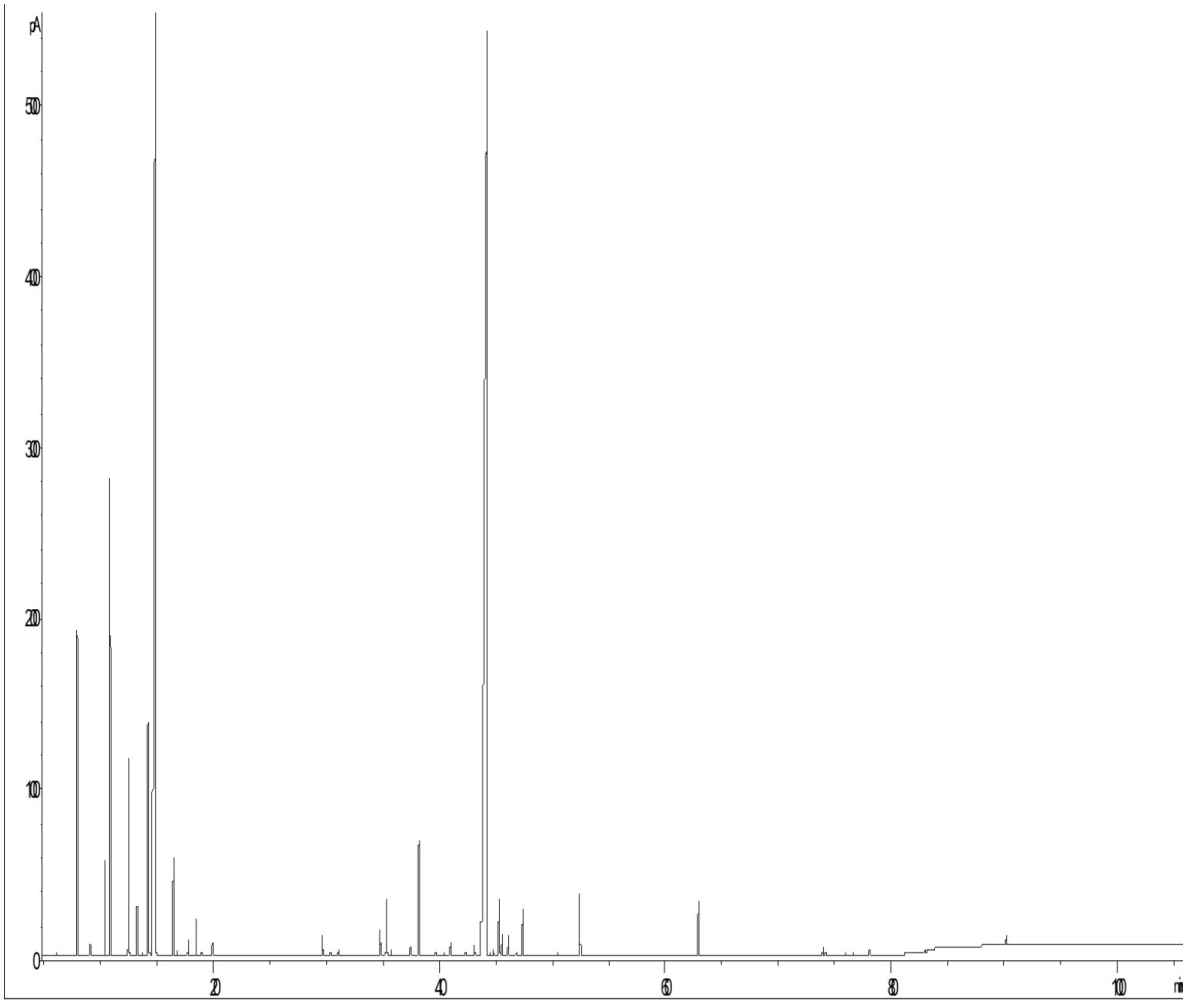
MALIKA ESSENTIALS

GC/MS ANALYSIS REPORT

Product Name	Cardamom Essential Oil
Botanical Name	Elettaria cardamomum
Analysis Date	October 30, 2026

Note: This GC/MS report is a representative analysis of this product. Due to volume turnover, it is not specific to an individual lot; specific lots may vary slightly, as is the case with natural products. The lot-specific quality document for each batch is its Certificate of Analysis.

