

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Fine Bine Farms

Sample ID: 23TMK1013-01FB

Variety: Teamaker

Product: T-90 Pellet

Date : 10/18/2023

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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	9.7
		% Dry Matter	90.3
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.238
Hops-13	Essential Oil by Steam Distillation	mL/100g	1.17
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	59.0 (% of Total AA)
ICE-3		% Alpha Acids	1.47
		Colupulone	45.9 (% of Total BA)
		% Beta Acids	11.90
		a/b ratio	0.12
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 : Fine Bine Farms

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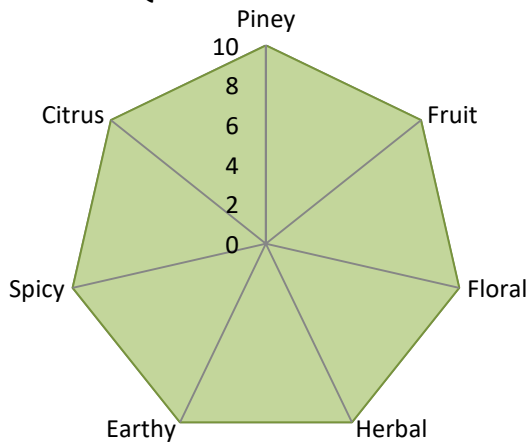
Certifying Officer: Zach Lilla - Lab Manager
TTB Certified Chemist - Member AOAC - ASBC - BJCP

		Typical Range	
% Moisture	9.7	8 - 12 %	<input checked="" type="checkbox"/>
HOP QUALITY (adjusted to 10% moisture)			
Total Oil ml/100g	1.17	1.0 - 2.0mL	<input checked="" type="checkbox"/>
cohumulone	59.0	35 - 75%	<input checked="" type="checkbox"/>
Alpha Acids	1.47	0.6 - 1.8%	<input checked="" type="checkbox"/>
Beta Acids	11.86	5.4 - 13.2%	<input checked="" type="checkbox"/>
Myrcene	NT	35.00 - 55.00 %	<input type="checkbox"/>

AROMA QUALITY (AQ)

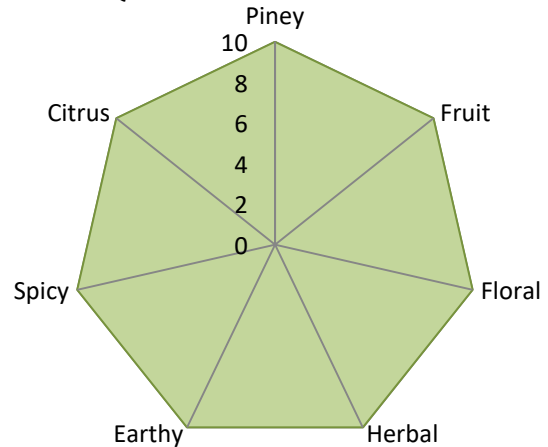
	% Area		mg/mL of Hop Oil		mg/100g of Hops (@10%H2O)	
B-Pinene	NT	0.30 - 0.80 %	NT	3 - 8	NT	3 - 16
Myrcene	NT	35.00 - 55.00 %	NT	350 - 550	NT	350 - 1100
Linalool	NT	0.50 - 1.00%	NT	5 - 10	NT	5 - 20
Caryophyllene	NT	3.00 - 5.00 %	NT	30 - 50	NT	30 - 100
Farnesene	NT	0.01 - 1.00%	NT	0.1 - 10	NT	0.1 - 20
Humulene	NT	3.00 - 5.00 %	NT	30 - 50	NT	30 - 100
Geraniol	NT	0.10 - 0.35 %	NT	1 - 3	NT	1 - 6

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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