Batch Number:
20260907-ELCA1FRG

ALTRAFLORA
NATURAL EXTRACTS

Manufactured:
07.09.2026

TECHNICAL DATA SHEET

Product Information

Product Name: Cardamom food fragrance oil, PN AF-ELCA1FRG

Scientific name: *Elettaria cardamomum*

Parts utilized for extraction: Seed (dried)

Appearance: Clear, colourless to pale-yellow mobile liquid

Aroma: Warm, sweet-spicy and camphoraceous, with a fresh eucalyptol top

Solubility: Insoluble in water; soluble in ethanol and fixed oils

Raw Material Specification

Analysis	Method	Result
Total ash for herb	Ph. Eur. (2.4.16)	<4%
Pesticides	GC/MS, LC-MS/MS	Complies with Ph. Eur. (2.8.13)
Aflatoxins (G1, G2, B1, B2)	AOAC 999.07	Complies with Ph. Eur. (2.8.18)
Ochratoxin A	AOAC 2004.10	Complies with Ph. Eur. (2.8.22)
Benzo(a)pyrene (PAH)	JOSS 2002 25, pp. 96–100	<10 ppb

Extract Specification

Analysis	Method	Specification	Result
Major components:			
α-Terpinyl acetate	GC-FID, area normalisation (AF-LABGC003)	30 – 50 %	45.52 %
1,8-Cineole		25 – 45 %	37.95 %
Limonene		2.0 – 8.0 %	4.98 %
Sabinene		2.0 – 6.0 %	3.69 %
β-Myrcene		1.0 – 4.0 %	2.73 %
α-Pinene		1.0 – 4.0 %	2.45 %
β-Pinene		max. 3.0 %	1.04 %
TOTAL		**min. 90 %**	**98.36 %**
Identified compounds (GC-FID area)	GC-FID, area normalisation (AF-LABGC003)	min. 95 %	99.63 %
Arsenic (As)	ICP-OES (In-house method)	N.D. (< 1 ppm)	N.D.
Cadmium (Cd)		N.D. (< 3 ppm)	N.D.
Lead (Pb)		N.D. (< 1 ppm)	N.D.
Mercury (Hg)		N.D. (< 0.1 ppm)	N.D.
Total aerobic microbial count (cfu/g)	ISO 4833-1	<10000	Complies
Yeast & mold (cfu/g)	ISO 21527-2	<100	Complies
Escherichia coli	ISO 16649-2	N.D. (in 1 g)	N.D.
Salmonella	ISO 6579	N.D. (in 25 g)	N.D.
Pseudomonas aeruginosa	ISO 13720	N.D. (in 1 g)	N.D.
Staphylococcus aureus	ISO 6888-1	N.D. (in 1 g)	N.D.

