

Table S2 Analysis results of volatile compounds in peppermint oil

Category	NO.	RT (min)	SI ^a	formula	CAS	Compound name	Relative content (%)
Alkenes (17)	1	11.25	930	C ₁₀ H ₁₆	7785-26-4	α-Pinene	2.36%
	2	11.78	949	C ₁₀ H ₁₆	79-92-5	Camphene	0.08%
	3	12.75	964	C ₁₀ H ₁₆	3387-41-5	Sabinene	1.57%
	4	12.89	915	C ₁₀ H ₁₆	18172-67-3	β-Pinene	3.05%
	5	14.36	920	C ₁₀ H ₁₆	99-86-5	α-Terpinene	0.38%
	6	14.8	788	C ₁₀ H ₁₄	18368-95-1	1,3,8-p-Menthatriene	0.59%
	7	15.17	916	C ₁₀ H ₁₆	13877-91-3	β-Ocimene	0.46%
	8	15.98	923	C ₁₀ H ₁₆	99-85-4	γ-Terpinene	0.88%
	9	17.09	927	C ₁₀ H ₁₆	586-62-9	Terpinolene	0.40%
	10	27.27	927	C ₁₅ H ₂₄	3856-25-5	α-Copaene	0.23%
	11	27.6	929	C ₁₅ H ₂₄	5208-59-3	β-Bourbonene	1.12%
	12	27.77	923	C ₁₅ H ₂₄	515-13-9	β-Elemene	0.45%
	13	28.83	959	C ₁₅ H ₂₄	87-44-5	β-Caryophyllene	5.36%
	14	29.69	932	C ₁₅ H ₂₄	28973-97-9	β-Farnesene	0.96%
	15	30.53	940	C ₁₅ H ₂₄	30021-74-0	γ-Muurolene	0.47%
	16	30.76	922	C ₁₅ H ₂₄	18252-44-3	beta-Copaene	2.97%
	17	31.34	880	C ₁₅ H ₂₄	317819-80-0	(-)-Germacrene-D	0.34%
Alcohols (12)	18	13.62	923	C ₈ H ₁₈ O	589-98-0	3-Octanol	0.31%
	19	15.09	942	C ₈ H ₁₈ O	470-82-6	Eucalyptol	7.82%
	20	16.32	946	C ₈ H ₁₈ O	546-79-2	cis-4-Thujanol	0.75%
	21	17.66	812	C ₁₀ H ₁₈ O	78-70-6	Linalool	0.54%
	22	20.8	929	C ₁₀ H ₂₀ O	21129-27-1	1-methyl-4-(1-methylethyl)-cyclohexano	6.98%
	23	20.22	813	C ₁₀ H ₂₀ O	490-99-3	Isomenthol	5.12%
	24	20.64	909	C ₁₀ H ₂₀ O	15356-70-4	Menthol	15.02%
	25	21.13	929	C ₁₀ H ₁₈ O	7785-53-7	α-Terpineol	0.76%
	26	21.32	824	C ₁₀ H ₁₆ O	515-00-4	(6,6-Dimethylbicyclo[3.1.1]hept-2-en-2-yl)methanol	0.07%
	27	22.27	850	C ₁₀ H ₂₀ O	40607-48-5	3,7-Dimethyl-2-octen-1-ol	0.12%
	28	23.73	856	C ₁₀ H ₂₂ O	112-30-1	1-Decanol	0.08%
	29	24.62	939	C ₁₂ H ₂₂ O ₂	20777-45-1	Isopulegyl acetate	7.69%
Aldehydes (1)	30	12.29	920	C ₇ H ₆ O	100-52-7	Benzaldehyde	0.10%

Esters (4)							
31	17.78	912	C ₁₀ H ₂₀ O ₂	2445-77-4	2-Methyl butyl isovalerate	0.21%	
32	18.37	757	C ₁₀ H ₂₀ O ₂	4864-61-3	3-Octyl acetate	0.12%	
33	22.47	866	C ₁₁ H ₂₀ O ₂	35154-45-1	cis-3-Hexenyl 3-isovalerate	0.12%	
34	25.17	901	C ₁₂ H ₂₀ O ₂	57576-09-7	Isopulegol acetate	0.07%	
Ketones (7)							
35	11.88	942	C ₇ H ₁₂ O	591-24-2	3-methyl-cyclohexanon	0.08%	
36	13.22	843	C ₈ H ₁₆ O	106-68-3	3-Octanone	0.08%	
37	19.93	921	C ₁₀ H ₁₈ O	14073-97-3	L-Menthone	21.89%	
38	22.8	884	C ₁₀ H ₁₆ O	15932-80-6	2-Isopropylidene-5-methylcyclohexanone	3.38%	
39	22.89	888	C ₁₀ H ₁₄ O	6485-40-1	(-)-Carvone	0.06%	
40	23.29	899	C ₁₀ H ₁₆ O	89-81-6	Piperitone	1.44%	
41	28.03	843	C ₁₁ H ₁₆ O	488-10-8	Jasmone	0.07%	
Furan (2)							
42	9.84	924	C ₈ H ₁₆ O	41239-48-9	2,5-Diethyltetrahydrofuran	0.08%	
43	20.13	855	C ₁₀ H ₁₄ O	494-90-6	Menthofuran	4.80%	
Other (1)							
44	34.09	926	C ₁₅ H ₂₄ O	1139-30-6	Caryophyllene oxide	0.58%	

^a SI: positive correlation score.