

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Melaleuca alternifolia*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	(+)-ALPHA-PHELLANDRENE	Essential Oil	--	--		
0	(+)-ALPHA-PINENE	Essential Oil	--	16800		
0	(+)-ALPHA-TERPINEOL	Essential Oil	--	20300		
0	(+)-LIMONENE	Essential Oil	--	5100	-1	
1	(+)-TERPINEN-4-OL	Essential Oil	--	247300		
0	(-)-ALPHA-PHELLANDRENE	Essential Oil	--	--		
0	(-)-ALPHA-PINENE	Essential Oil	--	1800		
0	(-)-ALPHA-TERPINEOL	Essential Oil	--	6900		
0	(-)-LIMONENE	Essential Oil	--	--		
1	(-)-TERPINEN-4-OL	Essential Oil	--	131300		
0	1,4-CINEOLE	Essential Oil	--	--		
0	1,4-CINEOLE	Leaf	0.001	0.001	-1.0000000000000002	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
67	1,8-CINEOLE	Leaf Essent. Oil	29000	56000	-0.6361233586223465	
67	1,8-CINEOLE	Essential Oil	30400	368000	0.697655500183284	
67	1,8-CINEOLE	Root Essent. Oil	--	25700		
67	1,8-CINEOLE	Leaf	260	16000	1.5277861196026847	
67	1,8-CINEOLE	Resin, Exudate, Sap	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALLO-AROMADENDRENE	Root Essent. Oil	--	500	-1	
0	ALLO-AROMADENDRENE	Essential Oil	--	6900	1	
0	ALLO-AROMADENDRENE	Leaf	45	112	-0.17653245666091683	
0	ALLYL-HEXANOATE	Leaf	0.001	0.001		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-AMORPHENE	Essential Oil	--	2900		
0	ALPHA-BULNESENE	Essential Oil	--	1900		
0	ALPHA-BULNESENE	Leaf	36	36	0.07322484800969471	
0	ALPHA-CADININE	Leaf	143	358		Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-COPAENE	Essential Oil	--	1700	-0.549784304993286	
0	ALPHA-COPAENE	Leaf	10	25	-0.20757155613371883	
0	ALPHA-CUBEBENE	Essential Oil	--	900	-0.7496353203164464	
0	ALPHA-CUBEBENE	Leaf	4	11	-0.33767336771702017	
0	ALPHA-GURJUNENE	Essential Oil	--	4500		
0	ALPHA-GURJUNENE	Leaf	23	58	-0.15077995129517616	
0	ALPHA-MUUROLENE	Leaf	0.001	30	0.829713596299792	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	ALPHA-MUUROLENE	Essential Oil	--	2600		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-P-DIMETHYL-STYRENE	Leaf	7	18	0.8209501528352008	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
11	ALPHA-PHELLANDRENE	Essential Oil	--	19000	-0.22528390900924156	
11	ALPHA-PHELLANDRENE	Leaf	10	50	-0.27886249891189346	
28	ALPHA-PINENE	Root Essent. Oil	--	9800	-1.1278541471754733	
28	ALPHA-PINENE	Leaf Essent. Oil	--	25000	-0.61562400418455	
28	ALPHA-PINENE	Resin, Exudate, Sap	--	--		
28	ALPHA-PINENE	Leaf	200	700	-0.17909734011546727	
28	ALPHA-PINENE	Essential Oil	23000	24000	-0.34888246838447257	
13	ALPHA-TERPINENE	Leaf Essent. Oil	--	4000	-0.40119306019054174	
13	ALPHA-TERPINENE	Essential Oil	13000	99000	1.9993554266154203	
13	ALPHA-TERPINENE	Leaf	190	4375	1.9483528403779093	
13	ALPHA-TERPINENE	Root Essent. Oil	--	92400	1.4125007138341448	
13	ALPHA-TERPINENE	Resin, Exudate, Sap	--	--		
23	ALPHA-TERPINEOL	Root Essent. Oil	--	2600	-1	
23	ALPHA-TERPINEOL	Leaf Essent. Oil	--	29000	-0.278711890942207	
23	ALPHA-TERPINEOL	Essential Oil	25000	31000	0.5997972191734514	
23	ALPHA-TERPINEOL	Leaf	180	902	0.9931170779349295	
