

HOP QUALITY REPORT CERTIFICATE OF ANALYSIS



To: Fine Bine Farms

Sample ID: 25GAL1013-01FB

Variety: Galena

Product: T-90 Pellet

Date : 10/29/2025

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

<u>Method</u>			
Hops-4C	Moisture Analysis	% Moisture	11.8
		% Dry Matter	88.2
AAR	Xanthohumol by HPLC		NT mg/g
Hops-12	Hop Storage Index	HSI	0.230
Hops-13	Essential Oil by Steam Distillation	mL/100g	NT
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	39.9 (% of Total AA)
ICE-3		% Alpha Acids	12.90
		Colupulone	63.7 (% of Total BA)
		% Beta Acids	7.67
		a/b ratio	1.68
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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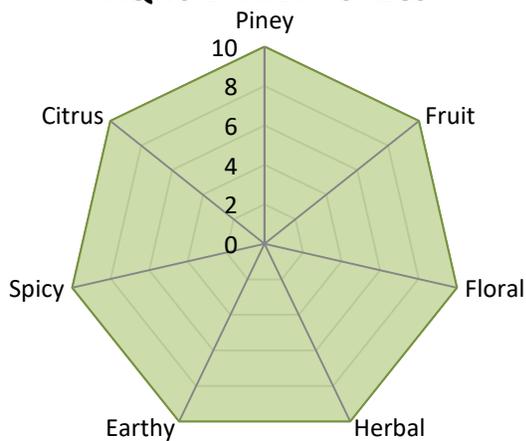
Certifying Officer: Zach Lilla - Lab Manager
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	Typical Range	
% Moisture <input style="width: 100px;" type="text" value="11.8"/>	8 - 12 %	<input checked="checked" style="width: 40px; height: 20px;" type="checkbox"/>
HOP QUALITY (adjusted to 10% moisture)		
Total Oil ml/100g <input style="width: 100px;" type="text" value="NT"/>	1.3 - 2.1 mL	<input style="width: 40px; height: 20px;" type="checkbox"/>
cohumulone <input style="width: 100px;" type="text" value="39.9"/>	34 - 39%	<input style="width: 40px; height: 20px;" type="checkbox" value="↑"/>
Alpha Acids <input style="width: 100px;" type="text" value="13.16"/>	13 - 15%	<input checked="checked" style="width: 40px; height: 20px;" type="checkbox"/>
Beta Acids <input style="width: 100px;" type="text" value="7.82"/>	7.5 - 8.5%	<input checked="checked" style="width: 40px; height: 20px;" type="checkbox"/>
Myrcene <input style="width: 100px;" type="text" value="NT"/>	40.00 - 50.00 %	<input style="width: 40px; height: 20px;" type="checkbox"/>

AROMA QUALITY (AQ)

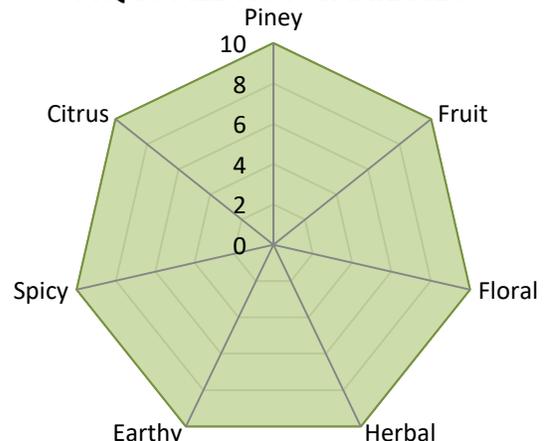
	% Area		mg/mL of Hop Oil		mg/100g of Hops (@10%H2O)	
B-Pinene	NT	0.40 - 0.70 %	NT	4 - 7	NT	5.2 - 14.7
Myrcene	NT	40.00 - 50.00 %	NT	400 - 500	NT	520 - 1050
Linalool	NT	0.10 - 0.40 %	NT	1 - 4	NT	1.3 - 8.4
Caryophyllene	NT	5.00 - 9.00 %	NT	50 - 90	NT	65 - 189
Farnesene	NT	0.01 - 1.00 %	NT	0.1 - 10	NT	0.13 - 21
Humulene	NT	11.00 - 17.00 %	NT	110 - 170	NT	143 - 357
Geraniol	NT	0.40 - 0.90 %	NT	4 - 9	NT	5.2 - 18.9

AQ vs VARIETY SPECS



Aroma Intensity=

AQ vs ALL HOP VARIETIES



Aroma Intensity=

Signed: _____

Zachary Lilla - Lab Manager - TTB Certified Chemist

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