

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS

To: Fine Bine Farms

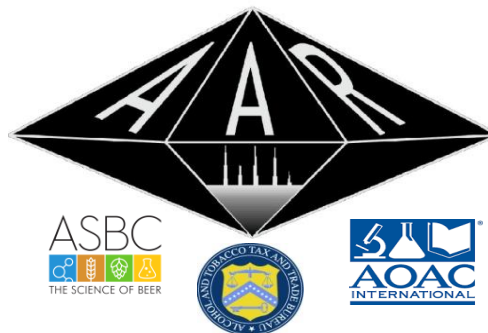
Sample ID: AGDNEW10152022

Variety: Newport

Whole Cone ☐

Date : 10/19/2022

Pellet ☒



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

Method		
Hops-4C	Moisture Analysis	
	% Moisture	14.0
	% Dry Matter	86.0
AAR	Xanthohumol by HPLC	NT mg/g
Hops-12	Hop Storage Index	HSI 0.297
Hops-13	Essential Oil by Steam Distillation	mL/100g 1.16
Hops-14	Alpha and Beta Acids by HPLC	
ICE-3		
	Cohumulone	30.1 (% of Total AA)
	% Alpha Acids	9.71
	Colupulone	55.3 (% of Total BA)
	% Beta Acids	7.14
	a/b ratio	1.36
Hops-17	Hop Essential Oil by GC-FID	
	(as is)	
	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 : Fine Bine Farms

Sample ID: AGDNEW10152022

Variety: Newport

Whole Cone ☐

Pellet ☒

Date : 10/19/2022



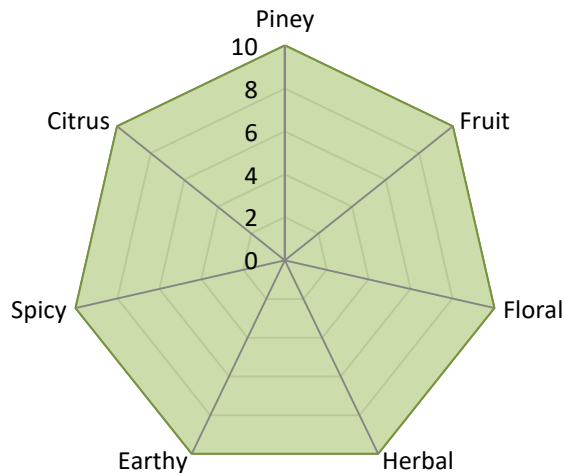
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% Moisture	14.0	Typical Range	8 - 12%	↑
HOP QUALITY (adjusted to 10% moisture)				
Total Oil ml/100g	1.21		1.6 - 2.5 mL	↓
columulone	30.1		36 - 38%	↓
Alpha Acids	10.16		10 - 12.5%	✓
Beta Acids	7.48		5.5 - 6.5%	↑

AROMA QUALITY (AQ)

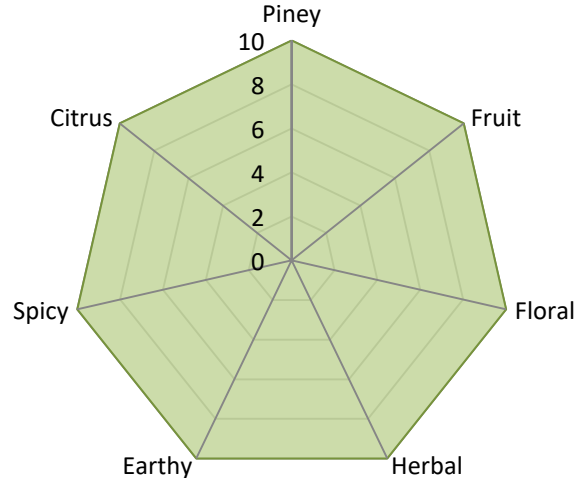
	% Area			mg/mL of Hop Oil			mg/100g of Hops (@10%H2O)		
B-Pinene	NT	0.60 - 0.90 %	↑	NT	6 - 9	↑	NT	9.6 - 22.5	↑
Myrcene	NT	45.00 - 55.00 %	↑	NT	450 - 550	↑	NT	720 - 1375	↑
Linalool	NT	0.30 - 0.70 %	↑	NT	3 - 7	↑	NT	4.8 - 17.5	↑
Caryophyllene	NT	7.00 - 11.00 %	↑	NT	70 - 110	↑	NT	112 - 275	↑
Farnesene	NT	0.01 - 1.00 %	↑	NT	0.1 - 10	↑	NT	0.16 - 25	↑
Humulene	NT	15.00 - 20.00 %	↑	NT	150 - 200	↑	NT	240 - 500	↑
Geraniol	NT	0.10 - 0.40 %	↑	NT	1 - 4	↑	NT	1.6 - 10	↑

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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