23	ALPHA-TERPINEOL	Resin, Exudate, Sap	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	ALPHA-TERPINEOL ACETATE	Essential Oil	--	--		
0	ALPHA-TERPINOLENE	Leaf	364	364	2.0000000000000004	
0	ALPHA-TERPINOLENE	Essential Oil	--	31800		
0	ALPHA-THUJENE	Leaf	76	76	0.14353236368545716	
0	ALPHA-THUJENE	Essential Oil	4400	15000	-0.303780787236796	
0	ALPHA-THUJENE	Root Essent. Oil	--	133000	1.4120805090287523	
6	ALPHA-THUJONE	Leaf	--	--		
3	AROMADENDRENE	Essential Oil	--	16100	-1	
3	AROMADENDRENE	Leaf	235	675	-0.21124659009947788	
0	BETA-CARYOPHYLLENE	Root Essent. Oil	--	900	-1.351320209582369	
0	BETA-CARYOPHYLLENE	Essential Oil	--	4400	-0.6585545633164767	
0	BETA-CUBEBENE	Root Essent. Oil	--	900	-1	
5	BETA-ELEMENE	Leaf	0.001	0.001	-0.4199714835192588	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BETA-GURJUNENE	Essential Oil	--	--		
0	BETA-MAALIENE	Essential Oil	--	--		
2	BETA-MYRCENE	Leaf Essent. Oil	--	3000	-1	
2	BETA-MYRCENE	Essential Oil	--	4600	-0.7384455661051742	
3	BETA-PHELLANDRENE	Leaf	75	75	-0.2851944616556111	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	BETA-PHELLANDRENE	Root Essent. Oil	--	6300	-1	
3	BETA-PHELLANDRENE	Essential Oil	--	5800	-0.713882215037173	
13	BETA-PINENE	Root Essent. Oil	--	10500	-1.0863317981096507	
13	BETA-PINENE	Essential Oil	300	7000	-0.5749553308101988	
13	BETA-PINENE	Leaf	59	950	0.9721123440273721	
13	BETA-PINENE	Leaf Essent. Oil	--	16000	-0.2532672759131343	
3	BETA-TERPINEOL	Leaf	24	60	-0.8297067996547693	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	BICYCLOGERMACRENE	Essential Oil	--	1300	-1	
0	CADINA-1,4-DIENE	Essential Oil	--	3000		
0	CALAMENENE	Essential Oil	--	2700	-1	
0	CALAMENENE	Leaf	10	25	-0.111319970411964	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
9	CAMPHENE	Leaf	0.001	0.001	-0.19269250009719266	
41	CAMPHOR	Leaf	0.001	0.001	-0.24890202349105242	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
31	CARYOPHYLLENE	Leaf	0.001	154	-0.5815524234681825	
0	CIS-MENTH-2-EN-1-OL	Leaf	--	--		
0	CIS-SABINENE-HYDRATE	Root Essent. Oil	--	2000		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CUBENOL	Essential Oil	--	5200		
0	CYCLOHEXANONE	Root Essent. Oil	--	600		
0	CYMENENE	Leaf	12	12		
9	DELTA-CADINENE	Leaf	--	--		
9	DELTA-CADINENE	Root Essent. Oil	--	1800	-1	
9	DELTA-CADINENE	Essential Oil	--	18600	-1	
0	DIMETHYL-STYRENE	Essential Oil	--	1700		
0	EO	Leaf Essent. Oil	--	--		
0	EO	Leaf	10000	25000	1.1843761113015423	
0	EPIBICYCLOSQUIPHELLANDRENE	Essential Oil	--	5100		
0	EPIGLOBULOL	Essential Oil	--	1800		
5	EUGENOL-METHYL-ETHER	Essential Oil	--	--		
0	GAMMA-ELEMENE	Root Essent. Oil	--	400	-1	
0	GAMMA-GURJUNENE	Essential Oil	--	1500		
11	GAMMA-TERPINENE	Resin, Exudate, Sap	--	--		
11	GAMMA-TERPINENE	Leaf	1154	3000	5.412420563741664	
11	GAMMA-TERPINENE	Leaf Essent. Oil	--	204000	1.941434009810004	
11	GAMMA-TERPINENE	Essential Oil	32000	211500	2.0658889836995122	
11	GAMMA-TERPINENE	Root Essent. Oil	--	135400	1	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	GLOBULOL	Leaf	--	--		
