

Dr. Duke's Phytochemical and Ethnobotanical Database

Chemicals Found in *Mentha aquatica*

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
4	(+)-PULEGONE	Leaf	510	1445	-0.6679831237459577	
2	(-)-MENTHONE	Leaf	510	2805	-0.7890023610971657	
67	1,8-CINEOLE	Shoot	--	45	-0.13495308546531803	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
67	1,8-CINEOLE	Shoot	110	110	-0.13402087558259082	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
67	1,8-CINEOLE	Shoot	--	110	-0.13402087558259082	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
67	1,8-CINEOLE	Leaf	300	850	-0.42089267832815774	
67	1,8-CINEOLE	Shoot	--	140	-0.13359062486748594	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
67	1,8-CINEOLE	Shoot	--	115	-0.13394916713007335	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
16	ACACETIN	Plant	--	--		J.S. Glasby Dict.PIs Containing 2ndary Metabolite. 1991.
3	ACETONE	Leaf	--	--		Jim Duke's personal files.
28	ALPHA-PINENE	Shoot	--	8	-0.14665065113583953	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	ALPHA-PINENE	Leaf	18	68	-0.22012965416485936	
28	ALPHA-PINENE	Shoot	8	8	-0.14665065113583953	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
28	ALPHA-PINENE	Shoot	--	9	-0.1465509191932106	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
28	ALPHA-PINENE	Shoot	--	14	-0.14605225948006592	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
28	ALPHA-PINENE	Shoot	--	13	-0.14615199142269486	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
101	APIGENIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
5	BETA-ELEMENE	Shoot	--	65	-0.11953111910292297	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
5	BETA-ELEMENE	Shoot	--	55	-0.1534515914700857	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
5	BETA-ELEMENE	Shoot	29	29	-0.24164481962470882	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
5	BETA-ELEMENE	Shoot	--	29	-0.24164481962470882	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
5	BETA-ELEMENE	Shoot	--	65	-0.11953111910292297	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-EUDESOL	Shoot	--	8	-0.3290760279158904	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-EUDESOL	Shoot	24	24	1.3163041116635639	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-EUDESOL	Shoot	--	24	1.3163041116635639	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-EUDESOL	Shoot	--	27	1.6248128878347115	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-EUDESOL	Shoot	--	13	0.18510526570268904	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	BETA-MYRCENE	Shoot	--	12	-0.3360589101674067	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	BETA-MYRCENE	Shoot	85	85	-0.18696758151302673	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	BETA-MYRCENE	Shoot	--	36	-0.2870425829385694	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	BETA-MYRCENE	Shoot	--	37	-0.2850002359707011	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	BETA-MYRCENE	Shoot	--	26	-0.3074660526172515	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-PINENE	Leaf	15	315	0.035492687396899314	
13	BETA-PINENE	Shoot	13	13	-0.12018976188565819	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-PINENE	Shoot	--	20	-0.11969942581367655	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-PINENE	Shoot	--	27	-0.11920908974169492	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-PINENE	Shoot	--	24	-0.11941923377254418	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	BETA-PINENE	Shoot	--	13	-0.12018976188565819	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	CAMPHENE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	CAMPHENE	Shoot	0.1	0.1	-0.1342670938252942	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

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9	CAMPHENE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	CAMPHENE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	CAMPHENE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
19	CARVONE	Leaf	510	1785	0.08317670792891492	Jim Duke's personal files.
31	CARYOPHYLLENE	Leaf	--	--		Jim Duke's personal files.
8	CARYOPHYLLENE-OXIDE	Shoot	1	1	-0.3970730841170472	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
8	CARYOPHYLLENE-OXIDE	Shoot	--	6	-0.3861085815952244	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
8	CARYOPHYLLENE-OXIDE	Shoot	--	3	-0.3926872831083181	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
8	CARYOPHYLLENE-OXIDE	Shoot	--	3	-0.3926872831083181	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
8	CARYOPHYLLENE-OXIDE	Shoot	--	1	-0.3970730841170472	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	ELEMOL	Shoot	--	170	0.374889742188684	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	ELEMOL	Shoot	--	70	-0.6732642434273933	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	ELEMOL	Leaf	660	1870	1.3469294965542162	
2	ELEMOL	Shoot	70	70	-0.6732642434273933	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	ELEMOL	Shoot	--	220	0.8989667349967224	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	ELEMOL	Shoot	--	275	1.4754514270855648	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
13	FORMIC-ACID	Leaf	--	--		Jim Duke's personal files.
6	FURFURAL	Leaf	--	--		Jim Duke's personal files.
11	GAMMA-TERPINENE	Shoot	2	2	-0.3929527157162362	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
11	GAMMA-TERPINENE	Shoot	--	8	-0.3888071076205311	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
11	GAMMA-TERPINENE	Shoot	--	5	-0.39087991166838365	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

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11	GAMMA-TERPINENE	Shoot	--	5	-0.39087991166838365	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
11	GAMMA-TERPINENE	Shoot	--	2	-0.3929527157162362	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	GERMACRENE-D	Shoot	25	25	-0.35647627073349986	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	GERMACRENE-D	Shoot	--	115	-0.3060201337212278	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	GERMACRENE-D	Shoot	--	130	-0.2976107775525158	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	GERMACRENE-D	Leaf	70	595	-0.04345648866625705	
2	GERMACRENE-D	Shoot	--	80	-0.3256419647815558	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	GERMACRENE-D	Shoot	--	25	-0.35647627073349986	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
8	HESPERETIN	Plant	--	--		J.S. Glasby Dict.Pls Containing 2ndary Metabolite. 1991.
3	ISOMENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

