

CERTIFICATE OF ANALYSIS



SUBSTANCE IDENTIFICATION

Name	Pinus sylvestris oil
INCI	Pinus Sylvestris Oil
CAS Nr.	84012-35-1 / 94266-48-5
EINECS Nr.	281-679-2 / 304-455-9
Batch	W2310.01
Production date	09 2022
Expiration date	09 2027
Specification	Ph Eur 11.0

GENERAL CHARACTERISTICS

Type of product	100% Natural essential oil
Quality	Conventional product
Botanical name	Pinus sylvestris L., Pinaceae
Type of production	Water steam distillation
Plant part	Branches and needles
Country of origin	Romania

SENSORICAL CHARACTERISTICS

Parameter	Specification requirements	Result
Appearance	Colourless pale yellow or pale greenish liquid	Complies
Odor	Characteristic	Complies

PHYSICAL CHARACTERISTICS

Parameter	Specification requirements	Result
Specific density (20°C)	0.855-0.875	0.861
Refractive index (20°C)	1.465-1.480	1.471
Optical rotation (20°C)	-9° to -30°	-25.1°
Peroxide value	max 20	Conforms

PURITY

Parameter	Parameter	Result
Fatty acids and resinified essential oils	Not present	Ustreza
Additives	Not present	Ustreza

CHEMICAL CHARACTERISTICS (GC-FID)



Parameter	Specification requirements	Result
α Pinene	32.0-60.0 %	53.4 %
Camphene	0.5-2.0 %	1.4 %
β Pinene	5.0-22.0 %	10.5 %
Car-3-ene	6.0-18.0 %	12.5 %
β Myrcene	1.5-10.0 %	4.6 %
Limonene	7.0-12.0 %	9.0 %
β Phellandrene	max 2.5 %	0.7 %
P-Cymene	max 2.0 %	0.7 %
Terpinolene	max 4.0 %	0.7 %
Bornyl acetate	1.0-4.0 %	1.6 %
β Caryophyllene	1.0-6.0 %	1.9 %

PACKAGING AND STORAGE

Parameter	Requirements
Standard packaging	ALU, HDPE
Storage	In tight closed and full containers, at cool, dry and well ventilated place below 25°C
Reanalysis	When opened for more than 24 months quality should be checked before use.

ASSESSMENT

Quality conforms to the specification.

Approved by
Date

Neža Rangus Ignjatović
10.11.2023

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