-3-BUTYRIC-ACID	Leaf				--
3	INDOLE-3-BUTYRIC-ACID	Seed				--
8	INOSITOL	Plant				--
12	IODINE	Seed		0.012	-0.2773081368232745	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
6	IRON	Silk Stigma Style		504.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
6	IRON	Seed	5.0	41.0	-0.5101323955139533	--
0	ISOAMYL-AMINE	Sprout Seedling				--
0	ISOBEHENIC-ACID	Seed		80.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	ISOLEUCINE	Seed	1290.0	5366.0	-0.654028618470496	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	ISOPROPYL-AMINE	Seed		2.3		--
22	ISOQUERCITRIN	Plant				Stitt, Paul. Why George should eat broccoli.
22	ISOQUERCITRIN	Pollen Or Spore				--
0	ISORHAMNETIN-3,4'-O-DIGLUCOSIDE	Pollen Or Spore				--
0	ISORHAMNETIN-3-O-BETA-D-GLUCOSIDE	Pollen Or Spore				--
0	ISORHAMNETIN-3-O-GLUCOSIDE-4'-O-DIGLUCOSIDE	Pollen Or Spore				--
0	ISORHAMNETIN-3-O-NEOHESPEROSIDE	Pollen Or Spore				--
1	ISOVALERALDEHYDE	Shoot				--
0	KAEMPFEROL-3-O-ALPHA-L-GALACTOSIDE	Pollen Or Spore				--
0	KILOCALORIES	Silk Stigma Style		3690.0		--
8	LACTIC-ACID	Plant				--
1	LANOSTEROL	Plant				--
0	LEAD	Seed	0.0	14.0	3.374509206732274	--
2	LEUCINE	Seed	3480.0	14477.0	-0.24929490146930922	USDA's Ag Handbook 8 and sequelae)
1	LEUCOCYANIDIN	Plant				--
1	LEUCOPELARGONIDIN	Plant				--
13	LIGNIN	Cob				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	LIGNIN	Stem	213000.0	245000.0	0.9696172791853698	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	LIGNOCERIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
60	LIMONENE	Seed Essent. Oil				--
60	LIMONENE	Silk Stigma Style				--
60	LIMONENE	Husk Essent. Oil				--
60	LIMONENE	Leaf				--
60	LIMONENE	Silk Essent. Oil		7000.0		--
0	LINALOL	Plant				--
53	LINALOOL	Leaf				--
53	LINALOOL	Plant				Stitt, Paul. Why George should eat broccoli.
0	LINGIFOLENE	Root				--
27	LINOLEIC-ACID	Seed	5420.0	22547.0	-0.724648681207493	USDA's Ag Handbook 8 and sequelae)
0	LIPOXIDASE	Plant				--
11	LITHIUM	Seed	0.048	0.22	-0.9999999999999998	--
0	LONGIFOLENE	Root				--
0	LOPHENOL	Shoot				--
15	LUTEIN	Leaf				--
0	LUTEIN_+_ZEAXANTHIN	Seed	7.3	22.0		--
0	LUTEOFOROL	Silk Stigma Style				--
1	LUTEOLINIDIN	Silk Stigma Style				--
4	LYSINE	Seed	1370.0	5699.0	-0.8668614509130552	USDA's Ag Handbook 8 and sequelae)
65	MAGNESIUM	Silk Stigma Style		1790.0		--
65	MAGNESIUM	Seed	100.0	1600.0	-0.531836823348677	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	MALEIC-ACID	Plant				--
15	MALIC-ACID	Plant				--
15	MALIC-ACID	Silk Stigma Style				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	MALIC-ACID-DEHYDROGENASE	Plant				--
1	MALONIC-ACID	Plant				--
0	MALTOSYL-TRANSFERASE	Plant				--
14	MANGANESE	Silk Stigma Style		34.0	-1.0	--
14	MANGANESE	Seed	0.84	63.0	0.11807339481595111	--
3	MANNOSE	Plant	1.0	7.0		--
3	MAYSIN	Leaf				--
3	MAYSIN	Silk Stigma Style				--
23	MELATONIN	Seed		0.001		Hattori, A., et. al. 1995. Identification of Melatonin in Plants and its Effects on Plasma Melatonin Levels and Binding to Melatonin Receptors in Vertebrates. Biochem. Mol. Biol. Int., 35(3): 627-634.
