

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Wisconsin Hop Exchange

Sample ID: 25MTH1092-01FB

Variety: Mt Hood

Product: T-90 Pellet

Date : 2/23/2026

Certifying Officer: Zach Lilla - Lab Manager
 TTB Certified Chemist - Member AOAC - ASBC - BJCP

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	12.0
		% Dry Matter	88.0
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.279
Hops-13	Essential Oil by Steam Distillation	mL/100g	1.18
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	25.1 (% of Total AA)
ICE-3		% Alpha Acids	4.71
		Colupulone	44.8 (% of Total BA)
		% Beta Acids	5.00
		a/b ratio	0.94
Hops-17	Hop Essential Oil by GC-FID (as is)	% area	mg/100g
		B-Pinene	0.38 4.59
		Myrcene	29.75 412.32
		Linalool	0.52 7.45
		Caryophyllene	15.21 193.59
		Farnesene	0.17 2.72
		Humulene	35.99 454.23
		Geraniol	0.23 3.39

NT=NOT TESTED

Signed:

Zachary Lilla - Lab Manager - TTB Certified Chemist
 AAR LAB - ADVANCED ANALYTICAL RESEARCH
 2517 Advance Rd Ste. A Madison WI 53718



AROMA QUALITY (AQ)

HOP QUALITY REPORT



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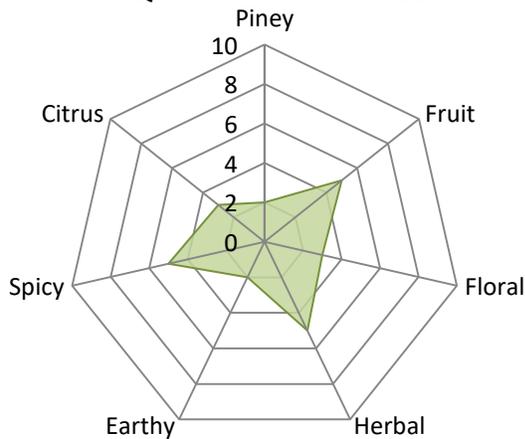
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	Typical Range	
% Moisture <input style="width: 100px;" type="text" value="12.0"/>	8 - 12 %	<input checked="" type="checkbox"/>
HOP QUALITY (adjusted to 10% moisture)		
Total Oil ml/100g <input style="width: 100px;" type="text" value="1.21"/>	0.8 - 2.0 mL	<input checked="" type="checkbox"/>
cohumulone <input style="width: 100px;" type="text" value="25.1"/>	21 - 25%	<input type="checkbox" value="↑"/>
Alpha Acids <input style="width: 100px;" type="text" value="4.82"/>	4.0 - 6.5%	<input checked="" type="checkbox"/>
Beta Acids <input style="width: 100px;" type="text" value="5.11"/>	4.4 - 7.2%	<input checked="" type="checkbox"/>
Myrcene <input style="width: 100px;" type="text" value="29.75"/>	25.00 - 35.00 %	<input checked="" type="checkbox"/>

AROMA QUALITY (AQ)

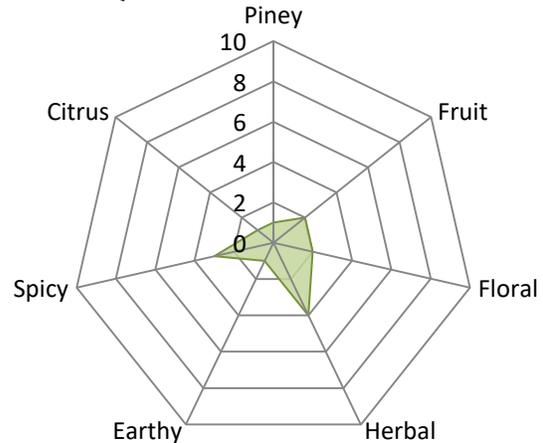
	% Area		mg/mL of Hop Oil			mg/100g of Hops (@10%H2O)		
B-Pinene	0.38	0.30 - 0.90 %	3.88	3 - 9	4.70	2.4 - 18		
Myrcene	29.75	25.00 - 35.00 %	348.49	250 - 350	421.59	200 - 700		
Linalool	0.52	0.40 - 1.00 %	6.30	4 - 10	7.62	3.2 - 20		
Caryophyllene	15.21	10.00 - 16.00 %	163.62	100 - 160	197.94	80 - 320		
Farnesene	0.17	0.01 - 1.00 %	2.30	0.1 - 10	2.78	0.08 - 20		
Humulene	35.99	30.00 - 40.00 %	383.91	300 - 400	464.44	240 - 800		
Geraniol	0.23	0.10 - 0.50 %	2.87	1 - 5	3.47	0.8 - 10		

AQ vs VARIETY SPECS



Aroma Intensity= 12

AQ vs ALL HOP VARIETIES



Aroma Intensity= 4

Signed: _____

Zachary Lilla - Lab Manager - TTB Certified Chemist

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