

Dr. Duke's Phytochemical and Ethnobotanical Databases

Chemicals found in *Curcuma longa*

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
0	(+)-(S)-AR-TURMERONE	Rhizome				--
0	(+)-ALPHA-PHELLANDRENE	Rhizome Essent. Oil				--
0	(+)-ALPHA-PHELLANDRENE	Root				--
0	(+)-ALPHA-PHELLANDRENE	Root Essent. Oil				--
0	(+)-AR-TURMERONE	Rhizome				--
0	(+)-SABINENE	Root				--
0	(+)-SABINENE	Rhizome Essent. Oil				--
0	1,5-BIS-(4-HYDROXY-3-METHOXY-PHENYL)-PENTA-TRANS-1-TRANS-4-DIEN-3-ONE	Rhizome		27.0		--
2	1,5-BIS-(4-HYDROXY-3-METHOXYPHENYL)-1,4-PENTADIEN-3-ONE	Rhizome				--
2	1,7-BIS-(4-HYDROXY-3-METHOXYPHENYL)-1,4,6-HEPTATRIEN-3-ONE	Rhizome				--
0	1,7-BIS-(4-HYDROXY-PHENYL)-HEPTA-1,4,6-TRIENE-3-ONE	Rhizome		3.0		--
2	1,7-BIS-(4-HYDROXYPHENYL)-1-HEPTENE-3,5-DIONE	Rhizome				--
67	1,8-CINEOLE	Leaf		330.0	-0.4877780232076323	--
67	1,8-CINEOLE	Root				--
67	1,8-CINEOLE	Rhizome	30.0	9575.0	0.3047864660484435	--
0	1-(4-HYDROXY-3-METHOXY-PHENYL)-5-(4-HYDROXY-PHENYL)-PENTA-TRANS-1-TRANS-4-DIEN-3-ONE	Rhizome		13.0		--
0	1-(4-HYDROXY-3-METHOXY-PHENYL)-7-(3,4-DIHYDROXY-PHENYL)-HEPTA-1,6-DIENE-3,5-DIONE	Rhizome		4.0		--
2	1-HYDROXY-1,7-BIS-(4-HYDROXY-3-METHOXYPHENYL)-6-HEPTENE-3,5-DIONE	Plant				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	2,5-DIHYDROXY-BISABOLA-3,10-DIENE	Rhizome		3.0		--
0	2-BORNANOL	Plant				J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
2	2-HYDROXY-METHYL-ANTHRAQUINONE	Rhizome				--
2	4''-(3''-METHOXY-4''-HYDROXYPHENYL)-2''-OXO-3''-ENEBUTANYL-3-(3'-METHOXY-4'-HYDROXYPHENYL)-PROPENOATE	Rhizome				--
0	4(S)-5(S)-EPOXY-GERMACRONE	Rhizome				--
0	4-HYDROXY-BISABOLA-2,10-DIEN-9-ONE	Rhizome		5.1		--
0	4-HYDROXY-CINNAMOYL-(FERULOYL)-METHANE	Rhizome		180.0		--
0	4-HYDROXY-CINNAMOYL-METHANE	Rhizome				--
0	4-HYDROXY-FERULOXYL-METHANE	Rhizome				--
0	5'-METHOXY-CURCUMIN	Rhizome		20.0		--
0	5-HYDROXY-4-METHOXY-BISABOLA-2,10-DIEN-9-ONE	Rhizome		0.3		--
0	5-HYDROXY-PROCURCUMENOL	Rhizome		0.6		--
0	ALPHA-ATLANTONE	Rhizome				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-ATLANTONE	Root				--
3	ALPHA-CURCUMENE	Rhizome				--
11	ALPHA-PHELLANDRENE	Rhizome		1945.0	1.0	--
11	ALPHA-PHELLANDRENE	Leaf		2325.0	1.3345170744070258	--
28	ALPHA-PINENE	Rhizome Essent. Oil		5300.0	-0.9114147781537915	--
28	ALPHA-PINENE	Leaf	60.0	1440.0	-0.1310531749310525	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Essential Oil		5300.0	-0.5134325695945586	--
