

CERTIFICATE OF ANALYSIS (COA)

Product Name	APPLE SEED OIL
Botanical Name	Pyrus malus (synonym Malus domestica)
CAS #	85251-63-4
EINECS #	286-475-7
INCI Name	Pyrus Malus (Apple) Seed Oil
Part Used	Seeds
Extraction Method	Cold Pressed
Quality	100% Pure and Natural

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULT</u>
Appearance	Pale yellow to greenish golden colored liquid	CONFORMS
Odour	Characteristic mild odour	CONFORMS
Refractive Index	1.465 - 1.485 @ 20°C	1.471
Specific Gravity (g/mL)	0.910 - 0.940 @ 20°C	0.924
Saponification Value (mgKOH/g)	180 – 200	192
Peroxide Value (meq O ₂ /kg)	Less than 5.0	CONFORMS
Iodine Value (g I ₂ /100g)	130 - 170	158
Acid Value (mgKOH/g)	Less than 2.0	CONFORMS
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water	CONFORMS

FATTY ACID COMPOSITION:

<u>FATTY ACID</u>	<u>C-CHAIN</u>	<u>SPECIFICATIONS (%)</u>	<u>RESULTS</u>
Palmitic Acid	<u>C16:0</u>	<u>4.00 – 8.00</u>	<u>6.10</u>
Stearic Acid	<u>C18:0</u>	<u>Maximum 5.00</u>	<u>1.20</u>
Oleic Acid	<u>C18:1 (n-9)</u>	<u>28.00 – 34.00</u>	<u>30.80</u>
Linoleic Acid	<u>C18:2 (n-6)</u>	<u>52.00 – 64.00</u>	<u>58.70</u>
Alpha-Linolenic Acid	<u>C18:3 (n-3)</u>	<u>Maximum 3.00</u>	<u>1.30</u>
Arachidic Acid	<u>C20:0</u>	<u>Maximum 3.5</u>	<u>1.40</u>

<u>MICROBIAL ANALYSIS</u>	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Aerobic Mesophilic Bacterial Count	< 100 CFU/g	ISO 21149	CONFORMS
Yeast and Mould	< 10 CFU/g	ISO 16212	CONFORMS
Candida albicans	ABSENT / 1g	ISO 18416	CONFORMS
Escherichia coli	ABSENT / 1g	ISO 21150	CONFORMS
Pseudomonas aeruginosa	ABSENT / 1g	ISO 22717	CONFORMS
Staphylococcus aureus	ABSENT / 1g	ISO 22718	CONFORMS

<u>HEAVY METAL TESTS</u>	<u>SPECIFICATIONS</u>	<u>STANDARDS</u>	<u>RESULTS</u>
Lead: Pb (mg/kg or ppm)	< 10 ppm	na	CONFORMS
Arsenic: As (mg/kg or ppm)	< 2 ppm	na	CONFORMS
Mercury: Hg (mg/kg or ppm)	< 1 ppm	na	CONFORMS

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