AROMATICS DATA

GC-MS BATCH SUMMARY

**Batch GRN-124**

November 18, 2026

# Geranium Essential Oil

*Pelargonium graveolens var. roseum*

Essential Oil

| DISTILLATION DATE | EXTRACTION | CULTIVATION | COUNTRY OF ORIGIN |
|---|---|---|---|
| April 15, 2026 | Steam Distilled | Organically Grown | India |

## TOP 5 COMPONENTS

of 113 measured

| | | |
|---|---|---|
| citronellol | Monoterpenol | 30.78% |
| geraniol | Monoterpenol | 17.12% |
| citronellyl formate | Ester | 8.08% |
| linalool | Monoterpenol | 4.37% |
| geranyl formate | Ester | 3.74% |

Batch GRN-124 was steam distilled in April 2026 from organically grown *Pelargonium graveolens var. roseum*, grown high in the Himalayan foothills of India and distilled from the fresh leafy material. This is true rose geranium, the rose-scented variety. In the mountains it can be harvested only once a year, and frost makes every season hard-won, but the altitude is what gives the oil its character: softer, sweeter and more rosy than lowland geranium, with more depth. The aroma of this batch is classic rose geranium: soft and green, faintly minty at the edges, with a sweet floral center that lingers.

GC-MS analysis of this batch identified 113 components, led by citronellol at 30.78% and geraniol at 17.12%, with citronellyl formate at 8.08%. Monoterpenols make up 53.14% of the profile, a family associated with gentle, skin-friendly character, while esters at 14.9% lend the calming, softly sweet quality geranium is known for. The lab found no adulterants, diluents or contaminants, and confirmed the oil meets the expected profile for genuine high altitude geranium from India.

If you read the full report, you will see one tiny component, dihydrocitronellol at 0.07%, listed under the family "Synthetic". That word is a quirk of the lab's software, which attaches one fixed family name to each compound and cannot change it for a particular sample. Dihydrocitronellol occurs naturally in geranium, and in an amount this small, in an oil that shows no other sign of anything added, our chemist reads it as natural and expected.



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This exact batch was independently GC-MS tested, and the full report and certificate of analysis are available to download here so you can see the chemistry behind what you are using.

**CHEMISTRY HIGHLIGHTS**

GRN-124 is a citronellol-rich geranium, which is exactly what a mountain-grown rose geranium should be. Citronellol at 30.78% sits toward the top of the 20.96-33.44% we have logged across our geranium batches, and geraniol at 17.12% is above its usual 9.45-15.69%. Together they build a monoterpenol block of 53.14%, the alcohols that give geranium its rosy, skin-friendly character. The formate esters run a little lower than usual, citronellyl formate at 8.08% and geranyl formate at 3.74% against their typical 7.6-13.3% and 4.54-7.46%, which simply means more of the alcohol stayed free in this distillation rather than pairing off into esters.

One number that looks odd next to our earlier batches is 6,9-guaiadiene at 0.23%, where the others ran 5.87-9.56%. That is a signature of origin, not of quality. Our previous geraniums came from Madagascar and South Africa, whose oils are rich in this sesquiterpene. Indian geranium carries very little of it and brings 10-epi-γ-eudesmol at 3.11% instead. The sesquiterpene fraction comes to 7.2%. Both rose oxides are resolved, (Z) at 1.65% and (E) at 0.43%, the natural 4 to 1 ratio, across 113 components total. The one trace component the report files as "Synthetic" is explained in the sourcing notes above.

Full composition · 113 components across 10 families

| | |
|---|---|
| **Monoterpenol** | **53.14%** |
| citronellol | 30.78% |
| geraniol | 17.12% |
| linalool | 4.37% |
| α-terpineol | 0.36% |
| nerol | 0.28% |
| neoisomenthol | 0.11% |
| isopulegol | 0.04% |
| terpinen-4-ol | 0.03% |
| borneol | 0.02% |
| dihydrocarveol | 0.02% |
| 3-hexen-1-ol | 0.01% |