28	ALPHA-PINENE	Rhizome				--
28	ALPHA-PINENE	Tuber				--
13	ALPHA-TERPINENE	Rhizome		23.0	-1.0	--
13	ALPHA-TERPINENE	Leaf		37.0	-0.2932431476626101	--
23	ALPHA-TERPINEOL	Rhizome				--
32	ALPHA-TOCOPHEROL	Root	11.0	18.0	-0.09053574604251821	--
0	ALPHA-TURMERONE	Rhizome		3.7		--
13	AR-TURMERONE	Root				--
13	AR-TURMERONE	Rhizome Essent. Oil	183800.0	596870.0		--
13	AR-TURMERONE	Rhizome	740.0	5800.0		--
0	ARABINOSE	Rhizome		10000.0		Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
112	ASCORBIC-ACID	Rhizome	0.0	293.0	-0.34465428565155654	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
112	ASCORBIC-ACID	Plant				--
0	ASH	Plant	9920.0	32000.0	-1.6080997471982341	--
0	ASH	Rhizome	9000.0	148000.0	0.8154551817141439	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
10	AZULENE	Rhizome				--
6	BETA-BISABOLENE	Rhizome				--
53	BETA-CAROTENE	Plant	6.0	18.0	-0.6296931924279244	--
53	BETA-CAROTENE	Rhizome		0.0	-0.746733045887731	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-PINENE	Leaf		215.0	-0.11200647112758456	--
13	BETA-PINENE	Rhizome				--
13	BETA-PINENE	Tuber				--
13	BETA-PINENE	Essential Oil		2700.0	-0.670434055955317	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	BETA-PINENE	Rhizome Essent. Oil		2700.0	-0.04995838534443404	--
5	BETA-SESQUIPELLANDRENE	Rhizome				--
47	BETA-SITOSTEROL	Root		510.0	-0.26351706526294477	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)
47	BETA-SITOSTEROL	Rhizome				--
5	BETA-TURMERONE	Rhizome				--
1	BIS-(4-HYDROXY-CINNAMOYL)-METHANE	Plant				--
1	BIS-(4-HYDROXY-CINNAMOYL)-METHANE	Rhizome				--
0	BIS-(P-HYDROXY-CINNAMOYL)-METHANE	Rhizome		1360.0		--
0	BIS-(PARA-HYDROXY-CINNAMOYL)-METHANE	Rhizome		1360.0		--
16	BIS-DEMETHOXYCURCUMIN	Root		400.0		--
16	BIS-DEMETHOXYCURCUMIN	Plant				--
16	BIS-DEMETHOXYCURCUMIN	Rhizome	6.6	16200.0		--
5	BIS-DESMETHOXYCURCUMIN	Rhizome	67.0	28000.0	1.0	--
0	BISABOLA-3,10-DIEN-2-ONE	Rhizome		13.5		--
0	BISABOLENE	Root				--
0	BISACUMOL	Rhizome		2.0		--
0	BISACURONE	Rhizome		9.0		--
35	BORNEOL	Rhizome Essent. Oil				--
35	BORNEOL	Rhizome				--
35	BORNEOL	Root				--
4	BORON	Root	1.0	6.0	-0.667360795790836	Betting on Boron, Unpublished draft by J. A. Duke on file at USDA, draft and papers relating to boron percentages. Includes Internat. Z. Vit. Ern. Forschung 43:1973 (boron).

