



CERTIFICATE of ANALYSIS (COA)

COMMON NAME	Cardamom - Organic
LATIN NAME	<i>Elettaria cardamomum</i>
COUNTRY OF ORIGIN	Guatemala
CULTIVATION METHOD	Certified Organic (USDA, NOP)
TYPE	Essential Oil
EXTRACTION METHOD	Steam Distilled
PLANT PART	Whole Fruit
USE	Aromatherapy, Natural Perfumery.

SKU	144
LOT #	18
MANUFACTURING DATE	July 2023
BEST BY DATE	July 2026

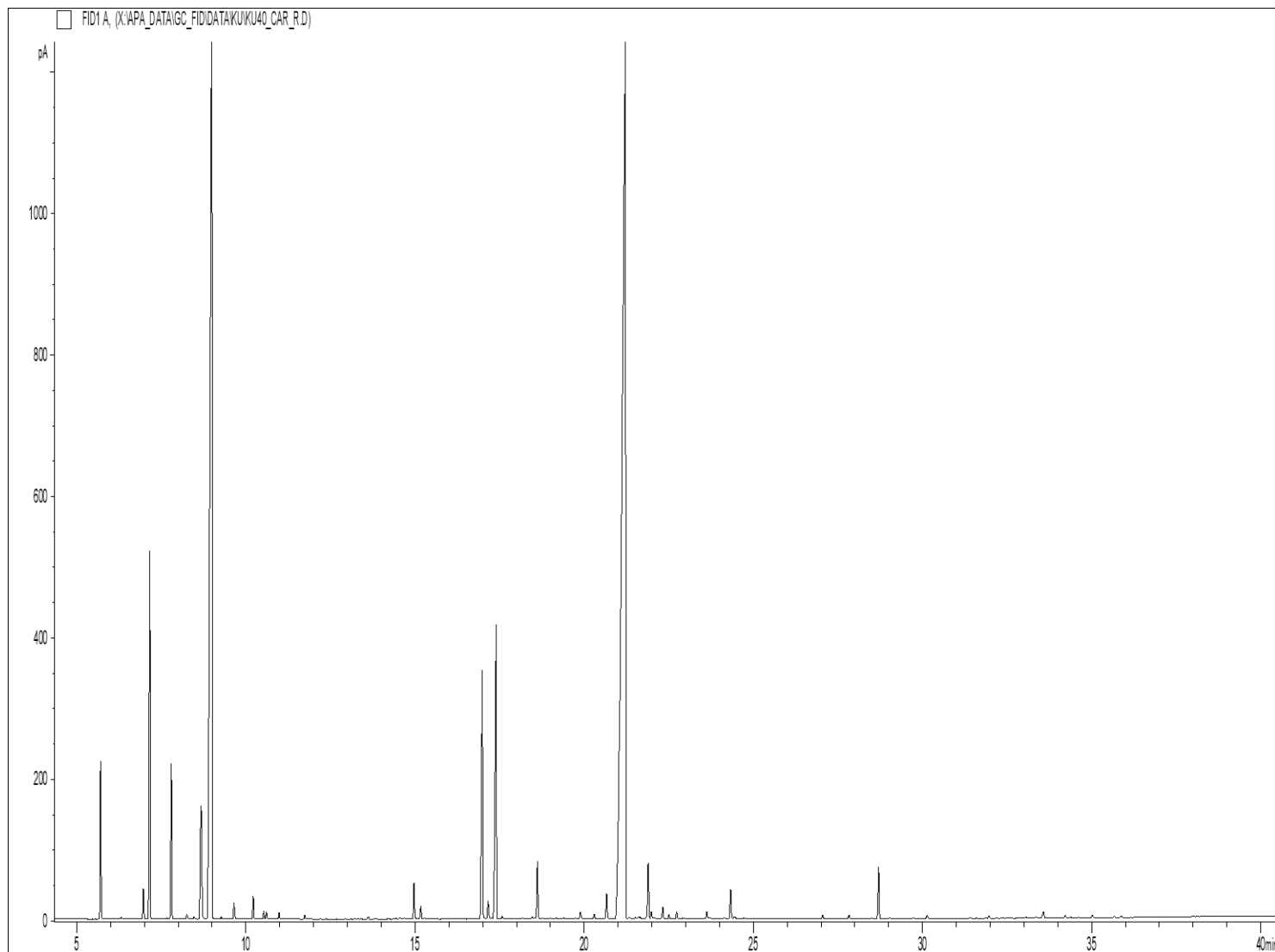
	SPECIFICATIONS (Range)	
SPECIFIC GRAVITY @20°C	0.908 – 0.949	0.9210
REFRACTIVE INDEX @20°C	1.445 – 1.483	1.4630
OPTICAL ROTATION @20°C	+22° to +44°	+28.30

