



NHR ORGANIC OILS
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Certificate of Analysis & Gas Chromatography
Organic Balsam Fir Essential Oil
(Abies balsamea)

Botanical name :	<i>Abies balsamea (L.) Miller</i>
Commercial name :	Organic Balsam Fir
Batch number :	221225-2
Geographical origin :	Canada

Physical and chemical data :

	Standards	Results of analysis
Appearance	Liquid	Conform
Colour	Colourless to light yellow	Conform
Odour	Fresh, woody, resinous	Conform
Specific gravity at 20°C	0.860 to 0.885	0.8734
Refractive index at 20°C	1.470 to 1.480	1.4741
Flash point	+35°C to +50°C	

Table of components :

Components	Contents
3-Methylfurane	0.01%
Toluene	0.02%
Santene	1.21%
Bornylene	0.02%
Tricyclene	0.68%
Alpha-thujene	0.15%
Alpha-pinene	18.94%
Camphene	4.46%
Alpha-fenchene	0.10%
Thuja-2.4(10)-diene	0.05%
3.7.7-Trimethylcyclohepta-1.3.5-triene	0.05%
Beta-pinene	32.73%
Sabinene	0.03%
Myrcene	2.47%
Alpha-phellandrene	0.21%
Pseudolimonene	0.02%

Delta-3-carene	10.40%
Alpha-terpinene	0.18%
Carvomenthene	0.01%
Para-cymene	0.18%
Limonene	11.86%
Cineole-1.8 (Eucalyptol) + Beta-phellandrene	5.29%
Z-beta-ocimene	0.01%
Gamma-terpinene	0.27%
Meta-cymenene	0.02%
Fenchone	0.10%
Para-cymenene	0.02%
Terpinolene	1.00%
Gamma-campholenal	0.03%
Linalool	0.10%
Nonanal	0.01%
Endo-fenchol	0.11%
Cis-para-menth-2-en-1-ol	0.02%
Alpha-campholenal	0.03%
Nopinone	0.01%
Cis-para-menth-2.8-dien-1-ol	0.01%
Trans-pinocarveol	0.10%
Camphor	0.17%
Trans-para-menth-2-en-1-ol	0.02%
Camphene Hydrate	0.05%
Meta-mentha-4.6-dien-8-ol	0.02%
Isoborneol	0.02%
Pinocamphone	0.03%
Methyl ether myrtenyle	0.01%
Pinocarvone	0.05%
Borneol	0.47%
Alpha-phellandren-8-ol	0.03%
Isopinocamphone	0.05%
Terpinene-4-ol	0.20%
Cryptone	0.02%
Para-cymen-8-ol	0.02%
Alpha-terpineol	0.76%
Myrtenal	0.06%
Myrtenol	0.06%
Methylchavicol (Estragole)	0.03%
Verbenone	0.04%
Endo-fenchyl Acetate	0.02%
Trans-carveol	0.04%
Citronellol	0.02%
Thymol methyl ether	0.07%
Carvone	0.02%
Piperitone	0.04%
Phellandral	0.03%

Iso-isopulegyl Acetate	0.02%
Bornyl Acetate	4.06%
Thymol	0.05%
Myrtenyl Acetate	0.01%
Alpha-longipinene	0.08%
Citronellyl Acetate	0.01%
Longicyclene	0.03%
Alpha-ylangene	0.02%
Alpha-copaene	0.02%
Beta-bourbonene	0.02%
Geranyl Acetate	0.06%
Beta-elemene	0.02%
Beta-longipinene	0.03%
Longifolene	0.41%
Methyleugenol	0.01%
Beta-caryophyllene	0.15%
Trans-alpha-bergamotene	0.02%
Alpha-himachalene	0.02%
Alpha-humulene	0.07%
E-beta-farnesene	0.04%
Thujopsene isomere	0.03%
Gamma-muurolene	0.02%
Germacrene D	0.01%
Gamma-curcumene	0.05%
Beta-selinene	0.04%
Alpha-selinene	0.03%
Beta-himachalene	0.04%
Alpha-muurolene	0.03%
Delta-amorphene	0.04%
Beta-bisabolene	0.28%
Beta-curcumene	0.03%
Gamma-cadinene	0.03%
Delta-cadinene	0.06%
E-gamma-bisabolene	0.01%
Neryl Butyrate	0.02%
Alpha-calacorene	0.02%
E-alpha-bisabolene	0.04%
E-Nerolidol	0.08%
Caryophyllene Oxide	0.03%
Abieta-8.12-diene	0.01%
Manool	0.02%
7.13-Abietadiene	0.02%
Z-Abienol	0.09%
Palustral	0.02%
TOTAL	99.46%