

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Curcuma longa*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
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	--	--		
2	1,7-BIS-(4-HYDROXYPHENYL)-1-HEPTENE-3,5-DIONE	Rhizome	--	--		
67	1,8-CINEOLE	Leaf	--	330	-0.4877780232076323	
67	1,8-CINEOLE	Rhizome	30	9575	0.3047864660484435	
67	1,8-CINEOLE	Root	--	--		
2	1-HYDROXY-1,7-BIS-(4-HYDROXY-3-METHOXYPHENYL)-6-HEPTENE-3,5-DIONE	Plant	--	--		
2	2-HYDROXY-METHYL-ANTHRAQUINONE	Rhizome	--	--		
2	4''-(3''-METHOXY-4''-HYDROXYPHENYL)-2''-OXO-3''-ENEBUTANYL-3-(3'-METHOXY-4'-HYDROXYPHENYL)-PROPENOATE	Rhizome	--	--		
3	ALPHA-CURCUMENE	Rhizome	--	--		
11	ALPHA-PHELLANDRENE	Leaf	--	2325	1.3345170744070258	
11	ALPHA-PHELLANDRENE	Rhizome	--	1945	1	
28	ALPHA-PINENE	Leaf	60	1440	-0.1310531749310525	
28	ALPHA-PINENE	Tuber	--	--		
28	ALPHA-PINENE	Rhizome Essent. Oil	--	5300	-0.9114147781537915	
28	ALPHA-PINENE	Essential Oil	--	5300	-0.5134325695945586	
28	ALPHA-PINENE	Rhizome	--	--		
13	ALPHA-TERPINENE	Rhizome	--	23	-1	
13	ALPHA-TERPINENE	Leaf	--	37	-0.2932431476626101	
23	ALPHA-TERPINEOL	Rhizome	--	--		
32	ALPHA-TOCOPHEROL	Root	11	18	-0.09053574604251821	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
13	AR-TURMERONE	Rhizome Essent. Oil	183800	596870		
13	AR-TURMERONE	Rhizome	740	5800		
13	AR-TURMERONE	Root	--	--		
112	ASCORBIC-ACID	Rhizome	--	293	-0.34465428565155654	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
112	ASCORBIC-ACID	Plant	--	--		
10	AZULENE	Rhizome	--	--		
6	BETA-BISABOLENE	Rhizome	--	--		
53	BETA-CAROTENE	Plant	6	18	-0.6296931924279244	
53	BETA-CAROTENE	Rhizome	--	--	-0.746733045887731	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
13	BETA-PINENE	Leaf	--	215	-0.11200647112758456	
13	BETA-PINENE	Rhizome Essent. Oil	--	2700	-0.04995838534443404	
13	BETA-PINENE	Tuber	--	--		
13	BETA-PINENE	Essential Oil	--	2700	-0.670434055955317	
13	BETA-PINENE	Rhizome	--	--		
5	BETA-SESQUIPELLANDRENE	Rhizome	--	--		
47	BETA-SITOSTEROL	Rhizome	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
47	BETA-SITOSTEROL	Root	--	510	-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.)
5	BETA-TURMERONE	Rhizome	--	--		
1	BIS-(4-HYDROXY-CINNAMOYL)-METHANE	Plant	--	--		
1	BIS-(4-HYDROXY-CINNAMOYL)-METHANE	Rhizome	--	--		
16	BIS-DEMETHOXYCURCUMIN	Root	--	400		
16	BIS-DEMETHOXYCURCUMIN	Rhizome	6.6	16200		
16	BIS-DEMETHOXYCURCUMIN	Plant	--	--		
5	BIS-DESMETHOXYCURCUMIN	Rhizome	67	28000	1	
35	BORNEOL	Root	--	--		
35	BORNEOL	Rhizome	--	--		
