

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Wisconsin Hop Exchange

Sample ID: 23NDV1104-01LH

Variety: Northern Discovery

T-90 Pellet

Date : 12/22/2023

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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	10.2
		% Dry Matter	89.8
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.291
Hops-13	Essential Oil by Steam Distillation	mL/100g	0.44
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	53.0 (% of Total AA)
ICE-3		% Alpha Acids	5.73
		Colupulone	77.5 (% of Total BA)
		% Beta Acids	4.75
		a/b ratio	1.21
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

Sample ID: 23NDV1104-01LH

Variety: Northern Discovery

Product: T-90 Pellet

Date : 12/22/2023



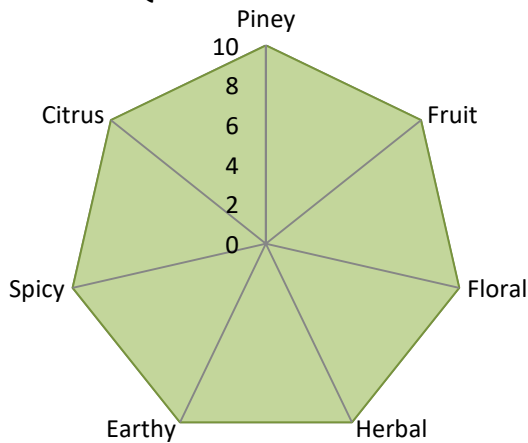
Certifying Officer: Zach Lilla - Lab Manager
TTB Certified Chemist - Member AOAC - ASBC - BJCP

		Typical Range	
% Moisture	10.2	8 - 12 %	<input checked="" type="checkbox"/>
HOP QUALITY (adjusted to 10% moisture)			
Total Oil ml/100g	0.44	0.4 - 0.8 mL/100g	<input checked="" type="checkbox"/>
cohumulone	53.0	48 - 54%	<input checked="" type="checkbox"/>
Alpha Acids	5.75	7.0 - 9%	<input type="checkbox"/>
Beta Acids	4.76	4.0 - 6.0%	<input checked="" type="checkbox"/>
Myrcene	NT	0	<input type="checkbox"/>

AROMA QUALITY (AQ)

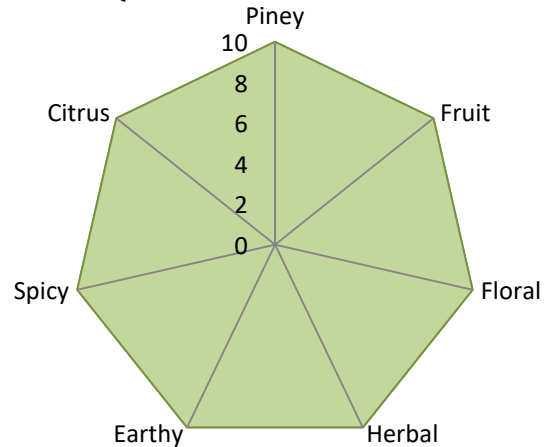
	% Area		mg/mL of Hop Oil		mg/100g of Hops (@10%H2O)	
	NT	0	NT	0	NT	0
B-Pinene	NT	0	NT	0	NT	0
Myrcene	NT	0	NT	0	NT	0
Linalool	NT	0	NT	0	NT	0
Caryophyllene	NT	0	NT	0	NT	0
Farnesene	NT	0	NT	0	NT	0
Humulene	NT	0	NT	0	NT	0
Geraniol	NT	0	NT	0	NT	0

AQ vs VARIETY SPECS



Aroma Intensity= 100

AQ vs ALL HOP VARIETIES



Aroma Intensity= 100

Signed: _____

Zachary Lilla - Lab Manager - TTB Certified Chemist

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