



HOP CERTIFICATE OF ANALYSIS

Customer : Wisconsin Hop Exchange

Sample ID: 21SOU1002-01LH



Variety: Southern Cross

Certifying Officer: Zach Lilla - Lab Manager

Date : 10/8/2021

TTB Certified Chemist - Member AOAC - ASBC - BJCP

Method				
Hops-4C	Moisture Analysis	% Moisture	11.9	
		% Dry Matter	88.1	
AAR	Xanthohumol by HPLC		NT	mg/g
Hops-12	Hop Storage Index	HSI	0.296	
Hops-13	Essential Oil by Steam Distillation	mL/100g	1.62	
Hops-14	Alpha and Beta Acids by HPLC	Cohumulone	27.4	(% of Total AA)
ICE-3		% Alpha Acids	9.82	
		Colupulone	55.8	(% of Total BA)
		% Beta Acids	3.44	
		a/b ratio	2.85	
Hops-17	Hop Essential Oil by GC-FID (as is)			
		% area	mg/100g	
		B-Pinene	NT	NT
		Myrcene	NT	NT
		Linalool	NT	NT
		Caryophyllene	NT	NT
		Farnesene	NT	NT
		Humulene	NT	NT
		Geraniol	NT	NT

NT=NOT TESTED

Signed: 
 Zachary Lilla - Lab Manager - TTB Certified Chemist





HOP QUALITY REPORT

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Certifying Officer: Zach Lilla - Lab Manager

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% Moisture	<input type="text" value="11.9"/>	Typical Range 8 - 12%	<input type="text" value="✓"/>
Total Oil ml/100g @ 10%	<input type="text" value="1.66"/>	1.2 - 1.8 mL	<input type="text" value="✓"/>
cohumulone	<input type="text" value="27.4"/>	25 - 28%	<input type="text" value="✓"/>
Alpha Acids @ 10%	<input type="text" value="10.03"/>	11 - 14%	<input type="text" value="↓"/>
Beta Acids @ 10%	<input type="text" value="3.52"/>	5.0 - 6.0%	<input type="text" value="↓"/>
AROMA QUALITY (AQ)			
	% Area		
B-Pinene	<input type="text" value="NT"/>	0.40 - 1.00 %	<input type="text" value="NT"/>
Myrcene	<input type="text" value="NT"/>	30.00 - 34.00 %	<input type="text" value="NT"/>
Linalool	<input type="text" value="NT"/>	0.50 - 1.00 %	<input type="text" value="NT"/>
Caryophyllene	<input type="text" value="NT"/>	6.00 - 8.00 %	<input type="text" value="NT"/>
Farnesene	<input type="text" value="NT"/>	6.50 - 8.50 %	<input type="text" value="NT"/>
Humulene	<input type="text" value="NT"/>	18.00 - 22.00 %	<input type="text" value="NT"/>
Geraniol	<input type="text" value="NT"/>	0.40 - 1.00 %	<input type="text" value="NT"/>
	mg/mL		
B-Pinene	<input type="text" value="NT"/>	4 - 10	<input type="text" value="NT"/>
Myrcene	<input type="text" value="NT"/>	300 - 340	<input type="text" value="NT"/>
Linalool	<input type="text" value="NT"/>	5 - 10	<input type="text" value="NT"/>
Caryophyllene	<input type="text" value="NT"/>	60 - 80	<input type="text" value="NT"/>
Farnesene	<input type="text" value="NT"/>	65 - 85	<input type="text" value="NT"/>
Humulene	<input type="text" value="NT"/>	180 - 220	<input type="text" value="NT"/>
Geraniol	<input type="text" value="NT"/>	4 - 10	<input type="text" value="NT"/>
	mg/100g @ 10% Moisture		
B-Pinene	<input type="text" value="NT"/>	4.8 - 12	<input type="text" value="NT"/>
Myrcene	<input type="text" value="NT"/>	360 - 408	<input type="text" value="NT"/>
Linalool	<input type="text" value="NT"/>	6 - 12	<input type="text" value="NT"/>
Caryophyllene	<input type="text" value="NT"/>	72 - 96	<input type="text" value="NT"/>
Farnesene	<input type="text" value="NT"/>	78 - 102	<input type="text" value="NT"/>
Humulene	<input type="text" value="NT"/>	216 - 264	<input type="text" value="NT"/>
Geraniol	<input type="text" value="NT"/>	4.8 - 12	<input type="text" value="NT"/>

Signed: 
 Zachary Lilla - Lab Manager - TTB Certified Chemist