PHYSICAL APPEARANCE	Transparent liquid	<i>Conforms</i>
COLOR	Colorless to pale yellow	<i>Conforms</i>
ODOR	Fresh, spicy, with sweet woody undertones.	<i>Conforms</i>
SOLUBILITY	Soluble in alcohol and fixed oils	
SPECIAL USE INSTRUCTIONS	Dilute before use	

MAIN CONSTITUENTS	Terpenyl Acetate, 1.8 Cineole, Linalyl Acetate, Linalool, Alpha-Terpineol.
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THIRD PARTY LAB ANALYSIS (GCMS)

CHROMATOGRAPHIC PROFILE:



- ORGANIC CARDAMOM EO - SKU 144 LOT 18 -

Peaks	RT (min)	Compound name	%	Standard (%)	Allergens (%)
1	4.63	KETONIC COMPOUND	0.01		
2	5.71	alpha-PINENE	1.66	1.0 - 2.0	1.66
3	5.75	alpha-THUYENE	0.23		
4	6.32	CAMPHENE	0.03		
5	6.97	beta-PINENE	0.40		0.40
6	7.16	SABINENE	4.78	3.0 - 5.0	
7	7.66	delta3-CARENE	0.01		
8	7.80	beta-MYRCENE	2.00	Tr. - 2.5	
9	8.26	alpha-TERPINENE	0.08		0.08
10	8.46	1,8-CINEOLE, 2,3-DEHYDRO-	0.03		
11	8.68	LIMONENE	2.54	2.0 - 3.0	2.54
12	8.99	1,8-CINEOLE	26.72	27.0 - 35.0	
13	9.27	cis-beta-OCIMENE	0.03		
14	9.65	gamma-TERPINENE	0.19		
15	9.70	trans-beta-OCIMENE	0.06		
16	10.22	p-CYMENE	0.29		
17	10.52	TERPINOLENE	0.10		0.10
18	10.60	OCTANAL	0.11		
19	10.98	1,3,7-NONATRIENE, 4,8-DIMETHYL-	0.08		
20	11.74	5-HEPTEN-2-ONE, 6-METHYL-	0.06		
21	13.61	TERPENIC COMPOUND	0.04		
22	13.79	COMPOUND Mw=150	0.01		
23	14.22	TERPENIC COMPOUND	0.01		
24	14.44	LINALOOL cis-OXIDE	0.01		
25	14.53	ACETIC ACID	0.04		
26	14.69	LIMONENE cis-1,2-EPOXIDE	0.02		
27	14.97	trans-THUYANOL	0.55		
28	15.17	TERPENE ISOMER	0.20		
29	15.27	OCTYL ACETATE	0.02		
30	15.83	YLANGENE	0.01		
31	15.97	DECANAL	0.03		
32	16.76	E-SOLANONE	0.01		
33	16.98	LINALOOL	4.27	3.0 - 6.0	4.27
34	17.16	cis-THUYANOL	0.32		
35	17.26	1-OCTANOL	0.03		
36	17.39	LINALYL ACETATE	5.72	4.0 - 6.0	5.72
37	17.58	trans-p-MENTH-2-EN-1-OL	0.04		
38	18.18	BORNYL ACETATE	0.03		
39	18.47	beta-ELEMENE	0.05		
40	18.54	SESQUITERPENE	0.03		
41	18.62	TERPINENE-4-OL	0.90	0.80 - 1.5	
42	18.77	SESQUITERPENE	0.03		
43	18.99	LAVANDULYL ACETATE	0.02		

