



Essential Oil University

GC/MS Report

Item	Lot
Fennel (Sweet) EO <i>Foeniculum vulgare</i>	3C
Date	Analyst
12/12/2025	Dr. Robert S. Pappas

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The analysis of this batch sample, Fennel (Sweet) EO, meets the expected chemical profile for authentic essential oil of *Foeniculum vulgare*. 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: Fennel (Sweet) EO
Botanical Name: Foeniculum vulgare
Lot Number: 3C
Production Method: Steam distilled

Sample Type: EO - Single
Country of Origin: Egypt
Analysis Date: 12/12/2025
Manufacture Date: June 2025

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

+8.96
1.54780
0.97674



Ret. Time	Component	Ret. Idx.	Conc. %	
11.615	alpha-Thujene	923	0.01%	
12.015	alpha-Pinene	930	1.72%	ALLERGEN
12.804	alpha-Fenchene	945	0%	
12.897	Camphene	947	0.08%	
14.144	Sabinene	970	0.04%	
14.438	beta-Pinene	975	0.12%	ALLERGEN
15.067	Myrcene	987	0.5%	PROP. 65
15.964	Pseudolimonene	1003	0.01%	
16.112	alpha-Phellandrene	1005	1.16%	
16.254	delta-3-Carene	1007	0.02%	
16.764	alpha-Terpinene	1015	0.01%	ALLERGEN
17.241	para-Cymene	1022	0.12%	
17.539	Limonene	1027	3%	ALLERGEN IFRA
17.638	beta-Phellandrene	1028	0.13%	
17.712	1,8-Cineole	1030	0.08%	
17.936	cis-beta-Ocimene	1033	0.03%	
19.384	gamma-Terpinene	1055	0.18%	
20.161	Unidentified	1067	0%	
21.173	Terpinolene	1083	0.04%	ALLERGEN
21.391	Fenchone	1086	2.73%	
22.130	Linalool	1098	0.01%	ALLERGEN IFRA
23.773	endo-Fenchol	1122	0.01%	
25.335	Camphor	1144	0.12%	ALLERGEN
27.647	Terpinen-4-ol	1178	0.04%	
28.652	alpha-Terpineol	1193	0.02%	ALLERGEN
28.876	Estragole	1196	3.37%	PROP. 65 IFRA
29.175	Unidentified	1200	0.01%	
31.103	exo-Fenchyl acetate	1229	0.02%	
32.360	Linalyl acetate	1247	0.02%	ALLERGEN
32.573	cis-Anethole	1250	0.09%	
32.689	para-Anisaldehyde	1252	1.18%	IFRA
35.096	trans-Anethole	1287	84.84%	ALLERGEN
40.705	alpha-Copaene	1373	0.01%	
40.970	Unidentified	1377	0.02%	
41.065	Anisyl methyl ketone	1378	0.17%	
43.395	Unidentified	1414	0%	
43.489	beta-Caryophyllene	1416	0.04%	ALLERGEN
44.349	trans-alpha-Bergamotene	1430	0.01%	
47.321	Germacrene D	1477	0.02%	
48.234	Unidentified	1492	0.01%	



Ret. Time	Component	Ret. Idx.	Conc. %
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Total Identified Compounds **99.95 %**



TIC
16,148,531

