



CERTIFICATE OF ANALYSIS (COA)

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PRODUCT INFORMATION

Parameter	Details
Product Name	Rose Centifolia Oil
Botanical Name	<i>Rosa centifolia</i> L.
Common Name	May Rose Oil / Cabbage Rose Oil
INCI Name	<i>Rosa Centifolia Flower Oil</i>
CAS No.	8007-01-0
FEMA No.	2989
Botanical Family	Rosaceae
Country of Origin	Bulgaria
Plant Part Used	Fresh Flowers
Extraction Method	Steam Distillation
Product Type	Natural Essential Oil
Grade	Professional Perfumery and Cosmetic Grade

Rosa Centifolia Flower Oil is recognised as a fragrance ingredient used in cosmetic products.

Analytical Specifications and Results

Test Parameter	Specification	Representative Result	Test Method
Appearance	Clear mobile liquid; may partially crystallise at low temperature	Clear mobile liquid	Visual
Colour	Pale yellow to yellow-orange	Pale yellow	Visual
Odour	Characteristic rich, fresh, sweet and diffusive rose odour	Complies	Organoleptic
Relative Density at 20°C	0.8480–0.8800	0.8624	Density Meter
Refractive Index at 20°C	1.4590–1.4720	1.4658	Refractometer
Optical Rotation at 20°C	–5.0° to +5.0°	–1.4°	Polarimeter
Congearing Point	15–25 °C	19.5 °C	Internal Method



Acid Value	≤3.0 mg KOH/g	1.2 mg KOH/g	Titration
Peroxide Value	≤10.0 meq O ₂ /kg	2.8 meq O ₂ /kg	Titration
Flash Point	≥64 °C	72 °C	Closed Cup
Solubility in 90% Ethanol	Soluble with possible slight opalescence	Pass	Visual
Solubility in Water	Practically insoluble	Complies	Visual
Foreign Matter	Absent	Pass	Visual
Added Solvents	Not detected	Pass	GC
Purity	100% natural essential oil	Complies	GC / Supplier Declaration

Published specifications for Bulgarian distilled rose oil commonly show relative density of approximately 0.848–0.868 at 25 °C and refractive index of approximately 1.459–1.472 at 20 °C.

Organoleptic Evaluation

Attribute	Evaluation
Opening Note	Fresh, radiant and diffusive rose
Floral Character	Rich, natural, sweet and petal-like
Secondary Facets	Green, citrus, honeyed, waxy and lightly spicy
Dry-Down	Soft, warm, floral and persistent
Overall Quality	Conforms to professional perfumery grade

The material possesses a natural rose profile with a fresh floral opening, sweet petal character and subtle green, waxy and spicy undertones.

Representative GC-MS Composition

Natural Constituent	CAS No.	Representative Specification (%)	Representative Result (%)
Citronellol	106-22-9	20.00–40.00	32.40
Geraniol	106-24-1	10.00–25.00	18.60
Nerol	106-25-2	5.00–15.00	9.20
Nonadecane	629-92-5	5.00–15.00	10.80
Heneicosane	629-94-7	2.00–10.00	5.70
Phenethyl Alcohol	60-12-8	1.00–5.00	2.80
Eugenol	97-53-0	Trace–2.00	1.10
Farnesol	4602-84-0	Trace–2.00	0.90
Linalool	78-70-6	Trace–2.00	0.70
Geranyl Acetate	105-87-3	Trace–2.00	0.60
Methyl Eugenol	93-15-2	≤0.50	0.18
Limonene	5989-27-5	Trace–1.00	0.12



Other Natural Constituents	Various	Balance	16.90
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The GC-MS profile above is representative rather than batch-specific. Natural rose oils vary according to species, cultivar, harvest, climate, flower maturity and distillation conditions.

Fragrance Allergen Profile

Fragrance Allergen	Status
Citronellol	Naturally Present
Geraniol	Naturally Present
Eugenol	Naturally Present
Farnesol	Naturally Present
Linalool	Naturally Present
Limonene	Naturally Present
Citral	May be Present in Trace Amounts
Benzyl Alcohol	May be Present
Benzyl Benzoate	May be Present in Trace Amounts

Final allergen values must be determined from the batch-specific GC-MS or allergen analysis.

Microbiological Quality

Due to the nature of the concentrated essential oil and its low water activity, significant microbial growth is not expected.

