



YAKIMA QUALITY HOPS

Testing completed by:



Certificate of Analysis

CoA ID	Date of Issue	Test Date
BRU-2513	10/27/2025	10/23/2025, 10/24/2025

Sample Type	Variety	Total Oil (mL/100G)
T90 Pellet	Bru-1™	1.1
Alpha %	Beta %	HSI
9.4	6.3	0.255
HopTechnic-008 (Alpha & Beta Acids by HPLC, Modified EBC 7.8)		
HopTechnic-008 (HSI Determination by Calculation, Modified ASBC Hops-6)		
HopTechnic-116 (Total Oil Determination, ASBC Hops-16)		

Released by:  _____

Date: 10/27/2025



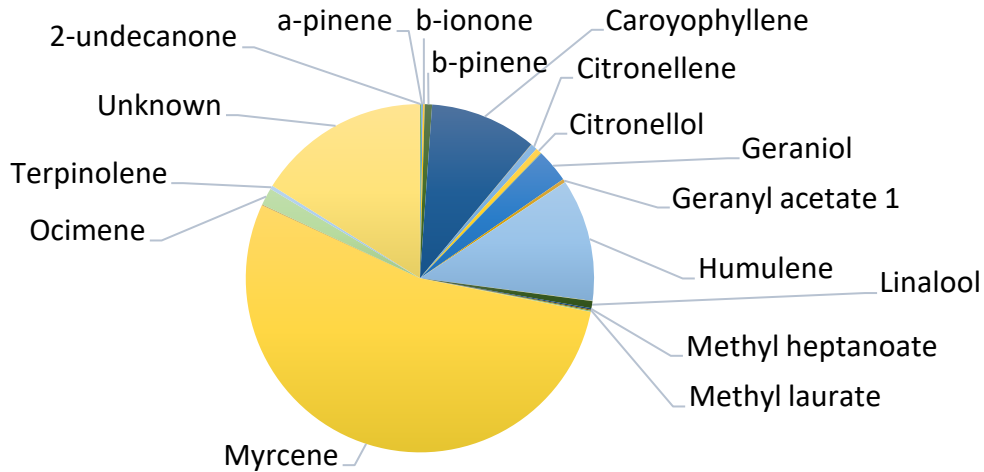
YAKIMA QUALITY HOPS

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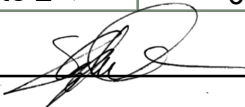
Hop Oil Composition

CoA ID	Date of Issue	Test Date
BRU-2513	10/27/2025	10/24/2025
Sample Type	Variety	Total Oil (mL/100g)
BRU-2513	Bru-1™	1.1
HopTechnic-116 (Total Oil Distillation, ASBC Hops-16)		
HopTechnic-116 (Terpenes Composition Analysis by GC-FID, modified ASBC Hops-17)		



Aroma Compound	% of Total Oil
2-Undecanone	0.12%
a-pinene	0.16%
B-ionone	0.17%
b-pinene	0.68%
Caryophyllene	9.92%
Caryophyllene oxide	0.04%
Citral	0.00%
Citronellene	0.60%
Citronellol	0.55%
Farnesene	0.05%
Geraniol	3.10%
Geranyl acetate 1	0.31%
Geranyl acetate 2	0.02%

Aroma Compound	% of Total Oil
Humulene	11.37%
Limonene	0.03%
Linalool	0.65%
Methyl Heptanoate	0.14%
Methyl Laurate	0.10%
Methyl Octanoate	0.09%
Methyl thiohexanoate	0.02%
Myrcene	53.79%
Nerol	0.00%
Nerolidol 1	0.00%
Nerolidol 2	0.06%
Ocimene	1.61%
Terpinolene	0.33%
Unidentified	16.09%

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