

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS

To: Wisconsin Hop Exchange

Sample ID: 22BIG1087-01LH

Variety: Bitter Gold

Whole Cone

Date : 12/5/2022

Pellet



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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	10.4
		% Dry Matter	89.6
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.311
Hops-13	Essential Oil by Steam Distillation	mL/100g	1.95
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	34.9 (% of Total AA)
ICE-3		% Alpha Acids	12.07
		Colupulone	59.5 (% of Total BA)
		% Beta Acids	6.03
		a/b ratio	2.00
Hops-17	Hop Essential Oil by GC-FID (as is)	% area	mg/100g
		B-Pinene	NT
		Myrcene	NT
		Linalool	NT
		Caryophyllene	NT
		Farnesene	NT
		Humulene	NT
		Geraniol	NT

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

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Pellet

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	Typical Range		
% Moisture <input style="width: 100px;" type="text" value="10.4"/>	8 - 12%	<input checked="" type="checkbox"/>	
HOP QUALITY (adjusted to 10% moisture)			
Total Oil ml/100g <input style="width: 100px;" type="text" value="1.96"/>	1.0 - 2.0 mL	<input checked="" type="checkbox"/>	
cohumulone <input style="width: 100px;" type="text" value="34.9"/>	36 - 41%	<input type="checkbox" value="↓"/>	
Alpha Acids <input style="width: 100px;" type="text" value="12.13"/>	12 - 14.5%	<input checked="" type="checkbox"/>	
Beta Acids <input style="width: 100px;" type="text" value="6.06"/>	4.5 - 6.0%	<input type="checkbox" value="↑"/>	
AROMA QUALITY (AQ)			
	% Area	mg/mL of Hop Oil	mg/100g of Hops (@10%H2O)
B-Pinene	NT 0.60 - 0.90 %	NT 6 - 9	NT 6 - 18
Myrcene	NT 45.00 - 55.00 %	NT 450 - 550	NT 450 - 1100
Linalool	NT 0.40 - 0.70 %	NT 4 - 7	NT 4 - 14
Caryophyllene	NT 7.00 - 11.00 %	NT 70 - 110	NT 70 - 220
Farnesene	NT 0.01 - 1.00 %	NT 0.1 - 10	NT 0.1 - 20
Humulene	NT 10.00 - 18.00 %	NT 100 - 180	NT 100 - 360
Geraniol	NT 0.01 - 1.00 %	NT 0.1 - 10	NT 0.1 - 20
AQ vs VARIETY SPECS		AQ vs ALL HOP VARIETIES	
Aroma Intensity= 100		Aroma Intensity= 100	

Signed: _____
Zachary Lilla - Lab Manager - TTB Certified Chemist

