



Essential Oil University

GC/MS Report

Item	Lot
Cinnamon Bark EO <i>Cinnamomum zeylanicum</i>	3H
Date	Analyst
5/16/2024	Dr. Robert S. Pappas

© Copyright 2024 by Essential Oil University. All rights reserved. Any publishing, copying, use, dissemination, or distribution of this report, including online, without the express written permission of Essential Oil University is strictly prohibited.

The analysis of this batch sample, Cinnamon Bark EO, meets the expected chemical profile for authentic essential oil of *Cinnamomum zeylanicum*. 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

Sample Name: Cinnamon Bark EO**Sample Type:** EO - Single**Botanical Name:** Cinnamomum zeylanicum**Country of Origin:** Sri Lanka**Lot Number:** 3H**Analysis Date:** 5/16/2024**Production Method:** Steam distilled**Date of Distillation:** May 2024

GC/MS

Inst. ID: Shimadzu GCMS-QP2010Ultra**Column Type:** ZB-5**Injection Type:** Split**Injection Volume:** 0.1 µL**Split Ratio:** 24.4**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

+1.32

1.58764

1.02100



Ret. Time	Component	Ret. Idx.	Conc. %	
8.231	Ethyl 2-methylbutyrate	843	0%	
10.054	Styrene	892	0.02%	
11.546	Tricyclene	922	0.01%	
11.695	alpha-Thujene	924	0.29%	
12.099	alpha-Pinene	932	3.01%	
12.889	alpha-Fenchene	946	0.01%	
12.984	Camphene	948	0.32%	
13.626	Benzaldehyde	960	0.14%	IFRA
14.236	Sabinene	971	0.09%	
14.535	beta-Pinene	977	0.3%	
15.160	Myrcene	988	0.04%	
15.771	Unidentified	1000	0.01%	
16.016	Octanal	1003	0.01%	
16.210	alpha-Phellandrene	1006	1.17%	
16.351	delta-3-Carene	1009	0.07%	
16.861	alpha-Terpinene	1016	0.77%	
17.022	ortho-Cymene	1019	0.02%	
17.345	para-Cymene	1024	1.14%	
17.641	Limonene	1028	1.7%	IFRA
17.745	beta-Phellandrene	1030	2.89%	
17.817	1,8-Cineole	1031	1.52%	
18.036	cis-beta-Ocimene	1035	0.05%	
18.346	Butyl 2-methylbutyrate	1039	0.01%	
18.713	trans-beta-Ocimene	1045	0.03%	
19.495	gamma-Terpinene	1057	0.09%	
19.950	Acetophenone	1064	0.03%	
20.275	trans-Sabinene hydrate	1069	0.02%	
21.027	Isoterpinolene	1081	0.01%	
21.285	Terpinolene	1085	0.11%	
21.610	para-Cymenene	1090	0.02%	
22.244	Linalool	1099	3.01%	IFRA
22.462	2-Methylbutyl-2-methylbutyrate	1103	0.03%	
23.915	cis-para-Menth-2-en-1-ol	1124	0.02%	
25.133	trans-para-Menth-2-en-1-ol	1141	0.02%	
25.458	Camphor	1146	0.07%	
26.483	Benzenepropanal	1161	0.21%	
27.165	Borneol	1171	0.06%	
27.338	Unidentified	1174	0.02%	
27.770	Terpinen-4-ol	1180	0.25%	
28.200	Unidentified	1186	0.03%	



Ret. Time	Component	Ret. Idx.	Conc. %	
28.773	alpha-Terpineol	1194	0.4%	
29.312	alpha-Phellandrene epoxide	1202	0.04%	
29.563	Decanal	1206	0.01%	
29.728	trans-Piperitol	1208	0.01%	
30.361	cis-Cinnamaldehyde	1218	0.3%	IFRA
31.113	Hydrocinnamic alcohol	1229	0.04%	
31.683	ortho-Anisaldehyde	1237	0.02%	
34.314	trans-Cinnamaldehyde	1276	69.78%	IFRA
35.209	Safrole	1289	0.01%	
35.765	Carvacrol	1297	0.02%	
36.269	trans-Cinnamyl alcohol	1305	0.03%	IFRA
39.275	Eugenol	1351	3.19%	IFRA
40.364	Hydrocinnamyl acetate	1367	0.07%	
40.853	alpha-Copaene	1375	0.22%	
41.601	cis-Cinnamyl acetate	1386	0.02%	
41.744	beta-Elemene	1388	0.01%	
42.428	Unidentified	1399	0.01%	
43.646	beta-Caryophyllene	1418	2.15%	
45.268	trans-Cinnamyl acetate	1444	4.6%	
45.888	alpha-Humulene	1454	0.36%	
47.481	Ar-Curcumene	1480	0.02%	
48.086	Unidentified	1490	0.01%	
49.140	beta-Bisabolene	1507	0.01%	
49.745	delta-Cadinene	1517	0.03%	
49.941	cis-Calamenene	1520	0.02%	
50.252	ortho-Methoxycinnamaldehyde	1526	0.13%	IFRA
51.094	Unidentified	1540	0.03%	
51.606	Unidentified	1548	0.01%	
53.115	Caryophyllene alcohol	1574	0.03%	
53.495	Caryophyllene oxide	1580	0.16%	
54.201	Unidentified	1592	0.03%	
55.111	Humulene epoxide II	1608	0.03%	
55.372	Tetradecanal	1613	0.08%	
56.390	Unidentified	1631	0.01%	
57.706	14-Hydroxy-9-epi-(Z)-Caryophyllene	1654	0.01%	
58.525	14-Hydroxy-9-epi-(E)-Caryophyllene	1669	0.01%	
63.736	Benzyl benzoate	1765	0.36%	IFRA
73.496	Phellandrene dimer	1957	0.01%	
74.711	Phellandrene dimer	1982	0.04%	
80.787	Unidentified	2113	0.05%	



Ret. Time	Component	Ret. Idx.	Conc. %
81.198	Unidentified	2122	0.02%

Total Identified Compounds **99.78 %**

