



CERTIFICATE of ANALYSIS (COA)

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|---------------------------|---------------------------------|
| COMMON NAME | Geranium, Africa - Organic |
| LATIN NAME | <i>Pelargonium graveolens</i> |
| COUNTRY OF ORIGIN | Congo |
| CULTIVATION METHOD | Certified Organic (USDA, NOP) |
| TYPE | Essential Oil |
| EXTRACTION METHOD | Steam Distilled |
| PLANT PART | Leaves/Tops |
| USE | Aromatherapy, Natural Perfumery |

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|---------------------------|----------------|
| SKU | 365 |
| LOT # | 16 |
| MANUFACTURING DATE | September 2022 |
| BEST BY DATE | September 2025 |

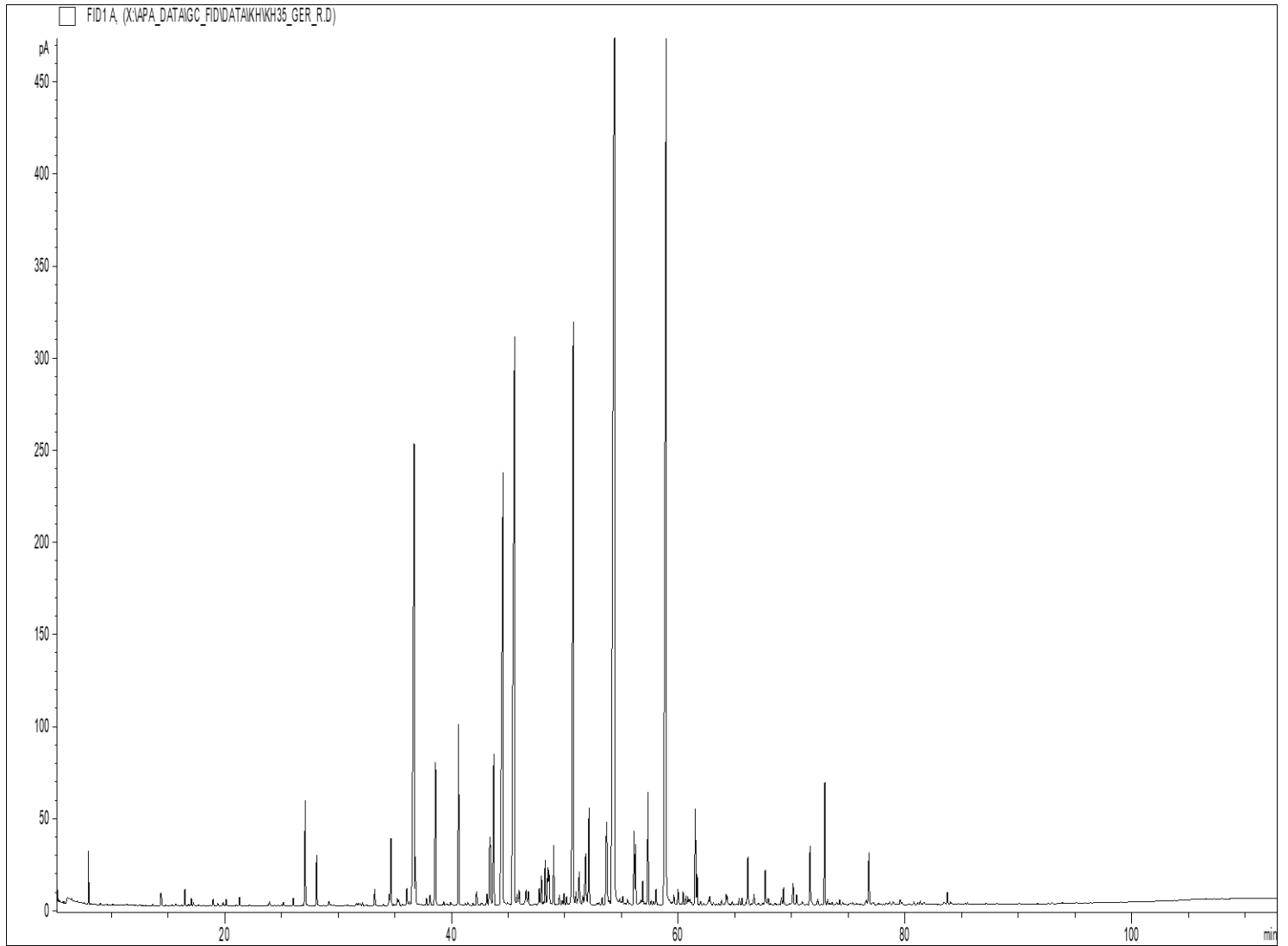
| | SPECIFICATIONS (Range) | |
|-------------------------------|-------------------------------|--------|
| SPECIFIC GRAVITY @20°C | 0.883 – 0.905 | 0.899 |
| REFRACTIVE INDEX @20°C | 1.461 – 1.477 | 1.4665 |
| OPTICAL ROTATION @20°C | -18° to +8.00° | -15.1° |