63	MENTHOL	Silk Stigma Style				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
63	MENTHOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	MERCURY	Seed	0.0	0.072	-0.30034903182835404	--
0	MESO-INOSITOL	Pollen Or Spore				--
15	METHIONINE	Pollen Or Spore				--
15	METHIONINE	Seed	670.0	2787.0	-0.39450659411183164	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	METHYL-2-THIENYL-KETONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
1	METHYL-AMINE	Seed		27.0	-0.00897230932189183	--
2	METHYL-PHENYLACETATE	Silk Essent. Oil	30000.0	40000.0		--
0	METHYL-PYRAN-2-CARBOXALDEHYDE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
0	MEVALONIC-ACID	Seed		14.0		--
2	MOLYBDENUM	Seed	0.084	6.3	0.4479349477443534	--
0	MONOGALACTOSYL-DIGLYCERIDE	Plant				--
0	MYO-INOSITOL	Plant				--
22	MYRCENE	Leaf				--
22	MYRCENE	Seed				--
22	MYRCENE	Seed Essent. Oil				--
22	MYRCENE	Husk Essent. Oil				--
0	MYRECITIN-GLUCOSIDE	Plant				--
6	MYRISTIC-ACID	Seed				--
0	N-DEMETHYL-DIAZEPAM	Seed				--
0	N-METHYL-BETA-PHENETHYLAMINE	Seed		1.1		--
0	N-METHYL-PHENETHYLAMINE	Seed		1.1	-1.0	--
0	N-PROPYL-GALLATE	Seed				--
1	NAPHTHALENE	Silk Essent. Oil		3000.0		--
1	NAPHTHALENE	Seed Essent. Oil				--
1	NAPHTHALENE	Silk Stigma Style				--
1	NAPHTHALENE	Husk Essent. Oil				--
0	NEOCRYPTOXANTHIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	NEOXANTHIN	Leaf				--
11	NEROLIDOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
39	NIACIN	Silk Stigma Style		25.0		--
39	NIACIN	Seed	16.0	71.0	0.8415661421509846	--
39	NIACIN	Cob	4.0	16.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	NICKEL	Seed	0.12	6.3	0.2960271506106448	--
1	NICOTIANAMINE	Leaf				--
0	NON-CIS-3-EN-1-OL	Seed Essent. Oil		30000.0		--
0	NON-CIS-3-EN-1-OL	Husk Essent. Oil				--
0	NON-CIS-3-EN-1-OL	Essential Oil		30000.0		--
0	NON-TRANS-2-EN-1-AL	Leaf				--
0	NON-TRANS-2-EN-1-AL	Silk Essent. Oil		10000.0		--
0	NON-TRANS-2-EN-1-AL	Husk Essent. Oil		10000.0		--
0	NONA-TRANS-2-TRANS-4-DIEN-1-AL	Silk Essent. Oil		3000.0		--
0	NONA-TRANS-2-TRANS-4-DIEN-1-AL	Husk Essent. Oil				--
0	NONAL-N-2-OL	Silk Stigma Style				--
0	NONAN-1-AL	Seed Essent. Oil				--
0	NONAN-1-AL	Husk Essent. Oil		97000.0		--
0	NONAN-1-AL	Silk Essent. Oil	80000.0	28000.0		--
0	NONAN-1-OL	Silk Stigma Style				--
0	NONAN-1-OL	Seed Essent. Oil		30000.0		--
0	NONAN-1-OL	Husk Essent. Oil				--
0	NONAN-1-OL	Essential Oil		30000.0		--
0	NONAN-2-OL	Seed Essent. Oil		260000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	NONAN-2-OL	Husk Essent. Oil		132000.0		--
