



Essential Oil University

GC/MS Report

Item	Lot
NOP Tea Tree EO <i>Melaleuca alternifolia</i>	6C
Date	Analyst
4/16/2024	Dr. Robert S. Pappas

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The analysis of this batch sample, NOP Tea Tree EO, meets the expected chemical profile for authentic essential oil of *Melaleuca alternifolia*. No contamination or adulteration was detected. The results provided in this GCMS quality analysis reflect the chemical composition of the oil and lot referenced above on the date of analysis.



Sample Information

Company: Revive**Sample Name:** NOP Tea Tree EO**Botanical Name:** Melaleuca alternifolia**Lot Number:** 6C**Production Method:** Steam distilled**Sample Type:** EO - Certified Organics**Country of Origin:** South Africa**Analysis Date:** 4/16/2024**Date of Distillation:** October 2021

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Injection Type:** Split**Split Ratio:** 24.4**Column Type:** ZB-5**Injection Volume:** 0.1 µL**Temperature Program:** 2C/min

Physical Data

ANALYSIS

Optical Rotation @20°C

Refractive Index @20°C

Specific Gravity @20°C

METHOD

USP[781]

USP[831]

USP[841]

RESULTS

+10.16

1.47704

0.90026



Ret. Time	Component	Ret. Idx.	Conc. %	
4.375	Unidentified	734	0.01%	
8.633	Hex-(3Z)-enol	841	0.08%	
11.907	alpha-Thujene	916	0.82%	
12.315	alpha-Pinene	923	2.03%	
13.208	Camphene	939	0.01%	
14.481	Sabinene	962	0.08%	
14.780	beta-Pinene	967	0.67%	
15.415	Myrcene	978	0.82%	
16.342	Hex-(3Z)-enyl acetate	995	0.03%	
16.471	alpha-Phellandrene	997	0.37%	
16.994	1,4-Cineole	1005	0.02%	
17.152	alpha-Terpinene	1008	9.47%	
17.616	para-Cymene	1015	2.35%	
17.920	Limonene	1019	0.94%	IFRA
18.022	beta-Phellandrene	1021	0.59%	
18.096	1,8-Cineole	1022	4.03%	
19.009	trans-beta-Ocimene	1036	0.01%	
19.823	gamma-Terpinene	1048	18.73%	
20.546	trans-Sabinene hydrate	1059	0.05%	
21.588	Terpinolene	1075	3.24%	
21.899	para-Cymenene	1079	0.03%	
22.527	Linalool	1089	0.07%	IFRA
22.605	cis-Sabinene hydrate	1090	0.05%	
23.849	Unidentified	1108	0.01%	
24.216	cis-para-Menth-2-en-1-ol	1114	0.24%	
24.321	Unidentified	1115	0.01%	
24.920	Unidentified	1124	0.01%	
24.993	Terpin-3-en-1-ol	1125	0.03%	
25.444	trans-para-Menth-2-en-1-ol	1131	0.22%	
27.378	delta-Terpineol	1159	0.01%	
28.228	Terpinen-4-ol	1171	46.31%	
28.522	para-Cymen-8-ol	1176	0.04%	
28.916	Unidentified	1181	0.07%	
29.107	alpha-Terpineol	1184	3.42%	
29.227	cis-Piperitol	1186	0.07%	
30.047	trans-Piperitol	1197	0.18%	
30.910	Unidentified	1210	0.01%	
31.000	Unidentified	1211	0.01%	
31.084	Nerol	1212	0.02%	
32.846	Geraniol	1238	0.01%	IFRA



Ret. Time	Component	Ret. Idx.	Conc. %	
34.440	cis-Ascaridol glycol	1261	0.1%	
35.620	trans-Ascaridol glycol	1279	0.07%	
36.060	Unidentified	1285	0.02%	
36.349	Unidentified	1289	0.03%	
37.086	Unidentified	1300	0.01%	
37.593	Unidentified	1308	0.17%	
38.337	Unidentified	1319	0.01%	
38.847	Unidentified	1327	0.01%	
39.330	alpha-Cubebene	1334	0.03%	
40.266	Unidentified	1348	0.02%	
40.628	Unidentified	1354	0.01%	
40.884	Isodene	1358	0.03%	
41.212	alpha-Copaene	1363	0.06%	
42.102	beta-Elementene	1376	0.01%	
42.407	Unidentified	1381	0.03%	
42.749	Methyleugenol	1386	0.01%	IFRA
43.227	alpha-Gurjunene	1393	0.12%	
43.471	Unidentified	1397	0.01%	
44.004	beta-Caryophyllene	1405	0.15%	
44.474	gamma-Maaliene	1413	0.03%	
44.921	alpha-Maaliene	1420	0.03%	
45.190	Aromadendrene	1424	0.38%	
45.285	Unidentified	1426	0.04%	
45.393	Unidentified	1427	0.01%	
45.642	alpha-Guaiene	1431	0.05%	
45.745	Unidentified	1433	0.01%	
45.847	cis-Murrola-3,5-diene	1435	0.04%	
46.078	Valerna-4,7(11)-diene	1438	0.01%	
46.245	alpha-Humulene	1441	0.03%	
46.529	Alloaromadendrene	1445	0.2%	
47.288	cis-Murrola-4(14),5-diene	1458	0.13%	
48.186	(1S,2S,4S)-Menthane-1,2,4-triol	1472	0.14%	
48.320	beta-Selinene	1474	0.09%	
48.469	Viridiflorene	1476	0.52%	
48.735	Bicyclogermacrene	1481	0.27%	
48.927	alpha-Murolene	1484	0.06%	
50.114	delta-Cadinene	1503	0.41%	
50.305	cis-Calamenene	1506	0.04%	
50.385	Zonarene	1507	0.11%	
50.959	trans-Cadina-1,4-diene	1517	0.07%	



Ret. Time	Component	Ret. Idx.	Conc. %	
52.392	Unidentified	1541	0.01%	
52.707	Pogostol	1546	0.05%	
53.145	Maaliol	1554	0.03%	
53.196	Palustrol	1555	0.03%	
53.558	Spathulenol	1561	0.04%	
54.094	Globulol	1570	0.21%	
54.596	Viridiflorol	1578	0.12%	
54.737	Guaiol	1580	0.09%	
55.194	Ledol	1588	0.03%	
55.315	Rosifoliol	1590	0.05%	
56.311	beta-Eudesmol	1607	0.09%	
56.520	1-Epicubenol	1611	0.12%	
56.789	Unidentified	1616	0.06%	
57.370	Epicubenol analogue	1626	0.05%	
57.573	delta-Cadinol	1630	0.02%	
81.794	Linoleic acid	2105	0.04%	
82.116	Oleic acid	2112	0.22%	
94.053	Unidentified	2391	0.01%	
94.317	Unidentified	2398	0.02%	

Total Identified Compounds **99.42 %**