0	GLOBULOL	Essential Oil	--	8000	-1	
0	HEX-CIS-3-EN-1-OL-ACETATE	Root Essent. Oil	--	1100		
3	HEXANOL	Leaf	0.001	0.001	-0.8082143664707829	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
2	HUMULENE	Leaf	0.001	12	-0.41827085091213445	
60	LIMONENE	Essential Oil	9000	43000	-0.48956283691487124	
60	LIMONENE	Root Essent. Oil	--	18700	-0.8519056002007065	
60	LIMONENE	Leaf	100	250	-0.18478404667687756	
60	LIMONENE	Leaf Essent. Oil	--	9000	-0.63844114380332	
0	LINALOL	Leaf	10	25	-0.4277914563027185	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	LINALOOL	Leaf	10	25	-0.6301316521369809	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
53	LINALOOL	Root Essent. Oil	--	--		
53	LINALOOL	Essential Oil	--	3000	-0.5696931497516874	
0	MENTH-TRANS-2-EN-1-OL	Root Essent. Oil	--	--		
0	MENTHATRIENES	Leaf	0.001	0.001		
22	MYRCENE	Root Essent. Oil	--	22000	-0.3578739589461676	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
22	MYRCENE	Essential Oil	8000	14000	-0.26049993773662816	
22	MYRCENE	Leaf	52	130	-0.1257647130754704	
10	NEROL	Leaf	0.001	0.001	-0.2992998552857443	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
0	P-CYMEN-8-OL	Essential Oil	--	--		
0	P-CYMEN-8-OL	Leaf	13	32	0.5643126655863213	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
16	P-CYMENE	Resin, Exudate, Sap	--	--		
16	P-CYMENE	Leaf Essent. Oil	--	21000	-0.46661329399275026	
16	P-CYMENE	Essential Oil	2000	49600	-0.22389544060464844	
16	P-CYMENE	Root Essent. Oil	--	8430	-0.4599999223758389	
16	P-CYMENE	Leaf	300	2855	1.971811409853858	
0	PALUSTROL	Essential Oil	--	600		
0	PIPERITOL	Leaf	7	18	-1	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
7	PIPERITONE	Leaf	8	20	-0.34645324761107676	Lawrence, B.M., Essential Oils 1976-1977, Essential Oils 1978, Essential Oils 1979-1980.
5	SABINENE	Root Essent. Oil	--	491400	1	
5	SABINENE	Essential Oil	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	SABINENE	Leaf	12	30	-0.2420946764640284	
0	SABINENE-HYDRATE	Essential Oil	--	--		
0	SPATHULENOL	Essential Oil	--	1500	-1	
0	TERPINEN-1-OL	Leaf	40	100		
23	TERPINEN-4-OL	Leaf Essent. Oil	364000	385000	2.7176167658294537	
23	TERPINEN-4-OL	Leaf	2941	11225	6.06904915922846	
23	TERPINEN-4-OL	Essential Oil	6000	374000	3.016973516825227	
23	TERPINEN-4-OL	Resin, Exudate, Sap	--	--		
23	TERPINEN-4-OL	Root Essent. Oil	--	6900		
18	TERPINEOL	Leaf Essent. Oil	--	--		
9	TERPINOLENE	Essential Oil	--	429000	2.8243865215973427	
9	TERPINOLENE	Root Essent. Oil	--	19200	-0.729853559357455	
9	TERPINOLENE	Leaf	236	6125	7.570382304488845	
9	TERPINOLENE	Resin, Exudate, Sap	--	--		
9	TERPINOLENE	Leaf Essent. Oil	--	33000	2.3936050236563244	
0	TRANS-MENTH-2-EN-1-OL	Leaf	--	--		
0	TRANS-SABINENE-HYDRATE	Root Essent. Oil	--	4200		
0	VIRIDIFLORENE	Essential Oil	--	17500		
0	VIRIDIFLORENE	Leaf	103	257	0.8589791738058528	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
1	VIRIDIFLOROL	Leaf	--	--		
1	VIRIDIFLOROL	Essential Oil	--	5800		