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|---------------------------------|---|-----------------|
| PHYSICAL APPEARANCE | Transparent oil | <i>Conforms</i> |
| COLOR | Green | <i>Conforms</i> |
| ODOR | Characteristic sweet, rosy, floral aroma. | <i>Conforms</i> |
| SOLUBILITY | Soluble in alcohol and fixed oils | |
| SPECIAL USE INSTRUCTIONS | Dilute before use | |

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| PRIMARY CONSTITUENTS | Citronellol (18-30%), Geraniol (7-21%), Citronellyl Formate (2-14%). |
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THIRD PARTY LAB ANALYSIS (GCMS)

CHROMATOGRAPHIC PROFILE:



- ORGANIC GERANIUM EO - SKU 365 LOT 16 -

| Peaks | RT (min) | Compound name | % | Standard (%) | Allergens (%) |
|-------|----------|--------------------------------|-------------|--------------------|---------------|
| 1 | 5.30 | CYCLIC COMPOUND | 0.04 | | |
| 2 | 8.00 | alpha-PINENE | 0.28 | | |
| 3 | 14.36 | beta-MYRCENE | 0.10 | | |
| 4 | 14.41 | alpha-PHELLANDRENE | 0.07 | | |
| 5 | 16.48 | LIMONENE | 0.13 | | 0.13 |
| 6 | 17.06 | 1,8-CINEOLE | 0.06 | | |
| 7 | | beta-PHELLANDRENE | | | |
| 8 | 17.25 | cis-ARBUSCULON | 0.02 | | |
| 9 | 18.98 | cis-beta-OCIMENE | 0.06 | | |
| 10 | 19.39 | trans-ARBUSCULON | 0.02 | | |
| 11 | 19.85 | AROMATIC COMPOUND Mw=122 | 0.03 | | |
| 12 | 20.12 | trans-beta-OCIMENE | 0.05 | | |
| 13 | 21.30 | p-CYMENE | 0.07 | | |
| 14 | 23.96 | OXYGENED COMPOUND | 0.04 | | |
| 15 | 25.17 | 1-HEXANOL | 0.03 | | |
| 16 | 26.05 | 5-HEPTEN-2-ONE, 6-METHYL- | 0.07 | | |
| 17 | 27.09 | ROSE cis-OXIDE | 0.98 | 0.70 - 1.5 | |
| 18 | 28.11 | ROSE trans-OXIDE | 0.46 | 0.30 - 0.60 | |
| 19 | 29.19 | TERPENIC COMPOUND | 0.05 | | |
| 20 | 31.62 | PHOTOCITRAL ISOMER | 0.03 | | |
| 21 | 31.78 | COMPOUND Mw=164 | 0.03 | | |
| 22 | 31.90 | PERILLENE | 0.04 | | |
| 23 | 32.16 | cis-p-MENTHANE-8-OL | 0.03 | | |
| 24 | 33.23 | LINALOOL cis-OXIDE | 0.16 | | |
| 25 | 33.99 | ALKAN COMPOUND | 0.02 | | |
| 26 | 34.51 | alpha-CUBEBENE | 0.13 | | |
| 27 | 34.66 | MENTHONE | 0.67 | ≤ 2.1 | |
| 28 | 35.22 | LINALOOL trans-OXIDE | 0.08 | | |
| 29 | 35.34 | SESQUITERPENE | 0.08 | | |
| 30 | 36.06 | CITRONELLAL | 0.18 | | |
| 31 | 36.31 | SESQUITERPENE | 0.04 | | |
| 32 | 36.70 | ISOMENTHONE | 7.17 | 4.0 - 8.0 | |
| 33 | 36.82 | alpha-COPAENE | 0.46 | | |
| 34 | 37.79 | 2,4-DIMETHYL-HEPTANE-3,5-DIONE | 0.06 | | |
| 35 | 38.11 | alpha-BOURBONENE | 0.13 | | |
| 36 | 38.60 | beta-BOURBONENE | 1.62 | | |
| 37 | 39.32 | alpha-GURJUNENE | 0.05 | | |
| 38 | 39.61 | COMPOUND Mw=154 | 0.02 | | |
| 39 | 39.92 | beta1-CUBEBENE | 0.04 | | |
| 40 | 40.02 | SESQUITERPENE | 0.02 | | |
| 41 | 40.62 | LINALOOL | 1.65 | | |
| 42 | 40.84 | DIMETHYL SULFOXIDE | 0.02 | | |
| 43 | 41.22 | LINALYL ACETATE | 0.03 | | |