0	NONAN-2-OL	Plant				--
0	NONAN-2-OL	Essential Oil		260000.0		--
0	NONAN-2-OL	Silk Essent. Oil		2000.0		--
0	NONAN-2-ONE	Seed Essent. Oil		20000.0		--
0	NONAN-2-ONE	Silk Stigma Style				--
0	NONAN-2-ONE	Husk Essent. Oil				--
0	NONAN-2-ONE	Essential Oil		20000.0		--
0	O-DIETHYL-PHTHALATE	Silk Stigma Style				--
0	OBTUSIFOLIOL	Sprout Seedling				--
0	OBTUSIFOLIOL	Shoot				--
0	OCT-1-EN-3-OL	Plant				--
0	OCT-1-EN-3-OL	Silk Stigma Style				--
0	OCT-1-EN-3-OL	Silk Essent. Oil		1000.0		--
0	OCT-1-EN-3-OL	Seed Essent. Oil				--
0	OCT-1-EN-3-OL	Husk Essent. Oil		25000.0		--
0	OCT-TRANS-2-EN-1-AL	Plant				--
0	OCT-TRANS-2-EN-1-AL	Husk Essent. Oil		37000.0		--
0	OCT-TRANS-2-EN-1-AL	Silk Essent. Oil		1000.0		--
0	OCT-TRANS-2-EN-1-OL	Husk Essent. Oil		10000.0		--
0	OCT-TRANS-2-EN-1-OL	Plant				--
0	OCT-TRANS-2-EN-1-OL	Silk Stigma Style				--
0	OCTA-3-5-DIEN-2-ONE	Silk Stigma Style				--
0	OCTA-3-5-DIENE-2-ONE	Silk Stigma Style				--
0	OCTA-TRANS-2-TRANS-5-DIEN-2-ONE	Silk Essent. Oil		2000.0		--
0	OCTADECADIENOIC-ACID	Seed				--
0	OCTADECATRIENOIC-ACID	Seed				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	OCTADECENOIC-ACID	Seed				--
0	OCTAN-1-AL	Husk Essent. Oil				--
0	OCTAN-1-OL	Silk Essent. Oil	5000.0	10000.0		--
0	OCTAN-1-OL	Seed Essent. Oil				--
0	OCTAN-1-OL	Husk Essent. Oil				--
0	OCTAN-1-OL	Silk Stigma Style				--
0	OCTAN-2-OL	Seed Essent. Oil		20000.0		--
0	OCTAN-2-OL	Essential Oil		20000.0		--
0	OCTAN-2-OL	Husk Essent. Oil		12000.0		--
0	OCTAN-2-OL	Silk Stigma Style				--
0	OCTAN-2-OL	Plant				--
0	OCTAN-2-ONE	Essential Oil				--
0	OCTAN-2-ONE	Husk Essent. Oil				--
0	OCTAN-2-ONE	Seed Essent. Oil				--
64	OLEANOLIC-ACID	Silk Stigma Style				--
18	OLEIC-ACID	Seed	3470.0	14435.0	-0.8604360359565065	USDA's Ag Handbook 8 and sequelae)
4	ORIENTIN	Silk Stigma Style				--
9	OXALIC-ACID	Fruit		99.0	-0.3008899412935749	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.
25	P-COUMARIC-ACID	Sprout Seedling				--
25	P-COUMARIC-ACID	Shoot		1.0	-0.7071067811865475	Jim Duke's personal files.
25	P-COUMARIC-ACID	Seed	4.0	46.0	-0.4061463765475915	--
4	P-HYDROXYBENZALDEHYDE	Cob				--
0	P-VINYL-GUAIACOL	Husk Essent. Oil				--
13	PALMITIC-ACID	Seed	1710.0	7114.0	-0.5528161466254179	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	PALMITIC-ACID	Silk Stigma Style				--
2	PALMITOLEIC-ACID	Fruit				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	PANTOTHENIC-ACID	Cob	3.0	7.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
11	PANTOTHENIC-ACID	Seed	4.0	34.0	1.8074305020007495	USDA's Ag Handbook 8 and sequelae)
0	PECTIC POLYSACCHARIDE	Shoot				--
24	PECTIN	Leaf	10000.0	17000.0	-0.9298021026280799	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PECTINS	Plant		5900.0		--
7	PELARGONIDIN	Silk Stigma Style				--
0	PELARGONIDIN-3-GLUCOSIDE	Plant				--
0	PENT-1-EN-2-OL	Silk Stigma Style				--
