

Product Specification — Sweet Almond Oil, Virgin (Cosmetic Grade)

Document Reference: OLE-SPEC-AO-001 **Revision:** 3.1 **Date:** 17 October 2026 **Prepared by:** Dean Oehlmann, Managing Director **Issued by:** Oleinza Oils Pty Ltd, trading as Oleinza Naturals

Revision 3.1 change note: Acid value, peroxide value, density, FFA and fatty acid limits aligned with established virgin almond oil trade specifications. Colour reported rather than specified. Cosmetic microbiology methods (ISO 21149 series). Standards wording restated as design basis confirmed per batch on CoA. Packaging and supply restated to current status.

Revision 3.0 change note: Trading name updated to Oleinza Naturals. Pack formats extended (1 L, 5 L, 20 L, 200 L, 1,000 L IBC). Refined grade (bleached, short-path deodorised) added as an on-request development option. Feedstock and grade statements reworded for external distribution. Aflatoxin limits unchanged from Rev 2.1 (OLE-QA-AFLX-DP-001, EU 2023/915 §1.1.9).

Product Description

Field	Detail
Product name	Oleinza Sweet Almond Oil, Virgin
INCI name	Prunus Amygdalus Dulcis (Sweet Almond) Oil
CAS number	8007-69-0
EC number	291-063-5
Grade	Cosmetic / personal care / aromatherapy carrier. Not supplied for human consumption.
Botanical source	<i>Prunus dulcis</i> var. <i>dulcis</i> — Australian-grown almonds (Riverina and Sunraysia, non-food-grade stream)
Extraction method	Expeller-pressed at 82–85 °C, settled and plate-filtered. No solvent, no chemical refining, no additives.
Production site	Pressed in Griffith, NSW; quality control and dispatch from Coburg North, Victoria
Appearance	Clear to slightly hazy, pale golden liquid
Odour	Mild, sweet, characteristic nutty almond
Country of origin	Australia
Allergen declaration	Contains tree nut (almond) derived material
GMO status	Non-GMO
Shelf life	24 months from date of manufacture (sealed, cool, dark storage ≤25 °C)
Packaging	20 L HDPE; 200 L lacquer-lined steel drum; 1,000 L IBC. Smaller packs by arrangement

Field	Detail
Storage	Store sealed, below 25 °C, away from direct light and heat. Nitrogen blanket recommended for drums and IBCs after partial use.

Refined grade (on request): A refined, bleached and short-path deodorised (RBD) grade with reduced colour and odour can be produced for development customers. Specification and lead time on application.

Specification Table

Physical & Chemical

Parameter	Unit	Specification	Test Method	Frequency
Acid Value	mg KOH/g	≤ 4.0	Ph.Eur. 2.5.1 / AOCS Te 1a-64	Every batch
Free Fatty Acid (as oleic)	%	≤ 2.0	Calculated from AV (× 0.503)	Every batch
Peroxide Value	meq O ₂ /kg	≤ 10	Ph.Eur. 2.5.5 / AOCS Cd 8b-90	Every batch
Anisidine Value (p-AV)	—	≤ 10	AOCS Cd 18-90	Quarterly
TOTOX (2×PV + p-AV)	—	≤ 15	Calculated	Quarterly
Moisture & Volatiles	%	≤ 0.2	AOCS Ca 2c-25 / Karl Fischer	Every batch
Refractive Index (20 °C)	—	1.468–1.474	Ph.Eur. 2.2.6	Quarterly
Relative Density (20 °C)	—	0.911–0.920	Ph.Eur. 2.2.5	Quarterly
Iodine Value (Wijs)	g I ₂ /100 g	93–106	Ph.Eur. 2.5.4 / AOCS Cd 1-25	Quarterly
Saponification Value	mg KOH/g	185–200	Ph.Eur. 2.5.6 / AOCS Cd 3-25	Quarterly
Unsaponifiable Matter	%	< 1.5	Ph.Eur. 2.5.7	Annual

Colour

Parameter	Unit	Specification	Test Method	Frequency
Lovibond (1" cell)	Y / R	Reported	Lovibond tintometer	Every batch
Gardner Scale	—	Reported	ASTM D1544	Every batch