- ORGANIC GERANIUM EO - SKU 365 LOT 16 -

| Peaks | RT (min) | Compound name | % | Standard (%) | Allergens (%) |
|-------|----------|----------------------------|--------------|--------------------|---------------|
| 44 | 41.43 | 1-OCTANOL | 0.04 | | |
| 45 | 41.90 | ISOPULEGOL | 0.03 | | |
| 46 | 42.22 | epsilon-CADINENE | 0.20 | | |
| 47 | 42.70 | ISOMENTHYL ACETATE | 0.05 | | |
| 48 | 43.13 | alpha-trans-BERGAMOTENE | 0.14 | | |
| 49 | 43.38 | alpha-GUAIENE | 1.09 | | |
| 50 | 43.73 | beta-CARYOPHYLLENE | 1.79 | | |
| 51 | 44.55 | 6,9-GUAIADIENE | 7.80 | 4 - 9 | |
| 52 | 45.56 | CITRONELLYL FORMATE | 10.20 | 2.0 - 14.0 | |
| 53 | 45.80 | MENTHOL | 0.15 | | |
| 54 | 45.96 | CADINA-3,5-DIENE | 0.19 | | |
| 55 | 46.58 | GERMACRENE A | 0.23 | | |
| 56 | 46.78 | ALLO-AROMADENDRENE | 0.18 | | |
| 57 | 47.37 | SESQUITERPENE | 0.02 | | |
| 58 | 47.75 | SESQUITERPENE | 0.18 | | |
| 59 | 47.94 | CITRONELLYL ACETATE | 0.32 | | |
| 60 | 48.10 | SESQUITERPENE | 0.03 | | |
| 61 | 48.27 | alpha-HUMULENE | 0.44 | | |
| 62 | 48.49 | NERYL FORMATE | 0.36 | | |
| 63 | 48.59 | SESQUITERPENE | 0.42 | | |
| 64 | 48.82 | SESQUITERPENE | 0.02 | | |
| 65 | 49.02 | NERAL | 0.57 | | 0.57 |
| 66 | 49.52 | gamma-MUUROLENE | 0.11 | | |
| 67 | 49.78 | CALARENE ISOMER | 0.04 | | |
| 68 | 49.94 | alpha-TERPINEOL | 0.11 | | |
| 69 | 50.16 | CALAMENENE ISOMER | 0.09 | | |
| 70 | 50.73 | GERANYL FORMATE | 7.56 | | |
| 71 | | SESQUITERPENE | | | |
| 72 | 50.99 | SESQUITERPENE | 0.15 | | |
| 73 | 51.27 | beta-SELINENE | 0.49 | | |
| 74 | | alpha-BULNESENE | | | |
| 75 | 51.58 | alpha-SELINENE | 0.11 | | |
| 76 | 51.84 | alpha-MUUROLENE | 0.75 | | |
| 77 | | GERANIAL | | | 0.75 |
| 78 | 52.13 | CITRONELLYL PROPIONATE | 1.01 | | |
| 79 | 52.84 | SESQUITERPENE | 0.02 | | |
| 80 | 53.02 | TERPENIC COMPOUND | 0.03 | | |
| 81 | 53.29 | E,E-alpha-FARNESENE | 0.08 | | |
| 82 | 53.67 | gamma-CADINENE | 0.99 | | |
| 83 | | delta-CADINENE | | | |
| 84 | 53.70 | GERANYL ACETATE | 0.34 | | |
| 85 | 53.94 | SESQUITERPENE | 0.02 | | |
| 86 | 54.38 | CITRONELLOL | 21.86 | 18.0 - 30.0 | 21.86 |