35	BORNEOL	Rhizome Essent. Oil	--	--		
4	BORON	Root	1	6	-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).
102	CAFFEIC-ACID	Rhizome	--	5		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	CALCIUM	Rhizome	270	2898	-0.8768568252409509	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
28	CALCIUM	Plant	226	730	-1.3755257581090707	
3	CALEBIN-A	Rhizome	--	--		
2	CAMPESTEROL	Root	--	90	-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	Tuber	--	--		
9	CAMPHENE	Rhizome	--	--		
41	CAMPHOR	Tuber	--	--		
41	CAMPHOR	Rhizome Essent. Oil	--	600	-1	
5	CAPRYLIC-ACID	Rhizome	--	--		
31	CARYOPHYLLENE	Tuber	--	--		
31	CARYOPHYLLENE	Rhizome	--	--		
31	CARYOPHYLLENE	Essential Oil	--	13400	-0.5168789270461833	
1	CHOLESTEROL	Rhizome	--	--		
24	CHROMIUM	Plant	0.2	0.6	-0.8071397754932234	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
24	CHROMIUM	Rhizome	--	6	-1	
18	CINNAMIC-ACID	Rhizome	--	--		
2	COBALT	Rhizome	--	1	-1	
2	COBALT	Plant	0.5	1.5	-0.42841157368319116	
12	COPPER	Rhizome	6	17	1.4469860213540642	
3	CURCUMENOL	Rhizome Essent. Oil	--	21300		
3	CURCUMENOL	Essential Oil	--	21300		
3	CURCUMENOL	Rhizome	--	65		
135	CURCUMIN	Plant	--	--		
135	CURCUMIN	Rhizome	9	56000	1.3976645180230614	
135	CURCUMIN	Resin, Exudate, Sap	--	175000		
135	CURCUMIN	Root	--	800		
9	CURCUMINOIDS	Root	30000	80000		
3	CURCUMOL	Rhizome	--	--		
6	CURDIONE	Rhizome Essent. Oil	--	11900		
6	CURDIONE	Tuber	--	--		
6	CURDIONE	Essential Oil	--	11900		
6	CURDIONE	Rhizome	--	--		
1	CYCLOCURCUMIN	Rhizome	13.3	8000		
8	DEHYDROCURDIONE	Rhizome	--	4.5		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
20	DEMETHOXYCURCUMIN	Rhizome	6.6	11100		
20	DEMETHOXYCURCUMIN	Plant	--	--		
20	DEMETHOXYCURCUMIN	Root	--	500		
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.
1	DIFERULOYL-METHANE	Rhizome	--	--		
2	EPI-PROCURCUMENOL	Rhizome	--	1.3		
76	EUGENOL	Rhizome Essent. Oil	--	2100		
76	EUGENOL	Essential Oil	--	2100	-0.7050089035376114	
76	EUGENOL	Tuber	--	--		
1	FERULOYL-4-HYDROXYCINNAMOYL-METHANE	Plant	--	--		
1	FERULOYL-P-COUMAROYL-METHANE	Rhizome	--	--		
15	FIBER	Rhizome	9000	84000	-1.0343269648768965	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
8	FRUCTOSE	Rhizome	--	120000	1.413312598024455	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
11	GAMMA-TERPINENE	Leaf	--	90	-0.19839281229128486	
11	GAMMA-TERPINENE	Rhizome	--	60	-1	
7	GERMACRONE	Rhizome	--	--		
7	GLUCOSE	Rhizome	--	280000	1	Leung, A.Y., Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics, John Wiley & Sons, New York, 1980.
