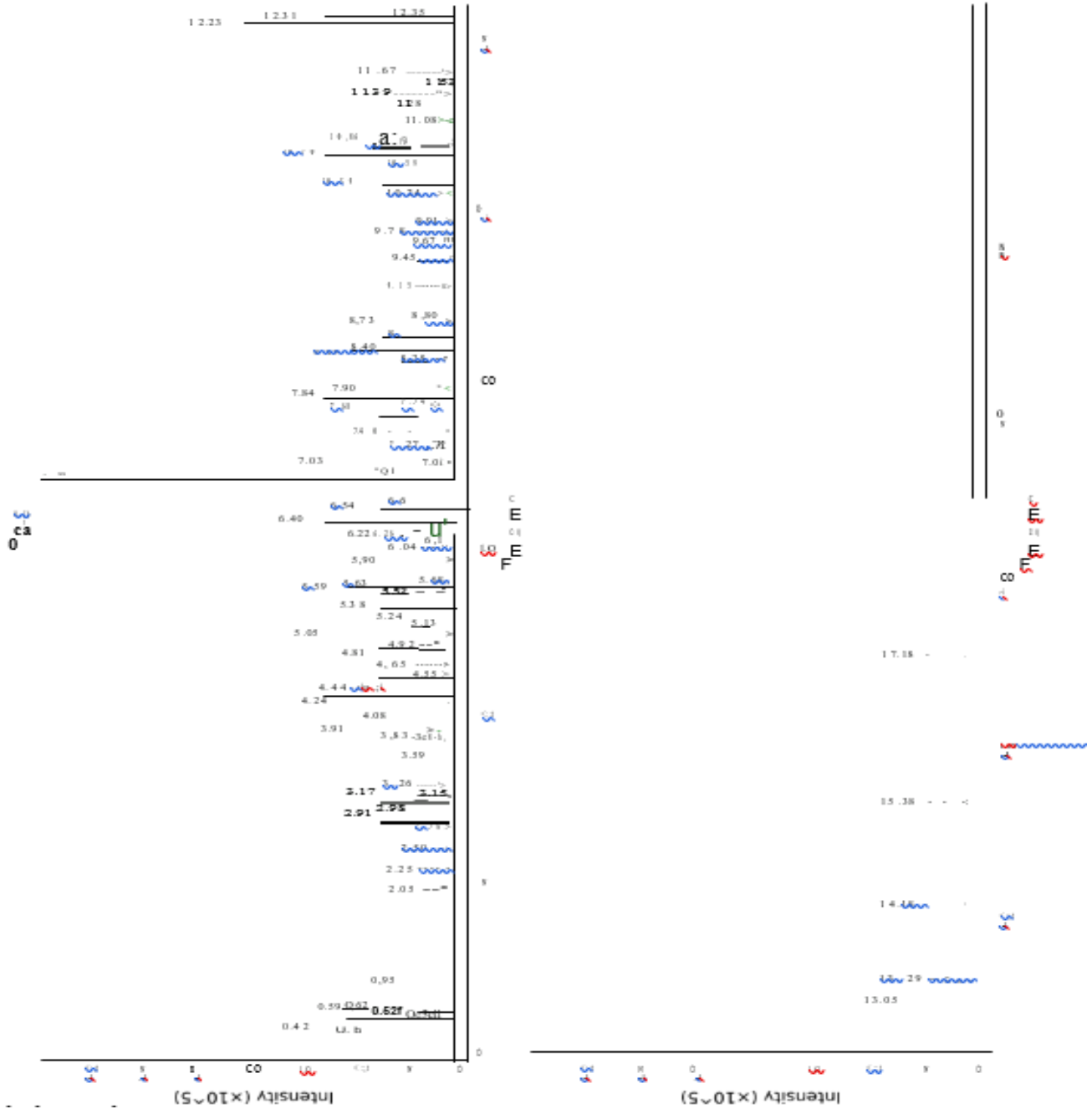


GCMS ANALYSIS

PRODUCT NAME: PEPPERMINT JAPANESE ORGANIC ESSENTIAL OIL - 50038

DATE: December 08, 2020



Due to volume turnover, this report is not lot specific, It is representative of the quality of this oil produced by the manufacturer of this product, Specific lots may vary slightly as is the case in natural products,

