AROMATICS DATA

GC-MS BATCH SUMMARY

Batch HPP-101

November 6, 2026

Hops Essential Oil Pekko

Humulus lupulus 'Pekko'

Essential Oil

DISTILLATION DATE	EXTRACTION	CULTIVATION	COUNTRY OF ORIGIN
September 1, 2022	**Steam Distilled**	**Conventional**	**USA**

TOP 5 COMPONENTS

of 57 measured

β-myrcene	Monoterpene	**43.12%**
α-caryophyllene	Sesquiterpene	**16.63%**
β-caryophyllene	Sesquiterpene	**13.99%**
δ-cadinene	Sesquiterpene	**2.71%**
para-camphorene	Other	**1.96%**

Full composition · 57 components across 9 families

Monoterpene	**45.18%**
β-myrcene	43.12%
β-pinene	0.99%
β-phellandrene	0.64%
(E)-β-ocimene	0.21%
α-pinene	0.12%
hashishene	0.04%
γ-terpinene	0.03%
terpinolene	0.03%
Sesquiterpene	**44.18%**
α-caryophyllene	16.63%

Every batch is GC-MS tested by an independent lab. This report is provided for full transparency by Aromatics International.

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β-caryophyllene	13.99%
δ-cadinene	2.71%
γ-muurolene	1.77%
γ-cadinene	1.63%
β-copaene	1.27%
α-selinene	0.90%
β-selinene	0.86%
α-panasinsen	0.76%
α-copaene	0.71%
selina-3,7(11)-diene	0.53%
(Z)-cadina-1(6),4-diene · trans-cadina-1(6),4-diene	0.53%
(E)-cadina-1,4-diene	0.41%
zonarene	0.33%
α-amorphene	0.28%
α-ylangene	0.22%
β-cadinene	0.18%
germacrene B	0.14%
α-cubebene	0.14%
(Z)-cadina-1(6),4-diene · cis-cadina-1(6),4-diene	0.13%
β-elemene	0.06%
Ester	**3.09%**
methyl 4-decenoate	1.86%
methyl octanoate	0.39%
methyl geranate	0.19%
methyl decanoate	0.16%
(Z)-muurola-4(14),5-diene	0.10%
methyl heptanoate	0.10%
(Z)-muurola-3,5-diene	0.09%
2-methylbutyl isobutyrate	0.07%
isoamyl propionate	0.04%

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(Z)-3-hexenyl acetate	0.04%
isoamyl isobutyrate	0.04%
isobutyl isobutyrate	0.01%
Other	**2.01%**
para-camphorene	1.96%
35.49 pentadecen-2-one<6z->	0.04%
octane	0.01%
Monoterpenol	**1.10%**
geranyl linalool	0.68%
linalool	0.31%
τ-cadinol	0.08%
geraniol	0.03%
Sesquiterpenol	**0.81%**
α-muurolol	0.63%
τ-muurolol	0.11%
(E)-nerolidol	0.04%
1,10-epi-cubenol	0.03%
Ketone	**0.58%**
2-undecanone	0.33%
2-nonanone	0.25%
Oxide	**0.25%**
caryophyllene oxide	0.14%
humulene epoxide 2	0.11%
Aldehyde	**0.02%**
nonanal	0.02%

SPECIFIC GRAVITY @20°C	REFRACTIVE INDEX @20°C
1.4827	**0.8585**

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