AROMATICS DATA

GC-MS BATCH SUMMARY

Batch CAC-103

November 15, 2026

Hops Oil Cascade

Humulus lupulus 'Cascade'

Essential Oil

DISTILLATION DATE	EXTRACTION	CULTIVATION	COUNTRY OF ORIGIN
September 15, 2025	**Steam Distilled**	**Conventional**	**USA**

TOP 5 COMPONENTS

of 73 measured

α-caryophyllene	Sesquiterpene	**36.42%**
β-caryophyllene	Sesquiterpene	**14.89%**
β-myrcene	Monoterpene	**11.37%**
geranyl linalool · (Z,Z)-geranyl linalool	Monoterpenol	**3.01%**
humulene epoxide 2	Oxide	**2.74%**

Batch CAC-103 was steam distilled in September 2025 from fresh hop flowers of the Cascade variety (*Humulus lupulus* 'Cascade'), conventionally grown in the USA. The flowers, often called cones, go into the still fresh.

The oil is clear to yellow, with a hoppy aroma and citrus, floral and spicy notes. Hops oil becomes thicker and more resinous as it sits, which is natural for this oil.

An independent laboratory tested this batch by GC/MS. The full report is available to download on this page, and the Chemistry Highlights describe what the report shows. This batch has a shelf life of seven years, to September 2032, when it is stored cool, dark and tightly closed.

CHEMISTRY HIGHLIGHTS

This batch is a sesquiterpene-rich hops oil. α-Caryophyllene (the lab report calls it α-humulene) leads at 36.42%, with β-caryophyllene at 14.89% and β-myrcene at 11.37%. Sesquiterpenes total 66.41% and monoterpenes 12.6%.

Our 2018 and 2019 batches (CAC-101 and CAC-102) came from a different hop variety and show the reverse.

Generated November 15, 2026 from live batch data · © 2026 Aromatics International

β-Myrcene led them at 62.20% to 66.84%, with α-caryophyllene at 13.51% to 13.73% and β-caryophyllene at 5.33% to 5.86%.

Two oxides sit beside their parent molecules: humulene epoxide II at 2.74% and caryophyllene oxide at 1.47%. A small group of esters may add a soft fruity, floral note: geranyl isobutyrate at 1.17%, geranyl acetate at 0.99% and methyl geranate at 0.59%.

Sesquiterpenes are large, slow molecules. In a blend, a profile like this may feel settling and calming.

The laboratory named 73 components.

Full composition · 73 components across 9 families

Sesquiterpene	**66.41%**
α-caryophyllene	36.42%
β-caryophyllene	14.89%
(E)-β-farnesene	2.73%
δ-cadinene	2.52%
α-selinene	2.00%
γ-muurolene	1.69%
γ-cadinene	1.52%
β-copaene	1.16%
β-selinene	1.12%
γ-amorphene	0.46%
α-copaene	0.45%
α-cadinene	0.33%
α-amorphene	0.17%
(E)-cadina-1,4-diene	0.15%
zonarene	0.14%
α-ylangene	0.12%
α-cubebene	0.11%
β-elemene	0.11%
β-bourbonene	0.10%
β-bisabolene	0.09%

Generated November 15, 2026 from live batch data · © 2026 Aromatics International

(Z)-cadina-1(6),4-diene	0.07%
α-calacorene	0.05%
(Z)-hex-3-en-1-ol	0.01%
Monoterpene	**12.60%**
β-myrcene	11.37%
β-pinene	0.87%
limonene (d)	0.19%
α-pinene	0.10%
β-phellandrene	0.05%
(E)-β-ocimene	0.02%
Monoterpenol	**4.63%**
geranyl linalool · (Z,Z)-geranyl linalool	3.01%
geranyl linalool · (e,z)-geranyl linalool	1.09%
linalool	0.37%
geraniol	0.08%
τ-cadinol	0.08%
Oxide	**4.21%**
humulene epoxide 2	2.74%
caryophyllene oxide	1.47%
Ester	**4.03%**
geranyl isobutyrate	1.17%
geranyl acetate	0.99%
isoamyl isobutyrate	0.59%
methyl geranate	0.59%
isobutyl isobutyrate	0.11%
geranyl propionate	0.10%
methyl nonanoate	0.09%
methyl octanoate	0.09%
methyl salicylate	0.08%

Generated November 15, 2026 from live batch data · © 2026 Aromatics International

isoamyl propionate	0.07%
methyl heptanoate	0.07%
hexyl isobutyrate	0.03%
geranyl formate	0.03%
neryl acetate	0.02%
Other	**1.65%**
2-tridecanone	0.55%
(2E)-tridecenol	0.21%
Pentadecen-2-one<6Z->	0.19%
Methyl decyl ketone	0.11%
methyl 6-methyl heptanoate	0.10%
Undecanal<2-methyl->	0.08%
Decanone<2->	0.08%
Calamenen-10-ol<trans->	0.06%
Heptyl isobutanoate	0.05%
Butanediol<2,3->	0.04%
2-methyl butyl isovalerate	0.04%
2-pentadecanone	0.03%
eicosane	0.03%
2-hexanol	0.03%
1-tetradecene	0.02%
octane	0.02%
prenyl isobutyrate	0.01%
Ketone	**0.64%**
2-undecanone	0.54%
carvone	0.07%
2-nonanone	0.03%
Sesquiterpenol	**0.28%**
α-muurolol	0.24%

Generated November 15, 2026 from live batch data · © 2026 Aromatics International

epi-cubenol	0.04%
Furan	**0.15%**
perillene	0.15%

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

Verify this batch: data.aromatics.com/products/hops-essential-oil-cascade#batch=CAC-103

Generated November 15, 2026 from live batch data · © 2026 Aromatics International