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Peak	RT (min)	Compound name	%
1	0,36	Ethanol	0,01
2	0,42	Isobutyral	tr
3	0,50	2-Methyl-3-buten-2-ol	tr
4	0,54	Isobutanol	tr
5	0,59	Isovaleral	0,01
6	0,62	2-Methylbutyral	tr
7	0,95	Isoamyl alcohol	0,01
8	0,96	2-Methylbutanol	0,01
9	2,05	(3Z)-Hexenol	0,02
10	2,25	Hexanol	tr
11	2,50	trans-2,5-Diethyltetrahydrofuran	0,04
12	2,76	Hashishene	0,01
13	2,91	α-Thujene	0,01
14	2,98	α-Pinene	0,70
15	3,15	3-Methylcyclohexanone	0,02
16	3,17	Camphene	0,03
17	3,26	Thuja-2,4(10)-diene	0,01
18	3,59*	β-Pinene	1,08
19	3,59*	Sabinene	[1,08]
20	3,80	Octen-3-ol	0,01
21	3,83	Octan-3-one	0,02
22	3,91	Myrcene	0,60
23	4,02	Octan-3-ol	0,46
24	4,08*	α-Phellandrene	0,03
25	4,08*	Pseudolimonene	[0,03]
26	4,24	α-Terpinene	0,02
27	4,34	ortho-Cymene	0,01
28	4,37	para-Cymene	0,02
29	4,44*	1,8-Cineole	2,97
30	4,44*	Limonene	[2,97]

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Peak	RT (min)	Compound name	%
31	4,44*	β -Phellandrene	[2,97]
32	4,55	2-Ethylhexanol	0,12
33	4,65	(Z)- β -Ocimene	0,03
34	4,81	(E)- β -Ocimene	0,04
35	4,92	γ -Terpinene	0,02
36	5,05	cis-Sabinene hydrate	0,01
37	5,14	cis-Linalool oxide (fur,)	0,02
38	5,24	Octanol	0,05
39	5,38*	Terpinolene	0,06
40	5,38*	trans-Linalool oxide (fur,)	[0,06]
41	5,38*	para-Cymenene	[0,06]
42	5,52	trans-Sabinene hydrate	0,04
43	5,59	Isoamyl 2-methylbutyrate	0,01
44	5,63	Linalool	0,10
45	5,68	Nonanal	0,04
46	5,90	trans-para-Mentha-2,8- dien-1-ol	0,02
47	6,04	Octan-3-yl acetate	0,02
48	6,13	cis-para-Mentha-2,8- dien-1-ol	0,03
49	6,22	trans-Sabinol	0,03
50	6,26	Isopulegol	0,87
51	6,40	Menthone	7,75
52	6,54*	Isomenthone	4,16
53	6,54*	Menthofuran	[4,16]
54	6,61	neo-Menthol	2,02
55	6,88*	Terpinen-4-ol	71,47
56	6,88*	Menthol	[71,47]
57	6,91*	Isomenthol	0,46
58	6,91*	para-Cymen-8-ol	[0,46]
59	7,02†	α -Terpineol	0,32
60	7,03†	neoiso-Menthol	[0,32]

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Peak	RT (min)	Compound name	%
61	7,22	Unknown [m/z 43, 99(84), 81 (46), 986 (43),126 (36), 71 (28),,, 170(12)]	0,02
62	7,27	trans-Piperitol	0,03
63	7,40	Octyl acetate	0,06
64	7,68	Pulegone	0,68
65	7,74*	(3Z)-Hexenyl isovalerate	0,41
66	7,74*	Carvone	[0,41]
67	7,74*	(2E)-Hexenyl isovalerate	[0,41]
68	7,84	Hexyl isovalerate	0,03
69	7,90	Piperitone	0,45
70	8,28	neo-Menthyl acetate	0,04
71	8,32	Decanol	0,06
72	8,40	Dihydroedulan I	0,01
73	8,56	Menthyl acetate	1,75
74	8,73	Isomenthyl acetate	0,05
75	8,80	Unknown [m/z 43, 136(55), 121 (55), 107 (48),93 (48), 81 (30), 79(29),,,]	0,04
76	9,16	Bicycloelemene	0,02
77	9,45	Eugenol	0,12
78	9,67	α -Copaene	0,06
79	9,78	β -Bourbonene	0,48
80	9,92	β -Elemene	[0,48]
81	10,24*	β-Caryophyllene	0,02
82	10,24*	β -Ylangene	0,01
83	10,39	β -Copaene	0,05
84	10,59	Isogermacrene D	0,02
85	10,70	α -Humulene	0,12
86	10,78	Muurola-4,11-diene	0,02
87	10,86	9-epi- β -Caryophyllene	0,03
88	11,08	Germacrene D	0,51
89	11,28	Bicyclogermacrene	0,14
90	11,39	α -Muurolene	0,02

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Peak	RT (min)	Compound name	%
91	11,53	γ -Cadinene	0,02
92	11,67	δ -Cadinene	0,06
93	12,23	(E)-Nerolidol	0,02
94	12,31	Spathulenol	0,02
95	12,35	Caryophyllene oxide	0,02
96	13,05	(3Z)-Hexenyl phenylacetate	0,04
97	13,13	τ -Cadinol	0,01
98	13,29	α -Cadinol	0,02
99	14,18	Mint sulfide?	0,01
100	15,38	Octyl phenylacetate?	0,01
101	17,18	Unknown [m/z 99, 43(43), 69 (37), 71 (37), 41(28),,,]	0,03
		TOTAL	99,19

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