Chromatogram



Identified Compounds

Peak	RT (min)	Compound name	%
1	6.08	BUTANAL, 2-METHYL-	0.01
2	6.11	ISOVALERALDEHYDE	0.03
3	7.96	alpha-PINENE	2.30
4	8.02	alpha-THUYENE	0.42
5	8.85	alpha-FENCHENE	0.02
6	9.09	CAMPHENE	0.10
7	10.40	beta-PINENE	0.86
8	10.89	SABINENE	4.58
9	11.96	delta3-CARENE	0.02
10	12.50	beta-MYRCENE	1.87
11	12.64	alpha-PHELLANDRENE	0.06
12	13.27	alpha-TERPINENE	0.56
13	13.75	1,8-CINEOLE, 2,3-DEHYDRO-	0.03
14	14.25	LIMONENE	4.87
15		1,8-CINEOLE	
16	14.89	beta-PHELLANDRENE	31.85
17	15.90	cis-beta-OCIMENE	0.02
18	16.49	gamma-TERPINENE	1.00
19	16.79	trans-beta-OCIMENE	0.07
20	17.76	p-CYMENE	0.18
21	18.47	TERPINOLENE	0.39
22	18.96	OCTANAL	0.05
23	19.93	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0.16
24	20.79	PINOL	0.01
25	21.71	5-HEPTEN-2-ONE, 6-METHYL-	0.03
26	26.19	TERPENIC COMPOUND	0.02
27	28.96	ACETIC ACID	0.01
28	29.61	trans-THUYANOL	0.28
29	29.97	TERPENIC COMPOUND	0.02
30	30.36	delta-ELEMENE	0.04
31	31.08	OCTYL ACETATE	0.07
32	31.90	KETONIC COMPOUND	0.03
33	33.13	ALIPHATIC ESTER	0.03
34	34.54	DECENAL ISOMER	0.04
35	34.76	LINALOOL	0.33
36	34.84	cis-THUYANOL	0.19
37	35.30	LINALYL ACETATE	0.68
38	35.72	trans-p-MENTH-2-EN-1-OL	0.08
39	36.66	BORNYL ACETATE	0.03
40	37.45	beta-ELEMENE	0.14
41	37.76	METHYL CAPRATE	0.02
42	38.16	TERPINENE-4-OL	1.50
43	38.90	SESQUITERPENE	0.03
44	39.70	cis-p-MENTH-2-EN-1-OL	0.05
45	40.43	GERMACRENE A	0.05
46	40.96	delta-TERPENYL ACETATE	0.19
47	42.33	delta-TERPINEOL	0.06
48	42.70	cis-PIPERITOL	0.02
49	43.11	NERAL	0.19
50	43.51	DECYL ACETATE	0.02
51	44.07	TERPENYL ACETATE	40.02
52	44.08	gamma-TERPINEOL	0.16
53	44.19	alpha-TERPINEOL	1.33

54	44.50	TERPENIC COMPOUND	0.04
55	44.80	METHYL 2-DECENOATE	0.06
56	45.04	GERMACRENE D	0.02
57	45.26	SESQUITERPENE	0.02
58	45.28	beta-SELINENE	0.73
59	45.57	alpha-SELINENE	0.30
60	46.13	GERANIAL	0.29
61	46.37	ALDEHYDIC COMPOUND	0.07
62	46.67	trans-PIPERITOL	0.04
63	46.80	COMPOUND Mw=134	0.04
64	47.37	GERANYL ACETATE	0.59
65	47.38	gamma-CADINENE	0.13
66	47.62	7-epi-alpha-SELINENE	0.02
67	48.76	trans-p-MENTHA-1(7),8-DIEN-2-OL	0.02
68	49.56	2-DECEN-1-OL	0.02
69	49.78	NEROL	0.02
70	50.43	ALIPHATIC ESTER	0.03
71	51.00	2-TRIDECANONE	0.01
72	51.38	GERANYL PROPIONATE	0.02
73	51.77	GERMACRENE B	0.02
74	52.44	GERANIOL	0.82
75	53.00	E-GERANYL ACETONE	0.02
76	56.29	COMPOUND Mw=166	0.02
77	58.21	ALIPHATIC ESTER	0.02
78	59.79	beta-COPAEN-4-alpha-OL ISOMER	0.02
79	60.84	MENTHADIENOL ISOMER	0.02
80	61.11	ALCOHOL COMPOUND	0.02
81	62.95	trans-NEROLIDOL	0.71
82	63.72	CAPRYLIC ACID	0.02
83	64.86	METHYL E-CINNAMATE	0.05
84	65.17	SESQUITERPENIC COMPOUND	0.01
85	65.31	SESQUITERPENOL	0.01
86	66.07	SESQUITERPENIC COMPOUND	0.02
87	68.46	SESQUITERPENIC COMPOUND	0.02
88	69.28	SORBIC ACID	0.01
89	73.96	CARVONE ACETATE	0.14
90	74.17	FARNESYL ACETATE	0.04
91	75.91	SESQUITERPENIC COMPOUND	0.03
92	76.58	TRICOSANE	0.02
93	77.14	GERANIC ACID	0.02
94	78.10	E,E-FARNESOL	0.06
95	78.65	COMPOUND Mw=234	0.02
96	79.47	SESQUITERPENIC COMPOUND	0.01
97	90.23	COMPOUND Mw=284	0.13
98	95.17	PALMITIC ACID	0.03
		TOTAL	**99.85**

Note: Peak 15 (1,8-CINEOLE) is listed in the source report without a retention time or percentage; it is carried here exactly as printed. The source report states TOTAL 99.85.

Faithful copy of the GC/MS analysis report. The original document is kept in the MALIKA Essentials archives.