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| | |
|---|---|
| **Ester** | **14.90%** |
| citronellyl formate | 8.08% |
| geranyl formate | 3.74% |
| geranyl tiglate | 1.21% |
| neryl propionate | 0.82% |
| geranyl acetate | 0.59% |
| citronellyl acetate | 0.27% |
| neryl formate | 0.07% |
| geranyl caproate | 0.07% |
| geranyl caprylate | 0.02% |
| methyl 2-methylbutyrate | 0.01% |
| methyl geranate | 0.01% |
| phenethyl propionate | 0.01% |
| **Sesquiterpene** | **7.20%** |
| α-copaene | 1.02% |
| β-caryophyllene | 0.98% |
| δ-cadinene | 0.88% |
| β-bourbonene | 0.80% |
| germacrene D | 0.71% |
| α-muurolene | 0.32% |
| α-caryophyllene | 0.27% |
| 9-epi-caryophyllene | 0.25% |
| 6,9-guaiadiene | 0.23% |
| (E,E)-α-farnesene | 0.20% |
| allo-aromadendrene | 0.18% |
| α-cubebene | 0.17% |
| (Z)-cadina-1(6),4-diene | 0.14% |
| γ-muurolene | 0.13% |
| β-selinene | 0.12% |
| zonarene | 0.12% |


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| | |
|---|---|
| δ-elemene | 0.10% |
| β-copaene | 0.10% |
| selina-3,7(11)-diene | 0.10% |
| cadina-3,5-diene | 0.09% |
| β-chamigrene | 0.09% |
| (E)-cadina-1,4-diene | 0.08% |
| α-gurjunene | 0.07% |
| α-amorphene | 0.05% |
| **Ketone** | **5.71%** |
| isomenthone | 3.44% |
| menthone | 2.17% |
| piperitone | 0.06% |
| 6-methyl-5-hepten-2-one | 0.03% |
| β-thujone | 0.01% |
| **Sesquiterpenol** | **5.22%** |
| 10-epi-γ-eudesmol | 3.11% |
| (Z)-nerolidol | 1.27% |
| hinesol | 0.19% |
| spathulenol | 0.14% |
| 1,10-epi-cubenol | 0.11% |
| epi-cubenol | 0.11% |
| epi-cubebol | 0.08% |
| globulol | 0.08% |
| γ-eudesmol | 0.08% |
| maaliol | 0.03% |
| pogostol | 0.01% |
| juniper camphor | 0.01% |
| **Oxide** | **2.56%** |
| (Z)-rose oxide | 1.65% |


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| | |
|---|---|
| (E)-rose oxide | 0.43% |
| caryophyllene oxide | 0.20% |
| linalool (Z)-oxide | 0.16% |
| (E)-linalool oxide | 0.08% |
| humulene epoxide 2 | 0.03% |
| 1,8-cineole | 0.01% |
| **Other** | **2.40%** |
| phenylethyl alcohol | 0.63% |
| Citronellyl oxyacetaldehyde | 0.52% |
| neryl isovalerate | 0.29% |
| α-agarofuran | 0.18% |
| ylangene<β-> | 0.13% |
| Citronellyl tiglate<E-> | 0.11% |
| β-dihydroagarofuran | 0.10% |
| dihydrocitronellol | 0.07% |
| Bourbonanone<1-...nor-> | 0.06% |
| 2-phenylethyl formate | 0.05% |
| 6-methyl-3,5-heptadien-2-one | 0.04% |
| Eudesmol<5-epi-7-epi-α-> | 0.04% |
| 3-methylpentanol | 0.03% |
| neo-menthyl acetate | 0.03% |
| Butanediol<2,3-> | 0.02% |
| trans-dehydroxy linalool oxide | 0.02% |
| Dihydro carveol<neoiso-> | 0.02% |
| Citronellol isobutanoate | 0.02% |
| octane | 0.01% |
| Undecyne<1-> | 0.01% |
| 1-tetradecene | 0.01% |
| Mustakone | 0.01% |


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| | |
|---|---|
| **Monoterpene** | **2.24%** |
| limonene (d) | 1.10% |
| α-pinene | 0.72% |
| β-myrcene | 0.08% |
| p-cymene | 0.08% |
| (E)-β-ocimene | 0.08% |
| α-phellandrene | 0.05% |
| camphene | 0.04% |
| α-thujene | 0.02% |
| γ-terpinene | 0.02% |
| terpinolene | 0.02% |
| β-pinene | 0.01% |
| δ-2-carene | 0.01% |
| β-phellandrene | 0.01% |
| **Aldehyde** | **1.94%** |
| citronellal | 0.62% |
| geranial | 0.52% |
| decanal | 0.45% |
| neral | 0.35% |
| **Ether** | **0.07%** |
| estragole (methyl chavicol) | 0.07% |
| **Unidentified peaks** | **1.56%** |
| 2 peaks the lab could not identify | 1.56% |

UK BP: 81 0.86% · UK BP: 104 0.70%



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