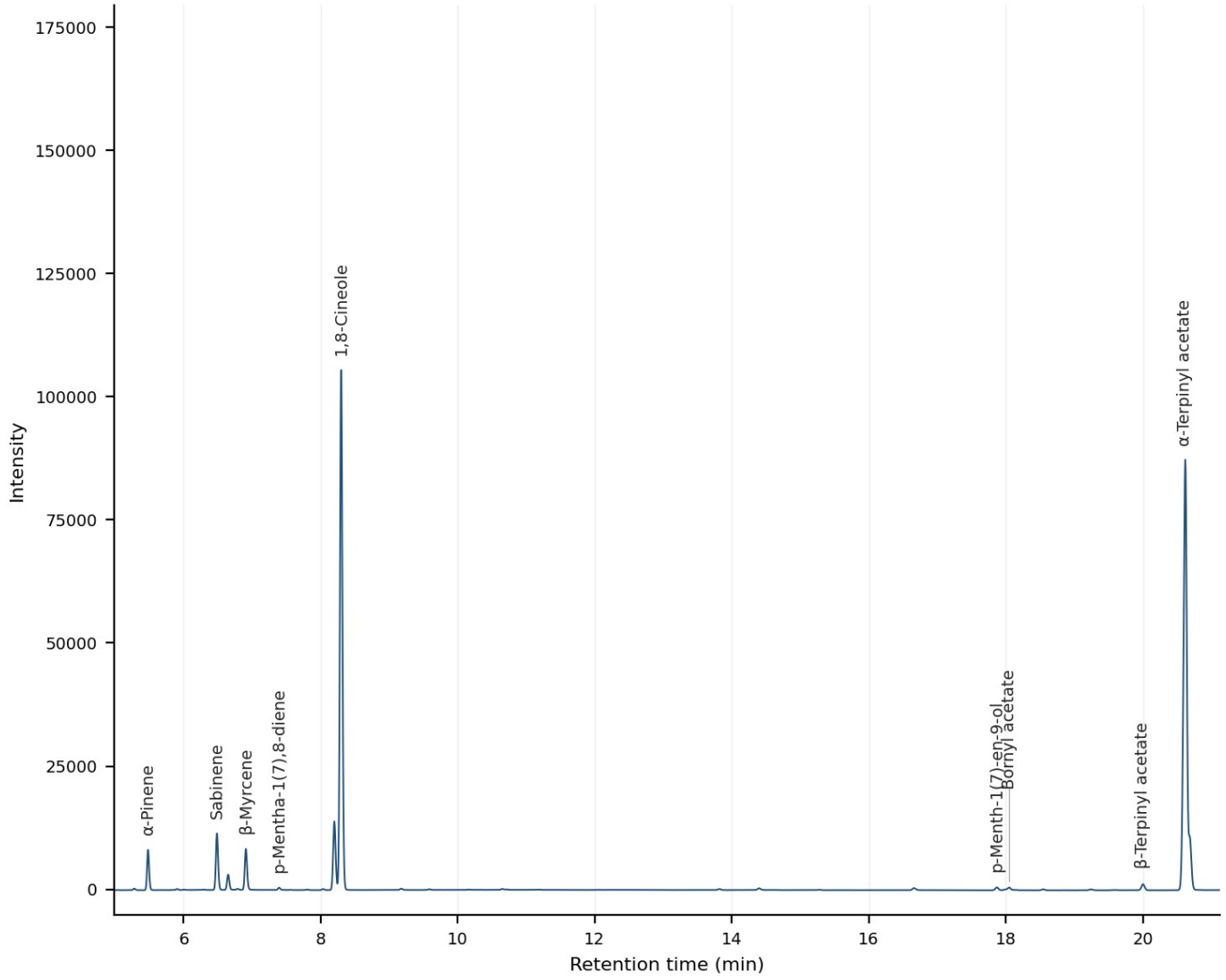
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Chromatogram



Additional Data

Storage conditions: Store in cool and dry place, keep away from intense light and high heat.

Carrier: Fractionated coconut oil (caprylic/capric triglyceride, MCT).

Packaging: 10 g, 15 g and 30 g amber glass bottles with food-grade fine-mist spray head.

Shelf life: 24 months

Dosage and use: Cardamom is used in bakery and confectionery, in coffee and chai bases, in liqueurs and bitters, and in savoury spice blends. The character rests on the balance between α-terpinyl acetate, which gives the sweet-spicy fruity body, and 1,8-cineole, which supplies the fresh camphoraceous lift; this batch sits with the ester slightly ahead of the oxide. It is also valued in fine fragrance for a warm, diffusive spice top note. Compositional figures in the Extract Specification and the chromatographic profile refer to the essential-oil fraction of the product, determined by GC-FID area normalisation; the carrier is stated separately above.

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Full chromatographic profile (GC-FID)

Name	CAS	RT (min)	Content (%)
α-Pinene	**80-56-8**	**5.480**	**2.45**
Sabinene	**3387-41-5**	**6.486**	**3.69**
β-Pinene	**127-91-3**	**6.649**	**1.04**
β-Myrcene	**123-35-3**	**6.908**	**2.73**
p-Mentha-1(7),8-diene	499-97-8	7.393	0.14
Limonene	**138-86-3**	**8.200**	**4.98**
1,8-Cineole	**470-82-6**	**8.299**	**37.95**
p-Menth-1(7)-en-9-ol	29548-16-1	17.870	0.26
Bornyl acetate	76-49-3	18.050	0.31
β-Terpinyl acetate	10198-23-9	20.004	0.56
α-Terpinyl acetate	**80-26-2**	**20.621**	**45.52**

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