

## HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Wisconsin Hop Exchange

Sample ID: 25VTA02WI-01FB

Variety: Vista

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	11.8
		% Dry Matter	88.2
AAR	Xanthohumol by HPLC		<b>NT</b> mg/g
Hops-12	Hop Storage Index	HSI	0.262
Hops-13	Essential Oil by Steam Distillation	mL/100g	<b>2.03</b>
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	33.7 (% of Total AA)
ICE-3		<b>% Alpha Acids</b>	<b>10.72</b>
		Colupulone	60.6 (% of Total BA)
		<b>% Beta Acids</b>	<b>3.84</b>
		a/b ratio	2.79
Hops-17	Hop Essential Oil by GC-FID (as is)	<b>% area</b>	<b>mg/100g</b>
		B-Pinene	0.47 8.54
		Myrcene	42.32 880.16
		Linalool	0.57 12.27
		Caryophyllene	9.81 187.34
		Farnesene	0.45 10.53
		Humulene	16.36 309.78
		Geraniol	0.10 2.17

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: 25VTA02WI-01FB

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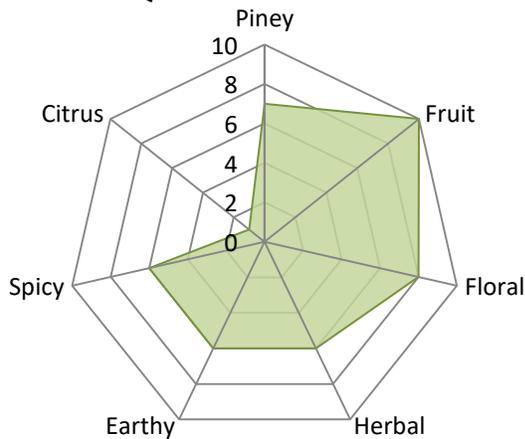
Certifying Officer: Zach Lilla - Lab Manager  
TTB Certified Chemist - Member AOAC - ASBC - BJCP

	Typical Range	
% Moisture <span style="border: 1px solid black; padding: 2px;">11.8</span>	8 - 12 %	✓
<b>HOP QUALITY (adjusted to 10% moisture)</b>		
Total Oil ml/100g <span style="border: 1px solid black; padding: 2px;">2.07</span>	0.8 - 2.0 ml	↑
cohumulone <span style="border: 1px solid black; padding: 2px;">33.7</span>	29 - 34%	✓
Alpha Acids <span style="border: 1px solid black; padding: 2px;">10.93</span>	11 - 12%	↓
Beta Acids <span style="border: 1px solid black; padding: 2px;">3.91</span>	3.5 - 5.5%	✓
Myrcene <span style="border: 1px solid black; padding: 2px;">42.32</span>	30.00 - 40.00 %	↑

### AROMA QUALITY (AQ)

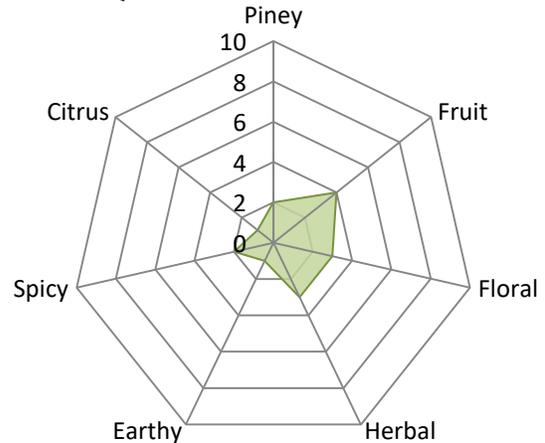
	% Area		mg/mL of Hop Oil			mg/100g of Hops (@10%H2O)			
B-Pinene	0.47	0.20 - 0.60 %	✓	4.21	2 - 6	✓	8.71	1.6 - 12	✓
Myrcene	42.32	30.00 - 40.00 %	↑	434.36	300 - 400	↑	897.66	240 - 800	↑
Linalool	0.57	0.40 - 0.80 %	✓	6.05	4 - 8	✓	12.51	3.2 - 16	✓
Caryophyllene	9.81	10.00 - 14.00 %	↓	92.45	100 - 140	↓	191.06	80 - 280	✓
Farnesene	0.45	0.10 - 1.00 %	✓	5.20	1 - 10	✓	10.74	0.8 - 20	✓
Humulene	16.36	18.00 - 22.00 %	↓	152.88	180 - 220	↓	315.94	144 - 440	✓
Geraniol	0.10	0.40 - 1.00 %	↓	1.07	4 - 10	↓	2.21	3.2 - 20	↓

#### AQ vs VARIETY SPECS



**Aroma Intensity= 40**

#### AQ vs ALL HOP VARIETIES



**Aroma Intensity= 5**

Signed: \_\_\_\_\_

Zachary Lilla - Lab Manager - TTB Certified Chemist

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