0	PENTAN-1-OL	Silk Stigma Style				--
0	PENTAN-2-OL	Silk Stigma Style				--
0	PENTAN-3-ONE	Silk Stigma Style				--
0	PEROXIDASE	Anther				--
0	PHENANTHRENE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
6	PHENETHYL-ALCOHOL	Silk Stigma Style				--
2	PHENYL-ACETALDEHYDE	Seed Essent. Oil				--
2	PHENYL-ACETALDEHYDE	Husk Essent. Oil		13000.0		--
2	PHENYL-ACETALDEHYDE	Plant				--
2	PHENYL-ACETALDEHYDE	Silk Essent. Oil		1000.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PHENYLACETIC-ACID	Pollen Or Spore				--
7	PHENYLALANINE	Seed	1500.0	6240.0	-0.6329654729366279	USDA's Ag Handbook 8 and sequelae)
0	PHENYLALANINE-AMMONIA-LYASE	Plant				--
2	PHOSPHATIDYL-CHOLINE	Plant				--
0	PHOSPHATIDYL-ETHANOLAMINE	Plant				--
0	PHOSPHATIDYL-INOSITOL	Plant				--
0	PHOSPHOENOL-PYRUVATE	Sprout Seedling				--
0	PHOSPHOLIPIDS	Seed				--
4	PHOSPHORUS	Silk Stigma Style		287.0		--
4	PHOSPHORUS	Seed	600.0	4066.0	-0.34019475720359266	--
5	PHYLLOQUINONE	Fruit		0.003	-0.2325377501021479	--
5	PHYLLOQUINONE	Oil		0.03	-1.0603756768844963	--
0	PHYTATE	Seed	310.0	6400.0	-0.7658880709229736	--
9	PHYTIC-ACID	Pollen Or Spore		2600.0		--
9	PHYTIC-ACID	Seed	7200.0	12900.0	-0.3647475557448543	--
0	PHYTIN	Plant				--
0	PHYTOFLUENE	Plant				--
2	PHYTOHAEMAGGLUTININ	Silk Stigma Style				--
0	PHYTOHEMAGGLUTININ	Silk Stigma Style				--
2	PHYTOSTEROLS	Seed	600.0	2800.0	0.11866310014704903	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
14	POTASSIUM	Silk Stigma Style		12200.0		--
14	POTASSIUM	Seed	2400.0	11450.0	-0.09850155432250932	--
0	PROLAMINE	Seed	45000.0	55000.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	PROLINE	Shoot		11.0	-0.7071737762939713	--
0	PROLINE	Seed	2920.0	12147.0	0.15935583041046553	--
0	PROLINE	Root		69.0	-1.2553270966850225	--
0	PROPAN-1-OL	Silk Stigma Style				--
0	PROTEASE INHIBITOR C1-4-A	Endosperm				--
0	PROTEIN	Silk Stigma Style		99000.0	-1.0	Pedersen, M. 1987. Nutritional Herbolgy. Pederson Publishing. Bountiful, Utah. 377 pp.
0	PROTEIN	Seed	22520.0	132000.0	-0.9055287385749634	--
43	PROTocatechuic-acid	Tissue Culture				--
0	PROTOSAN	Seed Oil				--
0	PUTRESCINE	Sprout Seedling				--
43	PYRIDOXINE	Cob	1.0	3.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	PYRROLE	Silk Stigma Style				--
1	PYRROLIDINE	Seed				--
1	PYRUVIC-ACID	Sprout Seedling				--
176	QUERCETIN	Plant				--
176	QUERCETIN	Pollen Or Spore				--
0	QUERCETIN-3,3'-O-BETA-D-GLUCOSIDE	Pollen Or Spore				--
0	QUERCETIN-3,7-DI-O-BETA-D-GLUCOSIDE	Pollen Or Spore				--
0	QUERCETIN-3-O-ALPHA-D-RHAMNOSYL-O-BETA-L-GALACTOSIDE?	Pollen Or Spore				--
2	QUERCETIN-3-O-BETA-D-GLUCOSIDE	Pollen Or Spore				--
0	QUERCETIN-3-O-BETA-D-GLUCOSYL-O-ALPHA-L-GALACTOSIDE?	Pollen Or Spore				--
0	QUERCETIN-3-O-BETA-D-NEOHESPEROSIDE	Pollen Or Spore				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	QUERCETIN-3-O-GLUCOSIDE-3'-O-DIGLUCOSIDE	Pollen Or Spore				--