- ORGANIC GERANIUM EO - SKU 365 LOT 16 -

| Peaks | RT (min) | Compound name | % | Standard (%) | Allergens (%) |
|-------|----------|----------------------------|--------------|--------------------|---------------|
| 87 | 54.84 | SESQUITERPENE | 0.04 | | |
| 88 | 55.12 | CADINA-1,4-DIENE | 0.09 | | |
| 89 | 55.53 | NERYL PROPIONATE | 0.07 | | |
| 90 | 56.10 | NEROL | 0.73 | | |
| 91 | 56.23 | CITRONELLYL BUTYRATE | 0.52 | | |
| 92 | 56.58 | TERPENIC COMPOUND | 0.04 | | |
| 93 | 56.69 | CITRONELLIC ESTER | 0.07 | | |
| 94 | 56.87 | NERYL ISOBUTYRATE | 0.25 | | |
| 95 | 57.06 | TERPENIC COMPOUND | 0.03 | | |
| 96 | 57.33 | GERANYL PROPIONATE | 1.08 | | |
| 97 | 57.61 | GERMACRENE B | 0.05 | | |
| 98 | 57.80 | cis-CALAMENENE | 0.04 | | |
| 99 | 58.05 | trans-CALAMENENE | 0.16 | | |
| 100 | 58.93 | GERANIOL | 14.37 | 10.0 - 18.0 | 14.37 |
| 101 | 59.61 | trans-MYRTANOL | 0.13 | | |
| 102 | 59.98 | ISOGERANIOL ISOMER | 0.20 | | |
| 103 | 60.42 | TERPENIC COMPOUND | 0.15 | | |
| 104 | 60.69 | 2-PHENYLETHYL ISOBUTYRATE | 0.10 | | |
| 105 | 60.85 | 2-PHENYLETHYL BUTYRATE | 0.09 | | |
| 106 | 60.95 | TERPENIC COMPOUND | 0.04 | | |
| 107 | 61.04 | ISOGERANIOL ISOMER | 0.07 | | |
| 108 | 61.16 | Epi-CUBEBOL | 0.03 | | |
| 109 | 61.51 | GERANYL BUTYRATE | 1.00 | 0.70 - 2.0 | |
| 110 | 61.67 | NERYL 2-METHYLBUTYRATE | 0.28 | | |
| 111 | 61.96 | alpha-CALACORENE | 0.04 | | |
| 112 | 62.67 | HUMULENE EPOXIDE | 0.07 | | |
| 113 | 62.78 | GERANYL METHYLBUTYRATE | 0.13 | | |
| 114 | 63.10 | CITRONELLYL ISOVALERATE | 0.03 | | |
| 115 | 63.82 | CUBEBOL | 0.05 | | |
| 116 | 64.22 | COMPOUND Mw=234 | 0.11 | | |
| 117 | 64.32 | CITRONELLYL METHYLVALERATE | 0.09 | | |
| 118 | 64.77 | AROMATIC COMPOUND | 0.04 | | |
| 119 | 65.37 | FUROPALARGON ISOMER | 0.07 | | |
| 120 | 65.62 | 2-PHENYLETHYL ISOVALERATE | 0.07 | | |
| 121 | 65.98 | AROMATIC COMPOUND | 0.03 | | |
| 122 | 66.14 | CARYOPHYLLENE OXIDE | 0.50 | | |
| 123 | 66.47 | AROMATIC COMPOUND | 0.02 | | |
| 124 | 66.68 | NERYL METHYLVALERATE | 0.15 | | |
| 125 | 67.07 | CITRONELLYL CAPROATE | 0.03 | | |
| 126 | 67.44 | COMPOUND Mw=164 | 0.03 | | |
| 127 | 67.67 | CITRONELLYL TIGLATE | 0.39 | | |
| 128 | 67.94 | GERANYL METHYLVALERATE | 0.08 | | |
| 129 | 68.13 | LEDOL | 0.02 | | |

