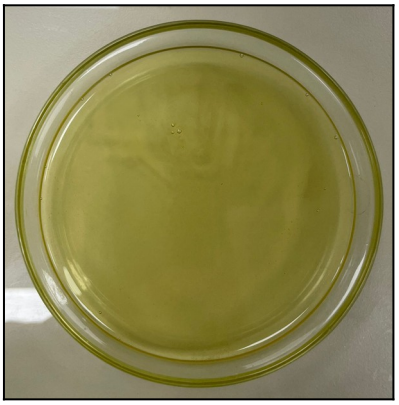
Batch Number:
20251229-PUGR1TSF

ALTRAFLORA
NATURAL EXTRACTS

Manufacturing Date:
29.12.2025

TECHNICAL DATA SHEET



Product Information

Product Name: Pomegranate seed SFE extract (origin: Turkey), PN AF-PUGR1TSF

Scientific name: *Punica granatum*

Parts utilized for extraction: Seeds (dry)

Appearance: Pale yellow oil

Flavour & aroma: Subtly fruity, with a faint tangy undertone

Solubility: Immiscible with water

Raw Material Specification

Analysis	Method	Result
Total ash for herb	Ph. Eur. (2.4.16)	<3%
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
Free fatty acids	Titration method (in-house)	<5.0 %	4.2 %
Peroxide value	Titration method (in-house)	<10 meq kg^{-1}	6.9 meq kg^{-1}
Squalene	GC-FID (in-house method)	>1.0 %	1.4 %
Fatty acid composition:			
Palmitic acid (**C16:0**)	GC-FID (in-house method)	<3 %	2.3 %
Linoleic acid (**C18:2ω6**)		<10.0 %	6.0 %
Oleic acid (**C18:1ω9**)		<6.0 %	4.0 %
Punicic acid (C18:3ω5)		>50.0 %	53.3 %
Stearic acid (**C18:0**)		<2.0 %	1.4 %
cis-11-Eicosenoic acid (**C20:1ω9**)		<1.0 %	0.6 %
Arachidic acid (**C20:0**)		<1.0 %	0.4 %
Loss on drying (%)	Ph. Eur. (2.8.17)	<5%	4.2%
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.

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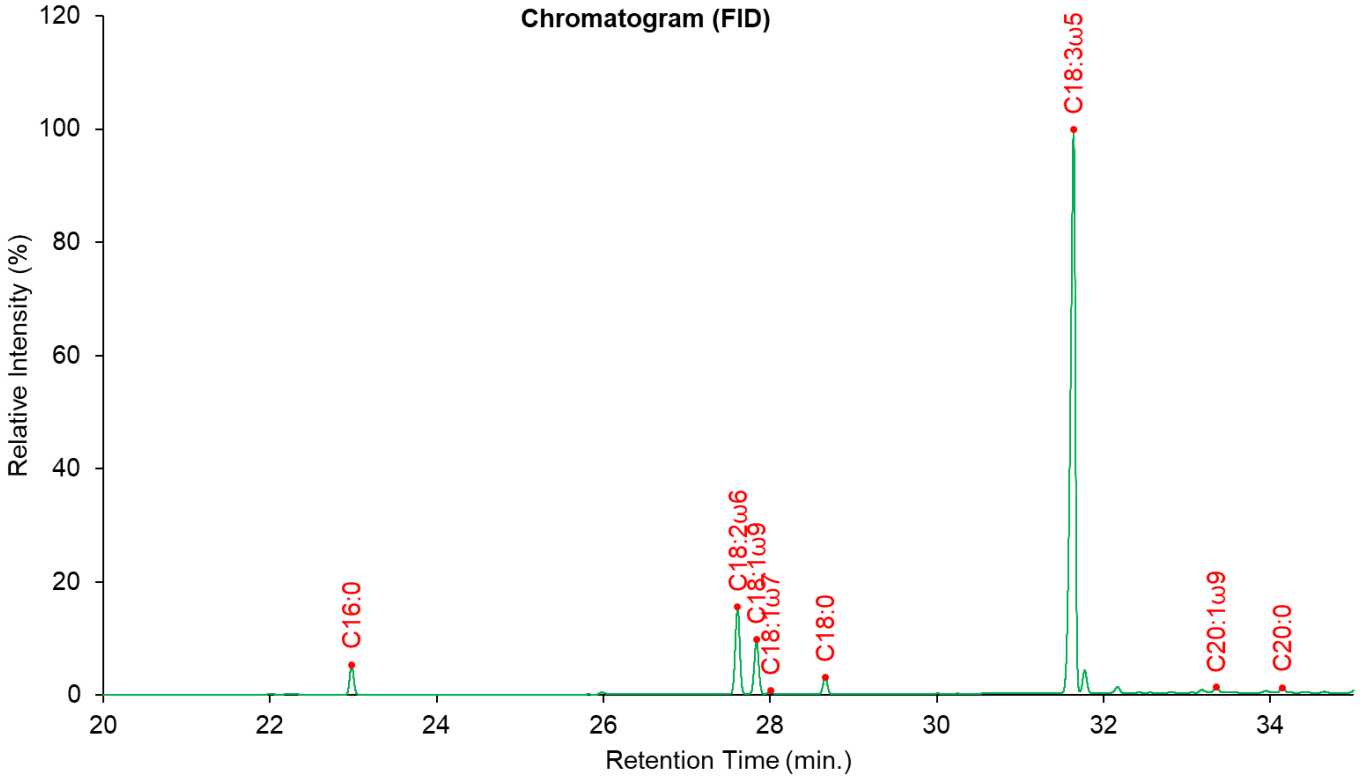
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Analysis	Method	Specification	Result
Total aerobic microbial count (cfu/g)	ISO 4833-1	<10000	Complies
Yeast & mold (cfu/g)	ISO 21527-2	<100	Complies
Escherichia coli	ISO 16649-2	N.D. (in 1 g)	N.D.
Salmonella	ISO 6579	N.D. (in 25 g)	N.D.
Pseudomonus aeruginosus	ISO 13720	N.D. (in 1 g)	N.D.
Staphylococcus aureus	ISO 6888-1	N.D. (in 1 g)	N.D.

Chromatogram(s)



Additional Data

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

Carrier: None. This is a pure extract obtained with food-grade CO_2.

Packaging: 1–5 kg/bottle, 10–25–50 kg/drum.

Shelf life: 24 months

Dosage and use: The extract is dominated by punicic acid (9Z,11E,13Z-octadecatrienoic acid). This omega-5 fatty acid, unique to pomegranate and a few related species, is responsible for the extract's distinctive bioactivity profile.

Punicic acid's documented anti-inflammatory, skin-regenerating, and collagen-stimulating properties support positioning in anti-aging serums, repair creams, and formulations targeting mature, damaged, or photostressed skin. The conjugated fatty acid structure provides enhanced penetration and bioavailability compared to conventional polyunsaturated oils. Hair care applications leverage the extract for dry, brittle hair treatments and scalp conditioning. Nutraceutical applications focus on metabolic health, with research indicating effects on lipid

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metabolism, glucose homeostasis, and inflammatory markers relevant to metabolic syndrome and cardiovascular wellness.

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