Contaminants

Parameter	Unit	Specification	Test Method	Frequency
Total Aflatoxins (B1+B2+G1+G2)	µg/kg	< 10	ELISA screen + HPLC / LC-MS/MS confirmation (AOAC 999.07)	Every batch
Aflatoxin B1	µg/kg	< 8	HPLC / LC-MS/MS	Every batch
Iron (Fe)	mg/kg	≤ 10	ICP-OES / AAS	Quarterly
Lead (Pb)	mg/kg	< 0.1	ICP-MS	Annual
Arsenic (As)	mg/kg	< 0.1	ICP-MS	Annual
Cadmium (Cd)	mg/kg	< 0.1	ICP-MS	Annual

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Parameter	Unit	Specification	Test Method	Frequency
Mercury (Hg)	mg/kg	< 0.01	ICP-MS	Annual
Benzo[a]pyrene (PAH)	µg/kg	< 2	GC-MS	Annual
Pesticide Residues	—	Below Ph.Eur. 2.8.13 limits	Multi-residue GC-MS/MS (QuEChERS)	Annual

Fatty Acid Profile (typical, by GC)

Fatty Acid	Typical %	Specification
Palmitic (C16:0)	6.5	4–9
Palmitoleic (C16:1)	0.5	≤ 1.0
Stearic (C18:0)	1.5	≤ 3.2
Oleic (C18:1)	70	62–86
Linoleic (C18:2)	20	7–30
α-Linolenic (C18:3)	0.1	≤ 1.0

Test method: Ph.Eur. 2.4.22 / AOCS Ce 1-62 (GC-FID). Frequency: annual or per new feedstock source.

Microbiological (cosmetic)

Parameter	Unit	Specification	Test Method	Frequency
Total Aerobic Mesophilic Count	CFU/g	< 100	ISO 21149	Annual
Yeast & Mould	CFU/g	< 100	ISO 16212	Annual
E. coli	per g	Not detected	ISO 21150	Annual
S. aureus	per g	Not detected	ISO 22718	Annual
Pseudomonas aeruginosa	per g	Not detected	ISO 22717	Annual

Bioactive Markers (reported, not specified)

Parameter	Unit	Typical	Test Method	Frequency
Total Tocopherols	mg/kg	> 200	HPLC	Annual
α-Tocopherol	mg/kg	> 150	HPLC	Annual

Sensory Evaluation (every batch)

Attribute	Acceptable	Reject
Colour	Pale golden, clear	Dark, brown, green tinge
Odour	Mild sweet nutty	Rancid, musty, burnt, chemical
Clarity	Clear to slightly hazy (post-filtration)	Turbid, visible sediment

Regulatory & Standards Alignment

Standard	Status
Ph.Eur. — Almond Oil, Virgin (monograph 0261)	Specification designed to monograph limits; conformance confirmed per batch on CoA
USP-NF — Almond Oil	Specification designed to monograph limits; conformance confirmed per batch on CoA
EU Cosmetic Regulation (EC) 1223/2009 — PAH, heavy metals	Specification set to comply; confirmed by batch testing
AICIS (Australia)	Listed on the Australian Inventory of Industrial Chemicals
ISO 22716 (Cosmetic GMP)	Quality system aligned; certification not held

Grade note: This product is supplied as **cosmetic grade**. Pressing temperature (82–85 °C) exceeds cold-pressed thresholds, so the oil is described as expeller-pressed, not cold-pressed. The feedstock is a non-food-grade almond stream and the product is not offered for human consumption. Batches that do not meet the aflatoxin limits are not released.

Downgrade Criteria

Oil failing cosmetic specification may be downgraded to industrial grade under non-conformance control:

Parameter	Cosmetic Limit	Industrial Tolerance
Acid Value	≤ 4.0	≤ 8.0
Peroxide Value	≤ 10	≤ 20
Iron	≤ 10 mg/kg	≤ 50 mg/kg

Batch Identification & Traceability

Format: **AO-YYMMDD-NN** (e.g., AO-260301-01)

Each batch is traceable from feedstock lot through pressing run, filtration and finished-product testing via the Oleinza Plant Operations System. A Certificate of Analysis accompanies every shipment.

Capacity & Availability

Item	Detail
Pack formats	20 L, 200 L drum, 1,000 L IBC; smaller packs by arrangement
Sample quantities	100 mL to 1 L samples available for evaluation
Supply	Griffith pressing plant in commissioning, running in first quarter 2027. Trial-run quantities available now
Delivery terms	FOB Melbourne; CIF and DAP by arrangement

This specification is subject to periodic review. Oleinza Oils Pty Ltd (trading as Oleinza Naturals) reserves the right to update specifications as processing and quality data accumulate.