

# KPU - AGC Hops Service

## Certificate of Analysis

Report Number:

38-GS

Customer:	Guy Shepard
Date of Arrival:	Oct. 28, 22
Date of Analysis:	Oct. 28, 22
Date of Report:	Nov. 4, 22
Hop/Sample Name:	Blend #1
Sample Form:	Dried Cones
Mass of Hops (g):	215



Applied  
Genomics  
Centre

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

Percent (%) by Mass

Alpha Acids	
Cohumulone	1.74
n+Adhumulone	6.26
<b>Total Alpha Acids</b>	<b>8.00</b>
Beta Acids	
Colupulone	1.96
n+Adlupulone	2.67
<b>Total Beta Acids</b>	<b>4.63</b>
HSI	0.22

### Essential Oil Analysis - EBC 7.12 Method

 $\mu\text{g per g of Hops}$ 

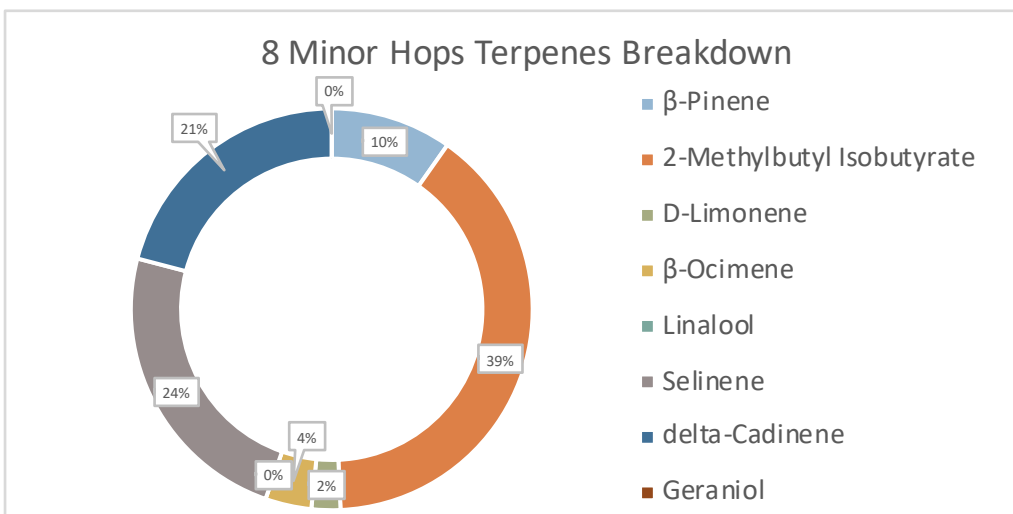
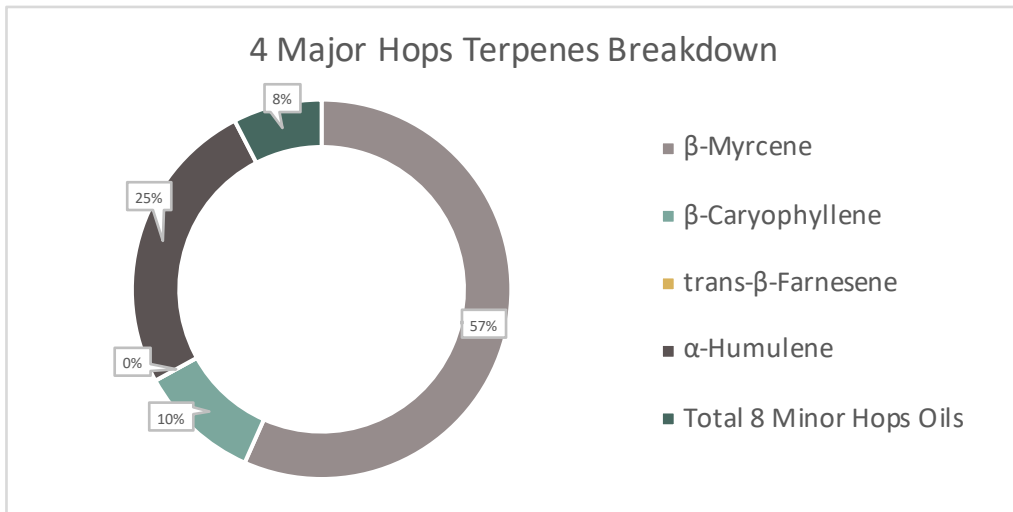
Percent (%) by Hops Mass

	$\mu\text{g per g of Hops}$	Percent (%) by Hops Mass
$\beta$ -Myrcene	1607	0.16
$\beta$ -Caryophyllene	294	0.03
trans- $\beta$ -Farnesene	0	0.00
$\alpha$ -Humulene	721	0.07
<b>Total 4 Major Hops Oils</b>	<b>2622.00</b>	<b>0.26</b>

Relative Conc. of 8 "Other" Oils to  $\beta$ -Myrcene $\mu\text{g per g of Hops}$ 

Percent (%) by Hops Mass

	$\mu\text{g per g of Hops}$	Percent (%) by Hops Mass
$\beta$ -Pinene	21	0.002
2-Methylbutyl Isobutyrate	85	0.009
D-Limonene	5	0.001
$\beta$ -Ocimene	8	0.001
Linalool	0	0.000
Selinene	51	0.005
delta-Cadinene	45	0.005
Geraniol	0	0.000
<b>Total 8 Minor Hops Oils</b>	<b>215</b>	<b>0.02</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)

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Samples kept for 1 month post-testing

Data reviewed by:

**Mathias Schuetz, PhD**  
Director of Hops Research and Development