

## HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Mr. Wizard's Hop farm

Sample ID: Strasburg - Mystique

Variety: Mystique

Product: T-90 Pellet

Date : 12/13/2023

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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	11.1
		% Dry Matter	88.9
AAR	Xanthohumol by HPLC		<b>NT</b> mg/g
Hops-12	Hop Storage Index	HSI	0.291
Hops-13	Essential Oil by Steam Distillation	mL/100g	<b>0.37</b>
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	45.6 (% of Total AA)
ICE-3		<b>% Alpha Acids</b>	<b>4.04</b>
		Colupulone	70.5 (% of Total BA)
		<b>% Beta Acids</b>	<b>3.88</b>
		a/b ratio	1.04
Hops-17	Hop Essential Oil by GC-FID (as is)	% area	mg/100g
		B-Pinene	0.27 0.83
		Myrcene	20.70 72.02
		Linalool	0.54 1.95
		Caryophyllene	13.00 41.54
		Farnesene	0.77 3.03
		Humulene	16.94 53.66
		Geraniol	0.41 1.50

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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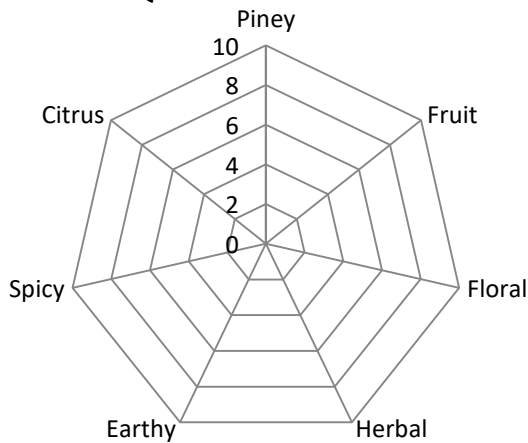
TTB Certified Chemist - Member AOAC - ASBC - BJCP

	Typical Range	
% Moisture <input type="text" value="11.1"/>	8 - 12 %	<input checked="" type="checkbox"/>
<b>HOP QUALITY (adjusted to 10% moisture)</b>		
Total Oil ml/100g <input type="text" value="0.38"/>	0.2 - 0.4 mL	<input checked="" type="checkbox"/>
cohumulone <input type="text" value="45.6"/>	45 - 55%	<input checked="" type="checkbox"/>
Alpha Acids <input type="text" value="4.09"/>	3.0 - 4.0%	<input type="checkbox" value="↑"/>
Beta Acids <input type="text" value="3.93"/>	3.0 - 4.0%	<input checked="" type="checkbox"/>
Myrcene <input type="text" value="20.70"/>		<input type="checkbox"/>

### AROMA QUALITY (AQ)

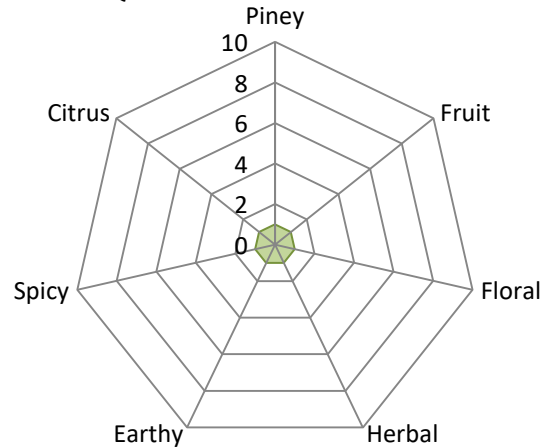
	% Area	mg/mL of Hop Oil	mg/100g of Hops (@10%H2O)
B-Pinene	0.27	2.21	0.84
Myrcene	20.70	192.75	72.93
Linalool	0.54	5.22	1.98
Caryophyllene	13.00	111.19	42.07
Farnesene	0.77	8.11	3.07
Humulene	16.94	143.62	54.34
Geraniol	0.41	4.02	1.52

### AQ vs VARIETY SPECS



Aroma Intensity= #VALUE!

### AQ vs ALL HOP VARIETIES



Aroma Intensity= 1

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

Zachary Lilla - Lab Manager - TTB Certified Chemist

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