- ORGANIC GERANIUM EO - SKU 365 LOT 16 -

| Peaks | RT (min) | Compound name | % | Standard (%) | Allergens (%) |
|-------|----------|------------------------------|-------------|-------------------|---------------|
| 130 | 68.56 | COMPOUND Mw=222 | 0.02 | | |
| 131 | 69.09 | EPOXY-6,7-HUMULENE | 0.08 | | |
| 132 | 69.29 | NERYL CAPROATE | 0.17 | | |
| 133 | 69.81 | SESQUITERPENOL | 0.02 | | |
| 134 | 70.13 | Epi-CUBENOL | 0.27 | | |
| 135 | 70.44 | CUBENOL | 0.12 | | |
| 136 | 70.93 | SESQUITERPENOL | 0.06 | | |
| 137 | 71.63 | FUROPALGON | 0.64 | | |
| 138 | 71.79 | ALIPHATIC ESTER | 0.03 | | |
| 139 | 72.31 | 2-PHENYLETHYL METHYLVALERATE | 0.07 | | |
| 140 | - | 10-epi-gamma-EUDESOL | Nd | 3.0 - 6.2 | |
| 141 | 72.63 | AROMATIC COMPOUND | 0.02 | | |
| 142 | 72.93 | GERANYL TIGLATE | 1.25 | 0.90 - 2.0 | |
| 143 | 73.17 | TERPENIC ESTER | 0.07 | | |
| 144 | 73.38 | TERPENIC ESTER | 0.02 | | |
| 145 | 73.59 | TERPENIC ESTER | 0.03 | | |
| 146 | 74.00 | TERPENIC COMPOUND | 0.02 | | |
| 147 | 74.24 | CITRONELLIC ESTER | 0.05 | | |
| 148 | 74.52 | TERPENIC COMPOUND | 0.04 | | |
| 149 | 74.68 | TERPENIC COMPOUND | 0.02 | | |
| 150 | 75.15 | SESQUITERPENIC COMPOUND | 0.04 | | |
| 151 | 75.38 | SESQUITERPENOL | 0.03 | | |
| 152 | 75.74 | ALIPHATIC COMPOUND | 0.02 | | |
| 153 | 75.85 | SESQUITERPENOL | 0.02 | | |
| 154 | 76.09 | SESQUITERPENOL | 0.02 | | |
| 155 | 76.52 | SESQUITERPENOL | 0.03 | | |
| 156 | 76.60 | alpha-MUUROLOL | 0.05 | | |
| 157 | 76.81 | 2-PHENYLETHYL TIGLATE | 0.55 | 0.50 - 1.2 | |
| 158 | 77.10 | CITRONELLIC ESTER | 0.05 | | |
| 159 | 77.26 | SESQUITERPENIC COMPOUND | 0.02 | | |
| 160 | 77.65 | AROMATIC COMPOUND | 0.03 | | |
| 161 | 78.33 | CADALENE | 0.03 | | |
| 162 | 78.54 | COMPOUND Mw=220 | 0.02 | | |
| 163 | 78.65 | SESQUITERPENOL | 0.03 | | |
| 164 | 78.96 | ALIPHATIC ESTER | 0.05 | | |
| 165 | 79.58 | CITRONELLIC ACID | 0.07 | | |
| 166 | 79.74 | COMPOUND Mw=218 | 0.03 | | |
| 167 | 80.78 | ALIPHATIC COMPOUND | 0.03 | | |
| 168 | 81.13 | trans-CHRYSANTHEMIC ACID | 0.02 | | |
| 169 | 81.35 | ALIPHATIC ESTER | 0.04 | | |
| 170 | 81.67 | NERIC ACID | 0.04 | | |
| 171 | 83.41 | SESQUITERPENIC COMPOUND | 0.03 | | |
| 172 | 83.51 | SESQUITERPENIC COMPOUND | 0.02 | | |

- ORGANIC GERANIUM EO - SKU 365 LOT 16 -

| Peaks | RT (min) | Compound name | % | Standard (%) | Allergens (%) |
|-------|----------|-------------------------|--------------|--------------|---------------|
| 173 | 83.73 | GERANIC ACID | 0.14 | | |
| 174 | 84.00 | TERPENIC COMPOUND | 0.03 | | |
| 175 | 84.15 | MANOYL OXIDE | 0.02 | | |
| 176 | 85.34 | SESQUITERPENIC COMPOUND | 0.02 | | |
| 177 | 85.52 | SESQUITERPENIC COMPOUND | 0.02 | | |
| | | TOTAL | 99.55 | | 36.93 |

This Essential Oil is a 100% pure and natural product. It does not contain any artificial ingredients or adulteration of any kind to the best of our knowledge. The analysis and statements herein constitute the most complete information available to Eden Botanicals. This product is guaranteed by Eden Botanicals to be of excellent quality.

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