0	QUERCETIN-DIGLUCOSIDE	Plant				--
1	QUINIC-ACID	Plant				--
1	RAFFINOSE	Fruit	1000.0	3000.0	-1.0	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
0	RESIN	Silk Stigma Style				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	RHAMNOGALACTURONAN-1	Tissue Culture				--
0	RHAMNOSE	Silk Stigma Style				--
15	RIBOFLAVIN	Silk Stigma Style		1.5	-1.0	--
15	RIBOFLAVIN	Fruit	1.0	4.0	-0.21615825716438572	--
15	RIBOFLAVIN	Cob	1.0	3.0		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
2	RIBONUCLEASE	Tissue Culture				--
7	RICINOLEIC-ACID	Plant				--
0	RUBISCO	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
5	SABINOL	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
7	SALICYLATES	Fruit	1.0	5.0	-0.3224047195908981	--
0	SALICYLIC-ACID-METHYL-ESTER	Leaf				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	SAPONIN	Silk Stigma Style	23000.0	32000.0		Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	SD	Plant				--
60	SELENIUM	Silk Stigma Style		5.7		--
60	SELENIUM	Seed	0.0	0.5	-0.2588230372812833	--
1	SERINE	Seed	1530.0	6365.0	-0.8067159497282409	USDA's Ag Handbook 8 and sequelae)
0	SEROTIN	Plant				--
0	SI	Plant				--
4	SILICON	Silk Stigma Style		237.0		--
3	SILVER	Seed	0.012	0.055	-0.18268699040920042	--
0	SITOSTANOL FERULATE	Bran				--
0	SITOSTANOL-P-COUMARATE	Bran				--
1	SODIUM	Silk Stigma Style		130.0		--
1	SODIUM	Seed	0.0	757.0	0.48595911191753866	--
1	SPERMIDINE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
1	SPERMINE	Seed				ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
10	SQUALENE	Seed Oil				--
10	SQUALENE	Seed				--
10	SQUALENE	Pollen Or Spore				--
5	STARCH	Seed				--
8	STEARIC-ACID	Seed	110.0	457.0	-0.5554746921056529	USDA's Ag Handbook 8 and sequelae)
8	STEARIC-ACID	Silk Stigma Style				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	STIGMASTEROL	Seed		210.0	-0.2634086805935878	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	Silk Stigma Style				--
12	STIGMASTEROL	Seed Oil				--
12	STIGMASTEROL	Shoot				--
12	STIGMASTEROL	Root				--
0	STRONTIUM	Seed	0.12	14.0	-0.3817365776937731	--
3	SUBAPHYLLIN	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
7	SUCCINIC-ACID	Plant				--
14	SUCROSE	Leaf				--
14	SUCROSE	Fruit	9000.0	19000.0	-0.6121007856075014	ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
14	SULFUR	Fruit	6.0	1140.0	-0.19109679700613894	--
4	SYRINGALDEHYDE	Cob				--
4	SYRINGALDEHYDE	Seed				--
6	SYRINGIC-ACID	Tissue Culture				--
6	TARTARIC-ACID	Silk Stigma Style				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
0	TEASTERONE	Seed				--
0	TEASTERONE	Pollen Or Spore		0.041		--
31	THIAMIN	Silk Stigma Style		2.1	-0.9999999999999999	--
31	THIAMIN	Fruit	2.0	8.0	0.3414272755878574	--
4	THREONINE	Seed	1290.0	5366.0	-0.6199585002377315	USDA's Ag Handbook 8 and sequelae)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
