# BIORUŽA, s. r. o.

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## CERTIFICATE OF ANALYSIS (COA)

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|---|---|
| **Product Name** | **RUE ESSENTIAL OIL** |
| **Botanical Name** | Ruta graveolens |
| **Product Code** | 4218 |
| **CAS #** | 8014-29-7; 84929-47-5 |
| **FEMA #** | 2995 |
| **EINECS #** | 284-531-5 |
| **INCI Name** | Ruta Graveolens (Rue) Oil |

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|---|---|
| **Batch #** | 11932408 |
| **Manufacturing Date** | AUGUST 2025 |
| **Best Before Date** | JULY 2028 |

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| **Part Used** | Leaves and Flowering Tops |
| **Extraction Method** | Steam Distilled Essential Oil |
| **Quality** | 100% Pure and Natural |
| **Note Classification** | Top Note |

| PROPERTIES | SPECIFICATIONS | RESULTS |
|---|---|---|
| **Appearance** | Pale yellow to orange colored liquid | CONFORMS |
| **Odour** | Strong, aromatic, bitter, herbaceous odour | CONFORMS |
| **Refractive Index** | 1.425 - 1.435 @ 20°C | 1.429 |
| **Specific Gravity (g/mL)** | 0.820 - 0.845 @ 20°C | 0.838 |
| **Optical Rotation (** | -1° to +2° | CONFORMS |
| **Solubility** | Soluble in alcohols and fixed oils; Insoluble in water | CONFORMS |

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|---|---|
| **Comments** | Odour quality is excellent |

| MICROBIAL ANALYSIS | SPECIFICATIONS | STANDARDS | RESULTS |
|---|---|---|---|
| **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 |

| HEAVY METAL TESTS | SPECIFICATIONS | STANDARDS | RESULTS |
|---|---|---|---|
| **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 |