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3	ISOMENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
3	ISOMENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
3	ISOMENTHONE	Leaf	30	170	-0.62376353248996	
3	ISOMENTHONE	Shoot	0.1	0.1	-0.5336018108879219	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
3	ISOMENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
60	LIMONENE	Shoot	--	21	-0.31774887535221497	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
60	LIMONENE	Shoot	--	60	-0.29789596175373306	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
60	LIMONENE	Shoot	--	75	-0.290260225754317	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
60	LIMONENE	Shoot	--	60	-0.29789596175373306	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
60	LIMONENE	Leaf	114	714	0.303344274117639	

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60	LIMONENE	Shoot	60	60	-0.29789596175373306	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
53	LINALOOL	Leaf	1080	3060	1.471569724590626	List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
7	LINALYL-ACETATE	Leaf	--	--		List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
5	MENTHOFURAN	Shoot	--	395	-0.3669798445209941	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	MENTHOFURAN	Shoot	--	500	-0.34612871699139214	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	MENTHOFURAN	Leaf	30	7582		
5	MENTHOFURAN	Shoot	42	42	-0.4370793494538463	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	MENTHOFURAN	Shoot	--	180	-0.4096750104149409	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
63	MENTHOL	Shoot	--	--		Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
63	MENTHOL	Shoot	--	3	-0.6414348966484517	Umamoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
63	MENTHOL	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
63	MENTHOL	Shoot	--	1	-0.6444587500209842	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
63	MENTHOL	Leaf	3570	3570	-0.19360438419646248	
63	MENTHOL	Shoot	1	1	-0.6444587500209842	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Shoot	0.1	0.1	-0.8214418565250121	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Shoot	--	2	-0.8211188672141561	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
30	MENTHONE	Leaf	23	212	-0.613866095511492	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
2	MENTHYL-ACETATE	Shoot	--	6	-0.49157346467694896	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
2	MENTHYL-ACETATE	Leaf	1900	1900	-1	
2	MENTHYL-ACETATE	Shoot	6	6	-0.49157346467694896	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
2	MENTHYL-ACETATE	Shoot	--	2	-0.6750942248230098	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
2	MENTHYL-ACETATE	Shoot	--	2	-0.6750942248230098	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
1	MENTHYL-VALERATE	Leaf	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
3	METHYL-ACETATE	Shoot	16	16	1	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
22	MYRCENE	Leaf	--	--		Jim Duke's personal files.
2	NEOMENTHOL	Leaf	--	--		Jim Duke's personal files.
11	NEROLIDOL	Shoot	--	4	-0.3981606988520306	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.
11	NEROLIDOL	Shoot	--	2	-0.40423910148064757	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogeikagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
11	NEROLIDOL	Shoot	--	3	-0.40119990016633905	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
11	NEROLIDOL	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
11	NEROLIDOL	Shoot	0.1	0.1	-0.4100135839778336	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	NONANOIC-ACID	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	NONANOIC-ACID	Shoot	--	2	-0.4758133309661321	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	NONANOIC-ACID	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	NONANOIC-ACID	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
2	NONANOIC-ACID	Shoot	0.1	0.1	-0.6146598831763856	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
16	P-CYMENE	Shoot	--	1	-0.500609925430423	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
16	P-CYMENE	Shoot	1	1	-0.500609925430423	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
16	P-CYMENE	Shoot	--	2	-0.4998171975740504	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
16	P-CYMENE	Shoot	--	2	-0.4998171975740504	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
16	P-CYMENE	Shoot	--	2	-0.4998171975740504	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
3	PIPERITENONE	Leaf	--	--		Jim Duke's personal files.
7	PIPERITONE	Leaf	--	--		ANON. 1948-1976. The Wealth of India raw materials. Publications and Information Directorate, CSIR, New Delhi. 11 volumes.
28	PULEGONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
28	PULEGONE	Leaf	54	153	-0.6636583918928131	
28	PULEGONE	Shoot	0.1	0.1	-0.2690227918468267	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
28	PULEGONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
28	PULEGONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
28	PULEGONE	Shoot	--	--		Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
57	ROSMARINIC-ACID	Plant	27000	27000	-0.08324448923511193	Fitoterapia No.62: 166.
5	SABINENE	Shoot	35	35	-0.25865584465310376	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	SABINENE	Shoot	--	10	-0.2852745731248914	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	SABINENE	Shoot	--	15	-0.2799508274305339	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	SABINENE	Shoot	--	35	-0.25865584465310376	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
5	SABINENE	Shoot	--	7	-0.2884688205415059	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
35	TANNIN	Leaf	74000	74000	-0.44596183266254885	List, P.H. and Horhammer, L., <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Vols. 2-6, Springer-Verlag, Berlin, 1969-1979.
9	TERPINOLENE	Shoot	--	1	-0.7769620719702403	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
9	TERPINOLENE	Shoot	1	1	-0.7769620719702403	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	TERPINOLENE	Shoot	--	2	-0.7480787235698596	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	TERPINOLENE	Shoot	--	2	-0.7480787235698596	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
9	TERPINOLENE	Shoot	--	2	-0.7480787235698596	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
1	VIRIDIFLOROL	Shoot	--	50	-0.24673262666016743	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
1	VIRIDIFLOROL	Leaf	36	102	4.397695972931276	
1	VIRIDIFLOROL	Shoot	140	140	1.109355092388081	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
1	VIRIDIFLOROL	Shoot	--	135	1.0340168857742895	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
1	VIRIDIFLOROL	Shoot	--	195	1.938075365139788	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.
1	VIRIDIFLOROL	Shoot	--	140	1.109355092388081	Umemoto, K., Arai, T., Nii, H. and Furukawa, K. 1993. A New Chemotype of <i>Mentha aquatica</i> Containing Sesquiterpene Alcohols as Major Components. <i>Nippon Nogekagaku Kaishi</i> 67(10): 1417-1419.