- ORGANIC CARDAMOM EO - SKU 144 LOT 18 -

Peaks	RT (min)	Compound name	%	Standard (%)	Allergens (%)
44	19.17	beta-TERPENYL ACETATE	0.02		
45	19.26	cis-p-MENTH-2-EN-1-OL	0.01		
46	19.39	SESQUITERPENE	0.03		
47	19.69	SESQUITERPENE	0.02		
48	19.75	2-DECENAL	0.02		
49	19.89	delta-TERPENYL ACETATE	0.14		
50	20.30	delta-TERPINEOL	0.09		
51	20.50	cis-PIPERITOL	0.03		
52	20.67	NERAL	0.43		0.43
53	21.22	alpha-TERPINEOL	2.25	Tr. - 2.5	2.25
54	21.25	TERPENYL ACETATE	40.97	35.0 - 45.0	
55	21.33	SESQUITERPENE	0.05		
56	21.52	GERMACRENE D	0.03		
57	21.61	SESQUITERPENE	0.03		
58	21.65	gamma-TERPINEOL	0.06		0.06
59	21.89	GERANIAL	0.68		0.68
60	21.90	beta-SELINENE	0.30		
61	21.99	alpha-SELINENE	0.13		
62	22.08	ALIPHATIC ALCOHOL	0.04		
63	22.32	GERANYL ACETATE	0.21		0.21
64	22.51	TERPENIC ESTER	0.08		
65	22.73	gamma-CADINENE	0.11		
66	22.89	SESQUITERPENE	0.02		
67	22.95	ALIPHATIC ALCOHOL	0.02		
68	23.17	ALIPHATIC ALCOHOL	0.02		
69	23.29	MYRTENOL	0.01		
70	23.56	TERPENIC ESTER	0.02		
71	23.63	NEROL	0.11		
72	23.67	TERPENIC ESTER	0.01		
73	23.73	2-TRIDECANONE	0.03		
74	24.15	trans-CARVEOL	0.03		
75	24.33	GERANIOL	0.49		0.49
76	24.45	p-CYMENE-8-OL	0.06		
77	24.73	E-GERANYL ACETONE	0.02		
78	27.05	TERPENIC ESTER	0.07		
79	27.46	SESQUITERPENOL	0.01		
80	27.83	SESQUITERPENOL	0.06		
81	28.51	KETONIC COMPOUND	0.02		
82	28.71	NEROLIDOL	0.79	0.50 - 1.0	
83	29.03	SESQUITERPENOL	0.02		
84	29.74	SESQUITERPENOL	0.02		
85	30.14	1-METHYL-4-(1-ACETOXY-1-METHYLETHYL)-CYCLOHEX-2-EN	0.06		
86	31.41	AROMATIC COMPOUND	0.02		

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Peaks	RT (min)	Compound name	%	Standard (%)	Allergens (%)
87	31.87	SESQUITERPENOL	0.01		
88	31.97	ALCOHOL COMPOUND	0.04		
89	33.05	TERPENIC COMPOUND	0.03		
90	33.36	FARNESAL	0.05		
91	33.58	COMPOUND Mw=150	0.15		
92	34.22	OXYGENED COMPOUND	0.05		
93	34.38	TRICOSANE	0.02		
94	34.62	OXYGENED COMPOUND	0.02		
95	35.02	E,E-FARNESOL	0.05		0.05
96	35.67	OXYGENED COMPOUND	0.03		
97	35.87	OXYGENED COMPOUND	0.03		
98	43.00	AROMATIC COMPOUND Mw=284	0.05		
		TOTAL	99.97		18.94

This Essential Oil is a 100% pure and natural product. It does not contain any artificial ingredients or adulteration of any kind to the best of our knowledge. The analysis and statements herein constitute the most complete information available to Eden Botanicals. This product is guaranteed by Eden Botanicals to be of excellent quality.

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