

# KPU - AGC Hops Service

## Certificate of Analysis

Report Number:

58-MT

Customer:	Mark Topper / Topp's Hops
Date of Arrival:	Sep.28, 23
Date of Analysis:	Oct.3, 23
Date of Report:	Oct.15, 23
Hop/Sample Name:	SARCASH230913
Sample Form:	Dried Flower
Mass of Hops (g):	152



Applied  
Genomics  
Centre

Kwantlen Polytechnic University  
12666 72nd Ave  
Surrey, BC  
V3W 2M8

### Alpha/Beta Acid Analysis - ASBC Hops-14 Method

Percent (%) by Mass

Alpha Acids	
Cohumulone	1.62
n+Adhumulone	5.43
<b>Total Alpha Acids</b>	<b>7.05</b>
Beta Acids	
Colupulone	2.33
n+Adlupulone	3.57
<b>Total Beta Acids</b>	<b>5.90</b>
HSI	0.21

### Essential Oil Analysis - EBC 7.12 Method

mg per g of Hops

Percent (%) by Hops Mass

	mg per g of Hops	Percent (%) by Hops Mass
$\beta$ -Myrcene	2.1	0.21
$\beta$ -Caryophyllene	0.7	0.07
trans- $\beta$ -Farnesene	0.0	0.00
$\alpha$ -Humulene	1.8	0.18
<b>Total 4 Major Hops Oils</b>	<b>4.6</b>	<b>0.46</b>

Analytical methods as noted in link below:

[https://www.kpu.ca/sites/default/files/Applied%20Genomics%20Centre/KPU\\_Hops\\_Testing\\_Info.pdf](https://www.kpu.ca/sites/default/files/Applied%20Genomics%20Centre/KPU_Hops_Testing_Info.pdf)

Terms and Conditions:

[https://www.kpu.ca/sites/default/files/Applied%20Genomics%20Centre/KPU\\_Hops\\_Testing\\_Services\\_Terms\\_and\\_Conditions.pdf](https://www.kpu.ca/sites/default/files/Applied%20Genomics%20Centre/KPU_Hops_Testing_Services_Terms_and_Conditions.pdf)

Samples kept for 1 month post-testing

Data reviewed by:

A handwritten signature in black ink, appearing to read 'M. Schuetz', is written over a horizontal line.

Mathias Schuetz, PhD  
KPU Applied Genomics Center