



Essential Oil University

GC/MS Report

Item	Lot
Plai EO	1P
<i>Zingiber cassumunar</i>	
Date	Analyst
1/23/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Plai EO, meets the expected chemical profile for authentic essential oil of *Zingiber cassumunar*. 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:** Plai EO**Botanical Name:** Zingiber cassumunar**Lot Number:** 1P**Production Method:** Steam distilled**Sample Type:** EO - Single**Country of Origin:** Thailand**Analysis Date:** 1/23/2025**Manufacture Date:** February 2023

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

-30.64

1.47722

0.88413



Ret. Time	Component	Ret. Idx.	Conc. %	
12.184	alpha-Thujene	921	1.13%	
12.599	alpha-Pinene	928	1.84%	
13.510	Camphene	945	0.19%	
14.841	Sabinene	968	34.06%	
15.113	beta-Pinene	973	4.5%	
15.729	Myrcene	984	1.3%	
16.655	Pseudolimonene	1000	0.01%	
16.802	alpha-Phellandrene	1003	0.16%	
17.472	alpha-Terpinene	1013	3.24%	
17.954	para-Cymene	1020	2.75%	
18.251	Limonene	1024	0.7%	IFRA
18.352	beta-Phellandrene	1026	1.37%	
18.430	1,8-Cineole	1027	0.93%	
19.337	trans-beta-Ocimene	1041	0.01%	
20.150	gamma-Terpinene	1053	6.75%	
20.917	trans-Sabinene hydrate	1065	1%	
21.959	Terpinolene	1080	1.2%	
22.272	para-Cymenene	1085	0.01%	
22.900	Linalool	1095	0.03%	IFRA
22.990	cis-Sabinene hydrate	1096	0.9%	
24.607	cis-para-Menth-2-en-1-ol	1119	0.29%	
25.383	Terpin-3-en-1-ol	1130	0.02%	
25.841	trans-para-Menth-2-en-1-ol	1137	0.21%	
26.163	Camphor	1142	0.06%	
26.325	cis-beta-Terpineol	1144	0.02%	
26.866	Sabina ketone	1152	0.02%	
27.897	Borneol	1167	0.05%	
28.588	Terpinen-4-ol	1176	30.26%	
28.914	para-Cymen-8-ol	1181	0.04%	
29.308	Unidentified	1187	0.02%	
29.497	alpha-Terpineol	1190	0.96%	
29.622	cis-Piperitol	1191	0.07%	
30.290	Unidentified	1201	0.01%	
30.450	trans-Piperitol	1203	0.12%	
33.538	Unidentified	1248	0.04%	
34.866	cis-Ascaridol glycol	1268	0.03%	
35.583	Bornyl acetate	1278	0.01%	
36.046	trans-Ascaridol glycol	1285	0.03%	
36.366	Terpin-1-en-4-yl acetate	1289	0.03%	
38.023	Unidentified	1314	0.02%	



Ret. Time	Component	Ret. Idx.	Conc. %
39.711	alpha-Terpinyl acetate	1340	0.22%
41.664	alpha-Copaene	1369	0.02%
42.537	beta-Elemene	1383	0.02%
43.673	alpha-Gurjunene	1400	0.04%
44.455	beta-Caryophyllene	1412	0.05%
45.380	Unidentified	1427	0.01%
45.641	Aromadendrene	1431	0.15%
46.092	alpha-Guaiene	1438	0.01%
46.534	trans-beta-Farnesene	1446	0.03%
46.698	alpha-Humulene	1448	0.03%
46.978	Alloaromadendrene	1453	0.07%
47.655	Unidentified	1463	0.04%
47.733	trans-Cadina-1(6),4-diene	1465	0.03%
48.280	Ar-Curcumene	1473	0.14%
48.462	Selina-4,11-diene	1476	0.03%
48.646	delta-Selinene	1479	0.03%
48.773	beta-Selinene	1481	0.05%
48.913	Viridiflorene	1483	0.18%
49.149	alpha-Zingiberene	1487	0.45%
49.372	alpha-Muurolene	1491	0.02%
49.939	beta-Bisabolene	1500	0.14%
50.038	beta-Curcumene	1502	0.03%
50.417	(Z)-1-(3,4-Dimethoxyphenyl)but-1-ene	1508	0.09%
50.561	delta-Cadinene	1510	0.17%
50.745	cis-Calamenene	1513	0.01%
50.897	beta-Sesquiphellandrene	1516	1.55%
51.404	trans-Cadina-1,4-diene	1524	0.03%
53.310	(Z)-1-(3,4-Dimethoxyphenyl)butadiene	1556	0.04%
54.553	Globulol	1577	0.05%
54.792	(E)-1-(3,4-Dimethoxyphenyl)but-1-ene	1581	0.51%
55.054	Viridiflorol	1586	0.02%
55.197	Cubeban-11-ol	1588	0.02%
55.371	Curzerenone	1591	0.03%
55.786	Rosifoliol	1598	0.01%
56.770	Unidentified	1615	0.01%
56.943	(E)-1-(3,4-dimethoxyphenyl)butadiene	1618	1.28%
61.036	Unidentified	1691	0.01%
62.621	Zerumbone	1720	0.01%

Total Identified Compounds **99.86 %**

