



CERTIFICATE of ANALYSIS (COA)

Cardamom - Organic (SKU 144 lot 14)

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

ANALYZED	January 22, 2021
MANUFACTURED	May 6, 2020
RETEST	May 6, 2022

SPECIFIC GRAVITY @ 20C	n/a
REFRACTIVE INDEX @ 20C	1,46
OPTICAL ROTATION @ 20C	n/a

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

COMMENTS	
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COMPONENT	Actual %	CAS
1,8-Cineole	32,49%	470-82-6
alpha-Terpinyl acetate	31,74%	80-26-2
Linalyl acetate	7,38%	115-95-7
Sabinene	6,68%	3387-41-5
Linalool ²	3,67%	78-70-6
alpha-Pinene	2,91%	80-56-8
Myrcene ¹	2,87%	123-35-3
alpha-Terpineol	2,16%	98-55-5
Terpinen-4-ol	1,22%	562-74-3
E-Nerolidol	0,94%	40716-66-3
Geranial ²	0,83%	141-27-5
cis-Sabinene hydrate	0,78%	15537-55-0
Limonene ²	0,68%	138-86-3
beta-Pinene	0,60%	127-91-3
Neral ²	0,59%	106-26-3
gamma-Terpinene	0,54%	99-85-4
trans-Sabinene hydrate	0,43%	17699-16-0

Geranyl acetate	0,42%	105-87-3
alpha-Thujene	0,37%	2867-05-2
alpha-Terpinene	0,25%	99-86-5
beta-Selinene	0,23%	17066-67-0
n-Octanal	0,22%	124-13-0
Geraniol ²	0,21%	106-24-1
delta-Terpinyl acetate	0,17%	93836-50-1
cis-(Ac vs. IPP)Sabinene hydrate acetate	0,17%	77318-48-0
Terpinolene	0,16%	586-62-9
para-Cymene	0,14%	99-87-6
gamma-Cadinene	0,13%	38357-83-4
Dec-(4E)-enal	0,12%	65405-70-1
Dec-(3Z)-enyl acetate	0,11%	81634-99-3
delta-Terpineol	0,09%	7299-42-5
(E)-, beta-Ocimene	0,07%	3779-61-1
Methyl geranate	0,06%	2349-14-6
alpha-Selinene	0,05%	473-13-2
Germacrene D	0,05%	23986-74-5
Germacrene B	0,05%	15423-57-1
octyl-Acetate	0,05%	112-14-1
cis-, para-Menth-2-en-1-ol	0,04%	29803-82-5
6-methyl-Hept-5-en-2-one	0,04%	110-93-0
Camphene	0,03%	79-92-5
n-Decanal	0,03%	112-31-2
(Z)-beta-Ocimene	0,02%	3338-55-4
Total Deleted Low Purity Peaks	0,00%	
Not Identified Peaks	0,23%	
¹ = Proposition 65 compound, ² = EU Allergen		

MS Results for SKU 144 lot 14