18	GUAIACOL	Rhizome	--	--		
6	IRON	Rhizome	121	467	0.32660224579628255	
6	IRON	Plant	25	80	-0.6440919715501999	
7	ISOBORNEOL	Rhizome Essent. Oil	--	200		
7	ISOBORNEOL	Tuber	--	--		
60	LIMONENE	Rhizome Essent. Oil	--	2300	-0.7761485185603905	
60	LIMONENE	Tuber	--	--		
60	LIMONENE	Rhizome	--	80	-1.049460471807569	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
60	LIMONENE	Essential Oil	--	2300	-0.7238268976657102	
60	LIMONENE	Leaf	--	125	-0.31628413309781417	
53	LINALOOL	Rhizome Essent. Oil	--	1600	-1	
53	LINALOOL	Tuber	--	--		
53	LINALOOL	Rhizome	--	--		
65	MAGNESIUM	Plant	3038	9800	1.779937751704662	
14	MANGANESE	Plant	2.5	8.2	-0.6361340105099139	
14	MANGANESE	Rhizome	33	78	-0.31727458910943884	
39	NIACIN	Plant	22	70	-0.09411242290768869	
39	NIACIN	Rhizome	5	62	-1.1295129485847604	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
3	NICKEL	Rhizome	--	3.8	-1	
4	O-COUMARIC-ACID	Leaf	--	--		
25	P-COUMARIC-ACID	Rhizome	--	345	1	
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	5184	1.9997542158504666	
16	P-CYMENE	Leaf	--	310	-0.1425664765796497	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	P-METHOXY-CINNAMIC-ACID	Rhizome	--	360		
1	P-TOLYL-METHYLCARBINOL	Rhizome	500	1750		
1	P-TOLYMETHYLCARBINOL	Rhizome	500	1750		
4	PHOSPHORUS	Plant	725	2340	-0.6000258604656092	
4	PHOSPHORUS	Rhizome	640	6307	1.0401873086070448	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PHYTOSTEROLS	Root	--	820	-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	16900	-0.3415285138089129	
14	POTASSIUM	Rhizome	4870	41271	3.143110666596612	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
2	PROCURCUMENOL	Rhizome	--	0.1		
43	PROTocatechuic-ACID	Leaf	--	--		
176	QUERCETIN	Rhizome	90	95	-1	
15	RIBOFLAVIN	Rhizome	--	12	1.6190517856385973	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	RIBOFLAVIN	Plant	--	--		
7	SALICYLATES	Root	--	765	1.8939419576365641	
60	SELENIUM	Plant	0.5	1.6	-0.35611748372726487	
4	SILICON	Plant	6	20	-0.425552572565658	
1	SODIUM	Plant	462	1490	-0.22159718118474486	
1	SODIUM	Rhizome	30	4290	4.312813192901911	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	SODIUM-CURCUMATE	Plant	--	--		
5	STARCH	Rhizome	300000	550000	0.7343043341593242	
12	STIGMASTEROL	Rhizome	--	--		
12	STIGMASTEROL	Root	--	220	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.)
6	SYRINGIC-ACID	Leaf	--	--		
18	TERPINEOL	Essential Oil	--	500	-1	
18	TERPINEOL	Rhizome Essent. Oil	--	500		
9	TERPINOLENE	Leaf	115	485	0.3857342005583795	
4	TETRAHYDROCURCUMIN	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
31	THIAMIN	Rhizome	--	8	0.17349447958987207	CRC Handbook of Medicinal Herbs and/or CRC Handbook of Proximate Analyses
1	TRIETHYLCURCUMIN	Plant	--	--		
3	TURMERIN	Rhizome	--	1000		
4	TURMERONE	Root	--	--		
4	TURMERONE	Rhizome Essent. Oil	--	240700		
4	TURMERONE	Rhizome	1800	43200		
1	TURMERONOL-A	Rhizome	--	282		
1	TURMERONOL-B	Rhizome	--	193		
3	UKONAN-A	Rhizome	33	6600		
2	UKONAN-B	Rhizome	--	47		
24	VANILLIC-ACID	Leaf	--	--		
77	ZINC	Rhizome	--	22	-0.3731629077654671	
77	ZINC	Plant	0.5	1.5	-0.49949550935262865	
6	ZINGIBERENE	Root	--	--		
6	ZINGIBERENE	Rhizome	750	18000	1	
6	ZINGIBERENE	Rhizome Essent. Oil	--	81400		