71	THYMOL	Silk Stigma Style				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
71	THYMOL	Seed				--
71	THYMOL	Seed Essent. Oil				--
4	TIN	Silk Stigma Style				--
4	TIN	Seed	1.0	1.8	-0.39709066551927835	--
0	TITANIUM	Seed	0.06	63.0	1.607580416896206	--
0	TOCOPHEROLS	Seed	900.0	1000.0	0.07466844710536599	--
0	TRANS-24-METHYL-23-DEHYDRO-LOPHENOL	Seed Oil				--
0	TRANS-24-METHYL-23-DEHYDRO-LOPHENOL	Seed				--
2	TRANS-BETA-FARNESENE	Leaf				--
2	TRANS-BETA-FARNESENE	Root				--
2	TRANS-FERULIC-ACID	Seed		1800.0	1.3913139699802963	--
2	TRANS-FERULIC-ACID	Plant				Stitt, Paul. Why George should eat broccoli.
0	TRANS-ISO-MENTH-5-EN-2-OL	Plant				--
0	TRANS-SINAPIC-ACID	Plant				--
0	TRICARBALLYL-ACID	Plant				--
0	TRICIN-GLYCOSIDE	Plant				--
0	TRIDECAN-1-AL	Husk Essent. Oil				--
15	TRIGONELLINE	Seed		4.0	-0.46810441555051263	--
4	TRYPTAMINE	Plant				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
29	TRYPTOPHAN	Cotyledon				--
29	TRYPTOPHAN	Seed	230.0	957.0	-0.8075994083741	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	TYPHASTEROL	Pollen Or Spore		0.066		--
8	TYROSINE	Seed	1230.0	5117.0	-0.6078994158411758	USDA's Ag Handbook 8 and sequelae)
0	UNDEC-TRANS-2-EN-1-AL	Silk Essent. Oil		2000.0		--
0	UNDECAN-1-AL	Husk Essent. Oil				--
0	UNDECAN-2-OL	Silk Stigma Style				--
0	UNDECAN-2-OL	Essential Oil		45000.0		--
0	UNDECAN-2-OL	Husk Essent. Oil				--
0	UNDECAN-2-OL	Seed Essent. Oil		45000.0		--
0	UNDECAN-2-ONE	Husk Essent. Oil				--
0	UREASE	Plant				--
0	URIDINE	Seed				--
0	URONIC-ACID	Plant				--
3	VALINE	Seed	1850.0	7696.0	-0.5315006159571728	USDA's Ag Handbook 8 and sequelae)
16	VANADIUM	Seed	0.05	1.35	0.6938324504308431	--
24	VANILLIC-ACID	Sprout Seedling				--
24	VANILLIC-ACID	Tissue Culture				--
28	VANILLIN	Cob				--
28	VANILLIN	Shoot				--
28	VANILLIN	Seed	4.0	31.0		Jim Duke's personal files.
0	VINYL-ETHYL-PHENETHYL-KETONE	Leaf				Duke, J. A. Writeups or information summaries on approximately 2,000 economic plants, USDA, ARS, Beltsville, MD 20705.
2	VIOLAXANTHIN	Leaf				--
0	VIT-B-6	Seed	1.0	3.0	-0.7480591991066328	--
0	VIT-D-3	Leaf				--
0	VIT-K	Silk Stigma Style				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
18	VITEXIN	Silk Stigma Style				--
0	WATER	Seed	100000.0	885000.0	2.5226907802804104	--
0	WATER	Silk Stigma Style		620000.0	1.0	--
43	XANTHOTOXIN	Root				--
0	XYLENE	Husk Essent. Oil				--
0	XYLOARABINOSE	Plant				--
3	XYLOSE	Plant				--
0	YTTERBIUM	Seed	0.02	4.5	3.3139442766048837	--
0	ZEA GLYCOPROTEIN U-CSE-100	Silk Stigma Style				--
0	ZEA GLYCOPROTEIN U-CSE-300	Silk Stigma Style				--
0	ZEA MAYS ALPHA-AMYLASE INHIBITOR	Seed				--
0	ZEA MAYS PROTEASE INHIBITOR	Fruit				--
0	ZEAMATIN	Seed				--
0	ZEANIN	Seed				--
0	ZEANOSIDE A	Seed				--
0	ZEANOSIDE-B	Seed				--
0	ZEANOSIDE-C	Seed		1.2		--
4	ZEARALENONE	Plant				--
2	ZEATIN	Plant		0.014		--
0	ZEATIN-RIBOSIDE	Leaf				--
5	ZEAXANTHIN	Plant				--
5	ZEAXANTHIN	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	ZEIN	Seed				--
0	ZEINOXANTHIN	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	ZETA-CAROTENE	Seed				Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
77	ZINC	Seed	4.0	20.0	-0.7135039207289134	--
0	ZIRCONIUM	Seed	0.2	1.8	-0.5968587488663253	--