

TECHNICAL DATA SHEET (TDS)

Product Name	BLACK SPRUCE ESSENTIAL OIL
Botanical Name	Picea mariana
CAS #	8008-80-8 ; 91722-19-9
EINECS #	3034
INCI Name	Picea Mariana (Black Spruce) Oil

Part Used	Needles
Extraction Method	Steam Distilled Essential Oil
Quality	100% Pure and Natural
Note Classification	Top to Middle

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>
Appearance	Colorless to pale yellow liquid
Odour	Fresh, penetrating, pine forest-like aroma with balsamic, woody undertones
Refractive Index	1.466 - 1.472 @ 20°C
Specific Gravity (g/mL)	0.900 - 0.930 @ 20°C
Optical Rotation (°)	-41° to +25°
Solubility	Soluble in alcohols and fixed oils; Insoluble

<u>MICROBIAL ANALYSIS</u>	<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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