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
102	CAFFEIC-ACID	Rhizome		5.0		--
28	CALCIUM	Rhizome	270.0	2898.0	-0.8768568252409509	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Plant	226.0	730.0	-1.3755257581090707	--
3	CALEBIN-A	Rhizome				--
2	CAMPESTEROL	Root		90.0	-0.45238102172974776	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	Rhizome				--
9	CAMPHENE	Rhizome				--
9	CAMPHENE	Tuber				--
41	CAMPHOR	Rhizome Essent. Oil		600.0	-1.0	--
41	CAMPHOR	Tuber				--
5	CAPRYLIC-ACID	Rhizome				--
0	CAR-3-ENE	Leaf	29.0	41.0		--
0	CARBOHYDRATES	Rhizome	79000.0	829000.0	0.7177691089649727	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
31	CARYOPHYLLENE	Essential Oil		13400.0	-0.5168789270461833	--
31	CARYOPHYLLENE	Rhizome				--
31	CARYOPHYLLENE	Tuber				--
1	CHOLESTEROL	Rhizome				--
24	CHROMIUM	Plant	0.2	0.6	-0.8071397754932234	--
24	CHROMIUM	Rhizome		6.0	-1.0	--
0	CINEOL	Tuber				--
0	CINEOL	Rhizome Essent. Oil		29200.0		--
0	CINEOL	Rhizome				--
0	CINEOLE	Essential Oil		29200.0		--
18	CINNAMIC-ACID	Rhizome				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
2	COBALT	Plant	0.5	1.5	-0.42841157368319116	--
2	COBALT	Rhizome		1.0	-1.0	--
12	COPPER	Rhizome	6.0	17.0	1.4469860213540642	--
0	CUMINYL-ALCOHOL	Rhizome				--
0	CURCUMENE	Rhizome				--
0	CURCUMENE	Essential Oil		121700.0		--
0	CURCUMENE	Tuber				--
0	CURCUMENE	Rhizome Essent. Oil		121700.0		--
3	CURCUMENOL	Rhizome		65.0		--
3	CURCUMENOL	Essential Oil		21300.0		--
3	CURCUMENOL	Rhizome Essent. Oil		21300.0		--
0	CURCUMENONE	Rhizome		26.0		--
135	CURCUMIN	Rhizome	9.0	56000.0	1.3976645180230614	--
135	CURCUMIN	Resin, Exudate, Sap		175000.0		--
135	CURCUMIN	Plant				--
135	CURCUMIN	Root		800.0		--
9	CURCUMINOIDS	Root	30000.0	80000.0		--
3	CURCUMOL	Rhizome				--
6	CURDIONE	Rhizome				--
6	CURDIONE	Rhizome Essent. Oil		11900.0		--
6	CURDIONE	Tuber				--
6	CURDIONE	Essential Oil		11900.0		--
0	CURLONE	Rhizome		120.0		--
0	CURZERENONE	Tuber				--
0	CURZERENONE	Rhizome				--
0	CURZERENONE-C	Rhizome Essent. Oil		20400.0		--
0	CURZERENONE-C	Essential Oil		20400.0		--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CYCLO-ISOPRENYMYRCENE	Rhizome	8500.0	29750.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
1	CYCLOCURCUMIN	Rhizome	13.3	8000.0		--
0	D-ALPHA-PHELLANDRENE	Rhizome	30.0	720.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-CAMPHENE	Rhizome		480.0	-1.0	--
0	D-CAMPHOR	Rhizome	30.0	1500.0	-0.29880116775229165	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	D-SABINENE	Rhizome	20.0	432.0		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
8	DEHYDROCURDIONE	Rhizome		4.5		--
0	DEHYDROTURMERONE	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
20	DEMETHOXYCURCUMIN	Plant				--
20	DEMETHOXYCURCUMIN	Rhizome	6.6	11100.0		--
20	DEMETHOXYCURCUMIN	Root		500.0		--
0	DESMETHOXYCURCUMIN	Rhizome	500.0	28000.0	1.3363062095621216	--
2	DI-P-COUMAROYL-METHANE	Rhizome				--
1	DICINNAMOYLMETHANE	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
0	DIDESMETHOXYCURCUMIN	Rhizome				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
1	DIFERULOYL-METHANE	Rhizome				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	DIHYDROCURCUMIN	Rhizome		57.0		--
0	EO	Plant	15500.0	80000.0	5.339729553841824	--
0	EO	Rhizome	3000.0	72000.0	0.38278614749621226	--
0	EO	Leaf		4100.0	-0.6539838935784101	--
2	EPI-PROCURCUMENOL	Rhizome		1.3		--
76	EUGENOL	Rhizome Essent. Oil		2100.0		--
76	EUGENOL	Tuber				--
76	EUGENOL	Essential Oil		2100.0	-0.7050089035376114	--
0	FAT	Rhizome	18000.0	153000.0	2.4259276123914604	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FAT	Plant	28830.0	93000.0	0.6021091742130502	--
1	FERULOYL-4-HYDROXYCINAMOYL-METHANE	Plant				--
1	FERULOYL-P-COUMAROYL-METHANE	Rhizome				--
15	FIBER	Rhizome	9000.0	84000.0	-1.0343269648768965	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	FIBER(CRUDE)	Plant		63000.0	-0.7596673986017957	--
0	FIBER(DIETARY)	Plant		370000.0	0.06486249593456934	--
0	FLAVONOIDS	Rhizome	90.0	95.0		--
8	FRUCTOSE	Rhizome		120000.0	1.413312598024455	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
0	GAMMA-ATLANTONE	Root				--
0	GAMMA-ATLANTONE	Rhizome				List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
11	GAMMA-TERPINENE	Rhizome		60.0	-1.0	--
11	GAMMA-TERPINENE	Leaf		90.0	-0.19839281229128486	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GERMACRENE	Rhizome				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
