

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS

To: Wisconsin Hop Exchange

Sample ID: 24AAA1087-01LH

Variety: AlphaAroma

Product: T-90 Pellet

Date : 3/15/2025



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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	10.0
		% Dry Matter	90.0
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.268
Hops-13	Essential Oil by Steam Distillation	mL/100g	1.03
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	22.6 (% of Total AA)
ICE-3		% Alpha Acids	9.41
		Colupulone	49.1 (% of Total BA)
		% Beta Acids	3.20
		a/b ratio	2.94
Hops-17	Hop Essential Oil by GC-FID (as is)		
		% area	mg/100g
		B-Pinene	0.36 3.50
		Myrcene	32.78 366.32
		Linalool	0.50 5.82
		Caryophyllene	9.37 96.12
		Farnesene	8.19 103.63
		Humulene	29.16 296.78
		Geraniol	0.36 4.16

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



Customer : Wisconsin Hop Exchange

Sample ID: 24AAA1087-01LH

Variety: AlphAroma

Product: T-90 Pellet

Date : 3/15/2025



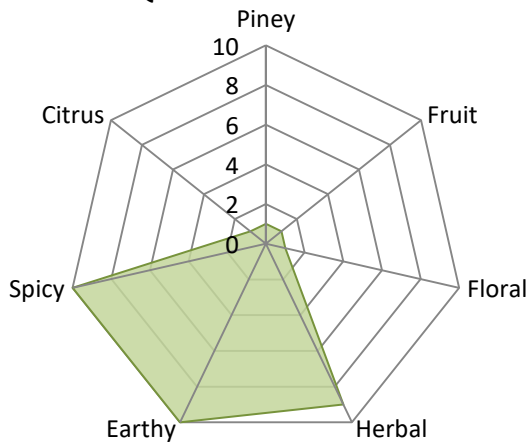
Certifying Officer: Zach Lilla - Lab Manager
TTB Certified Chemist - Member AOAC - ASBC - BJCP

	Typical Range	
% Moisture <input style="width: 100px;" type="text" value="10.0"/>	8 - 12 %	<input checked="" type="checkbox"/>
HOP QUALITY (adjusted to 10% moisture)		
Total Oil ml/100g <input style="width: 100px;" type="text" value="1.02"/>	1.1 - 1.3 mL	<input type="checkbox"/>
cohumulone <input style="width: 100px;" type="text" value="22.6"/>	25 - 28%	<input type="checkbox"/>
Alpha Acids <input style="width: 100px;" type="text" value="9.41"/>	5.8 - 11%	<input checked="" type="checkbox"/>
Beta Acids <input style="width: 100px;" type="text" value="3.20"/>	2.5 - 4.9%	<input checked="" type="checkbox"/>
Myrcene <input style="width: 100px;" type="text" value="32.78"/>	50.00 - 65.00 %	<input type="checkbox"/>

AROMA QUALITY (AQ)

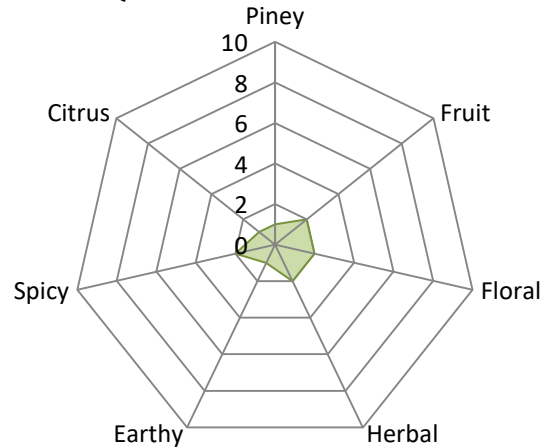
	% Area		mg/mL of Hop Oil			mg/100g of Hops (@10%H2O)			
B-Pinene	0.36	0.30 - 1.00 %	<input checked="" type="checkbox"/>	3.41	3 - 10	<input checked="" type="checkbox"/>	3.50	3.3 - 13	<input checked="" type="checkbox"/>
Myrcene	32.78	50.00 - 65.00 %	<input type="checkbox"/>	357.31	500 - 650	<input type="checkbox"/>	366.17	550 - 845	<input type="checkbox"/>
Linalool	0.50	0.50 - 1.00 %	<input checked="" type="checkbox"/>	5.68	5 - 10	<input checked="" type="checkbox"/>	5.82	5.5 - 13	<input checked="" type="checkbox"/>
Caryophyllene	9.37	3.00 - 8.00 %	<input type="checkbox"/>	93.76	30 - 80	<input type="checkbox"/>	96.08	33 - 104	<input checked="" type="checkbox"/>
Farnesene	8.19	4.00 - 6.00 %	<input type="checkbox"/>	101.08	40 - 60	<input type="checkbox"/>	103.59	44 - 78	<input type="checkbox"/>
Humulene	29.16	12.00 - 16.00 %	<input type="checkbox"/>	289.48	120 - 160	<input type="checkbox"/>	296.66	132 - 208	<input type="checkbox"/>
Geraniol	0.36	0.3 - 1.00 %	<input checked="" type="checkbox"/>	4.06	3 - 10	<input checked="" type="checkbox"/>	4.16	3.3 - 13	<input checked="" type="checkbox"/>

AQ vs VARIETY SPECS



Aroma Intensity= 30

AQ vs ALL HOP VARIETIES



Aroma Intensity= 2

Signed: _____

Zachary Lilla - Lab Manager - TTB Certified Chemist

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