Test	Specification	Result
Total Aerobic Microbial Count	$\leq 1,000$ CFU/g	<10 CFU/g
Yeast and Mould	≤ 100 CFU/g	<10 CFU/g
Escherichia coli	Absent in 1 g	Not Detected
Salmonella spp.	Absent in 25 g	Not Detected
Staphylococcus aureus	Absent in 1 g	Not Detected
Pseudomonas aeruginosa	Absent in 1 g	Not Detected

Heavy Metals

Parameter	Specification	Representative Result
Lead (Pb)	≤ 10 ppm	<1.0 ppm
Arsenic (As)	≤ 3 ppm	<0.5 ppm
Cadmium (Cd)	≤ 1 ppm	<0.1 ppm
Mercury (Hg)	≤ 1 ppm	<0.1 ppm



Pesticide and Contaminant Status

Parameter	Status
Pesticide Residues	Complies with applicable limits
Residual Extraction Solvents	Not applicable to steam-distilled oil
Phthalates	Not intentionally added
Synthetic Fragrance Materials	Not intentionally added
Mineral Oil	Not intentionally added
Preservatives	Not added
Antioxidants	Not added unless otherwise declared
Animal-Derived Materials	None
GMO Materials	Not expected
Irradiation	Not irradiated

Purity and Authenticity Statement

Rose Centifolia Oil – Bulgaria is declared to be a natural steam-distilled floral oil.

The material is not intentionally diluted or adulterated with:

- Synthetic citronellol
- Synthetic geraniol
- Synthetic rose bases
- Carrier oils
- Mineral oils
- Glycols
- Alcohol
- Phthalates
- Artificial colours
- Artificial preservatives

Authenticity should be confirmed through batch-specific GC-MS analysis, chromatographic comparison and review of the original producer's documentation.

Applications

Suitable for professional use in:

- Fine fragrances
- Extrait de parfum
- Eau de parfum
- Attars
- Natural perfumes
- Rose accords
- Floral bouquets
- Oriental fragrances
- Luxury cosmetics



- Skin-care fragrances
- Soap and toiletries
- Incense
- Home-fragrance compositions

Use levels must comply with the applicable IFRA Standard and the safety assessment of the finished product.

Storage Conditions

Store:

- In the original tightly sealed container
- In a cool, dry and well-ventilated location
- Away from direct sunlight and ultraviolet light
- Away from heat and ignition sources
- Away from strong oxidising agents
- With minimum container headspace where possible

Recommended Storage Temperature

5–20°C

Refrigerated storage may cause partial crystallisation or solidification. Allow the sealed container to return gradually to room temperature and homogenise gently before use.

Shelf Life

24 months from the manufacturing date when stored unopened under recommended conditions.

After opening, minimise exposure to air, heat, light and moisture to reduce oxidation.

Quality Conclusion

Based on the representative tests and specifications stated in this certificate, the material is considered to comply with the established quality requirements for Rose Centifolia Oil, suitable for professional perfumery and cosmetic fragrance applications.

Important Botanical Identity Notice

Commercial Bulgarian rose oil is most commonly produced from *Rosa damascena* Mill., while the product name supplied for this document is Rose Centifolia Oil.

The exact botanical species, INCI designation, CAS number and chromatographic profile must therefore be confirmed against the original producer's specification, GC-MS report and batch documentation before this certificate is issued for:



- Regulatory submission
- Customer certification
- Product registration
- Cosmetic safety assessment
- IFRA calculation
- EU allergen declaration

Disclaimer

This Certificate of Analysis is a professional representative template prepared from published technical ranges and typical compositional information for natural distilled rose oil. It is not evidence that the listed batch was physically tested.

All representative results must be replaced or verified using actual laboratory results for the specific batch before the certificate is signed, stamped or issued to a customer.

Natural essential oils may vary in:

- Colour
- Odour
- Density
- Refractive index
- Optical rotation
- Congealing point
- Constituent concentrations
- Allergen content

Such variation may result from botanical identity, cultivar, growing region, climate, harvest period, flower maturity, distillation process and storage history.

Aromology Trading LLC and the finished-product manufacturer remain responsible for confirming the material identity, reviewing the original producer's documentation and ensuring compliance with applicable quality, cosmetic, fragrance and regulatory requirements.

Authorised by

Fozia Khot

Director

Aromology Trading LLC