0	GERMACRON-(4S',5S)-EPOXIDE	Rhizome		0.7		--
0	GERMACRON-13-AL	Rhizome		0.6		--
7	GERMACRONE	Rhizome				--
7	GLUCOSE	Rhizome		280000.0	1.0	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
18	GUAIACOL	Rhizome				--
0	GUAIANE	Rhizome				Bisset, N.G., ed. 1994. Herbal Drugs and Phytopharmaceuticals. CRC Press. Boca Raton, FL. 566 pp.
6	IRON	Rhizome	121.0	467.0	0.32660224579628255	--
6	IRON	Plant	25.0	80.0	-0.6440919715501999	--
7	ISOBORNEOL	Rhizome Essent. Oil		200.0		--
7	ISOBORNEOL	Tuber				--
0	ISOPROCURCUMENOL	Rhizome		1.6		--
0	L-ALPHA-CURCUMENE	Rhizome		18000.0		Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp.
0	L-BETA-CURCUMENE	Rhizome		18000.0		--
60	LIMONENE	Leaf		125.0	-0.31628413309781417	--
60	LIMONENE	Rhizome		80.0	-1.049460471807569	--
60	LIMONENE	Tuber				--
60	LIMONENE	Essential Oil		2300.0	-0.7238268976657102	--
60	LIMONENE	Rhizome Essent. Oil		2300.0	-0.7761485185603905	--
0	LINALOL	Essential Oil		1600.0	1.0	--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
53	LINALOOL	Rhizome				--
53	LINALOOL	Tuber				--
53	LINALOOL	Rhizome Essent. Oil		1600.0	-1.0	--
65	MAGNESIUM	Plant	3038.0	9800.0	1.779937751704662	--
14	MANGANESE	Rhizome	33.0	78.0	-0.31727458910943884	--
14	MANGANESE	Plant	2.5	8.2	-0.6361340105099139	--
0	MONODEMETHOXYCURCU MIN	Root				--
0	MONODEMETHOXYCURCU MIN	Rhizome				--
0	MONODESMETHOXYCURC UMIN	Rhizome				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
39	NIACIN	Rhizome	5.0	62.0	-1.1295129485847604	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
39	NIACIN	Plant	22.0	70.0	-0.09411242290768869	--
3	NICKEL	Rhizome		3.8	-1.0	--
4	O-COUMARIC-ACID	Leaf				--
25	P-COUMARIC-ACID	Rhizome		345.0	1.0	--
1	P-COUMAROYL- FERULOYL-METHANE	Rhizome				Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp.
16	P-CYMENE	Rhizome	210.0	5184.0	1.9997542158504666	--
16	P-CYMENE	Leaf		310.0	-0.1425664765796497	--
5	P-METHOXY-CINNAMIC- ACID	Rhizome		360.0		--
1	P-TOLYL- METHYLCARBINOL	Rhizome	500.0	1750.0		--
1	P-TOLYMETHYLCARBINOL	Rhizome	500.0	1750.0		--
4	PHOSPHORUS	Plant	725.0	2340.0	-0.6000258604656092	--
4	PHOSPHORUS	Rhizome	640.0	6307.0	1.0401873086070448	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	PHYTOSTEROLS	Root		820.0	-0.21102387892333058	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	Plant	5239.0	16900.0	-0.3415285138089129	--
14	POTASSIUM	Rhizome	4870.0	41271.0	3.143110666596612	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PROCURCUMENOL	Rhizome		0.1		--
