

TECHNICAL DATA SHEET (TDS)

Product Name	BLACK CUMIN SEED (KALONJI) OIL
Botanical Name	Nigella sativa
CAS #	90064-32-7
EINECS #	290-094-1
INCI Name	Nigella sativa (Black Cumin) Seed Oil

Part Used	Seeds
Extraction Method	Cold Pressed
Quality	100% Pure and Natural

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>
Appearance	Pale yellow to amber colored liquid
Odour	Characteristic mild peppery, bittery aroma
Refractive Index	1.460 - 1.480 @ 20°C
Specific Gravity (g/mL)	0.910 - 0.935 @ 25°C
Saponification Value (mgKOH/g)	180 – 210
Peroxide Value (meq O ₂ /kg)	Less than 5.0
Iodine Value (g I ₂ /100g)	110 - 130
Free Fatty Acids (% oleic)	Less than 10.0
Acid Value (mgKOH/g)	Less than 1.0
Solubility	Soluble in cosmetic esters and fixed oils; Insoluble in water

FATTY ACID COMPOSITION:

<u>FATTY ACID</u>	<u>C-CHAIN</u>	<u>SPECIFICATIONS (%)</u>
Palmitic Acid	<u>C16:0</u>	<u>2.00 – 14.00</u>
Palmitoleic Acid	<u>C16:1</u>	<u>0.10 – 0.50</u>
Stearic Acid	<u>C18:0</u>	<u>2.00 – 4.00</u>
Oleic Acid	<u>C18:1 (n-9)</u>	<u>17.00 – 26.00</u>
Linoleic Acid	<u>C18:2 (n-6)</u>	<u>52.00 – 67.00</u>
Alpha-Linolenic Acid	<u>C18:3 (n-3)</u>	<u>Maximum 2.00</u>
Eicosadienoic Acid	<u>C20:2 (n-6)</u>	<u>Maximum 3.00</u>

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

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

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