



CERTIFICATE OF ANALYSIS (COA)

Product Name	DOUGLAS FIR NEEDLE ESSENTIAL OIL
Botanical Name	Pseudotsuga menziesii
Product Code	GF2188
CAS #	8050-89-3 ; 91771-64-1 ; 97926-19-7
EINECS #	294-957-3 ; 308-234-8
INCI Name	Pseudotsuga Menziesii (Douglas Fir) Oil

Batch #	11882602
Manufacturing Date	FEBRUARY 2026
Best Before Date	JANUARY 2028

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

<u>PROPERTIES</u>	<u>SPECIFICATIONS</u>	<u>RESULTS</u>
Appearance	Colorless to pale yellow green colored liquid	CONFORMS
Odour	Rich, soft, woody-balsamic, sweet Pine needle-like aroma	CONFORMS
Refractive Index	1.470 - 1.480 @ 20°C	1.476
Specific Gravity (g/mL)	0.860 - 0.869 @ 20°C	0.864
Optical Rotation (°)	-30° to -4°	CONFORMS
Solubility	Soluble in alcohols and fixed oils; Insoluble in water	CONFORMS

Comments	Odour quality is excellent
----------	----------------------------

Disclaimer & Caution: Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. Gattefossé provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the product, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of Gattefossé, no representation or warranty - expressed or implied - is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of Gattefossé is limited to the value of the goods and does not include any consequential loss. Gattefossé shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. Gattefossé shall not be responsible for any damages resulting from the use of or reliance upon this information.



<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

STABILITY AND STORAGE:

Keep in tightly closed container in a cool and dry place, protected from sunlight. When stored for more than 24 months, quality should be checked before use.

As it is electronically generated document, hence no signature required.

Disclaimer & Caution: Please refer to all relevant technical information specific to the product, prior to use. The information contained in this document is obtained from current and reliable sources. Gattefossé provides the information contained herein, but makes no representation as to its comprehensiveness or accuracy. Individuals receiving this information must exercise their independent judgment in determining its appropriateness for a particular purpose. The user of the product is solely responsible for compliance with all laws and regulations applying to the use of the product, including intellectual property rights of third parties. As the ordinary or otherwise use(s) of this product is outside the control of Gattefossé, no representation or warranty - expressed or implied - is made as to the effect(s) of such use(s), (including damage or injury), or the results obtained. The liability of Gattefossé is limited to the value of the goods and does not include any consequential loss. Gattefossé shall not be liable for any errors or delays in the content, or for any actions taken in reliance thereon. Gattefossé shall not be responsible for any damages resulting from the use of or reliance upon this information.