0	PROTEIN	Plant	31000.0	100000.0	-0.6020445420166102	--
0	PROTEIN	Rhizome	12000.0	306000.0	2.0009280065663138	--
43	PROTocatechuic-acid	Leaf				--
176	QUERCETIN	Rhizome	90.0	95.0	-1.0	--
0	RESIN	Rhizome				Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
15	RIBOFLAVIN	Plant				--
15	RIBOFLAVIN	Rhizome	0.0	12.0	1.6190517856385973	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
7	SALICYLATES	Root		765.0	1.8939419576365641	--
0	SATURATED-FATTY-ACIDS	Rhizome				--
60	SELENIUM	Plant	0.5	1.6	-0.35611748372726487	--
4	SILICON	Plant	6.0	20.0	-0.425552572565658	--
1	SODIUM	Plant	462.0	1490.0	-0.22159718118474486	--
1	SODIUM	Rhizome	30.0	4290.0	4.312813192901911	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	SODIUM-CURCUMATE	Plant				--
5	STARCH	Rhizome	300000.0	550000.0	0.7343043341593242	--
12	STIGMASTEROL	Root		220.0	0.43921373955665255	Spiller, G. A. 1996 (Spiller, G. A. Ed. 1996. CRC Handbook of Lipids in Human Nutrition. CRC Press. Boca Raton, FL. 233 pp.)

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
12	STIGMASTEROL	Rhizome				--
0	SUGARS	Plant	108500.0	400000.0	2.5556146442635606	--
6	SYRINGIC-ACID	Leaf				--
0	TERPINENE	Rhizome				--
0	TERPINENE	Rhizome Essent. Oil		27200.0		--
0	TERPINENE	Tuber				--
0	TERPINENE	Essential Oil		27200.0		--
18	TERPINEOL	Essential Oil		500.0	-1.0	--
18	TERPINEOL	Rhizome Essent. Oil		500.0		--
9	TERPINOLENE	Leaf	115.0	485.0	0.3857342005583795	--
4	TETRAHYDROCURCUMIN	Plant				--
31	THIAMIN	Rhizome	0.0	8.0	0.17349447958987207	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	THIAMINE	Plant				--
0	TOLYL-METHYLCARBINOL	Rhizome				--
1	TRIETHYLCURCUMIN	Plant				--
3	TURMERIN	Rhizome		1000.0		--
4	TURMERONE	Root				--
4	TURMERONE	Rhizome	1800.0	43200.0		--
4	TURMERONE	Rhizome Essent. Oil		240700.0		--
1	TURMERONOL-A	Rhizome		282.0		--
1	TURMERONOL-B	Rhizome		193.0		--
3	UKONAN-A	Rhizome	33.0	6600.0		--
2	UKONAN-B	Rhizome		47.0		--
0	UKONAN-C	Rhizome	52.0	315.0		--
0	UKONAN-D	Rhizome		41.0		--
0	UNSATURATED-FATTY-ACIDS	Rhizome				--

Activities Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Refernce Citation
24	VANILLIC-ACID	Leaf				--
0	WATER	Plant		690000.0	-0.346469410041001	--
0	WATER	Rhizome		133000.0	-1.1144884211539199	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
0	ZEDOARONDIOL	Rhizome		35.0		--
77	ZINC	Plant	0.5	1.5	-0.49949550935262865	--
77	ZINC	Rhizome		22.0	-0.3731629077654671	--
6	ZINGIBERENE	Root				--
6	ZINGIBERENE	Rhizome Essent. Oil		81400.0		--
6	ZINGIBERENE	Rhizome	750.0	18000.0	1.0	--