

## Industrial Hemp | Certificate of Analysis

<b>Client Name:</b>	GrowPoint, Inc. (Krieger)
<b>Contact:</b>	515-370-1552
<b>License Number:</b>	S0047
<b>License State:</b>	Iowa

<b>Sample ID:</b>	GP-04	<b>4.93% Moisture</b>	
<b>Submitted:</b>	9/25/20	<b>Analyzed:</b>	9/28/20
<b>Cultivar:</b>	Serenity	<b>Matrix:</b>	Flower

### Cannabinoid Profile (% dry weight basis)



Basic Panel Cannabinoids			
<b>Δ-9-THC</b>	<LLOQ	<b>CBD</b>	0.02% ± 0.00
<b>THCA</b>	0.06% ± 0.01	<b>CBDA</b>	0.17% ± 0.03
<b>CBN</b>	<LLOQ		
Expanded Panel Cannabinoids			
<b>CBG</b>	0.41% ± 0.01	<b>CBDVA</b>	<LLOQ
<b>CBGA</b>	7.68% ± 0.03	<b>THCV</b>	<LLOQ
<b>CBC</b>	0.13% ± 0.00	<b>THCVA</b>	<LLOQ
<b>CBCA</b>	0.44% ± 0.01	<b>CBL</b>	<LLOQ
<b>Δ-8-THC</b>	<LLOQ	<b>CBLA</b>	<LLOQ
<b>CBDV</b>	<LLOQ		

### Calculations (Expanded Panel)

<b>Total THC</b>	$\Delta\text{-9-THC} + 0.877 \times \text{THCA} = 0.05\% \pm 0.01$
<b>Total CBD</b>	$\text{CBD} + 0.877 \times \text{CBDA} = 0.17\% \pm 0.04$
<b>Total CBG</b>	$\text{CBG} + 0.877 \times \text{CBGA} = 7.14\% \pm 0.04$
<b>Total CBC</b>	$\text{CBC} + 0.877 \times \text{CBCA} = 0.52\% \pm 0.01$
<b>Total Tested Cannabinoids</b>	<b>8.91% ± 0.09%</b>

**Interpretation of Results**  
The sample we received from **GrowPoint, Inc** on **09/25/20** tested at **0.05% total THC, 0.17% total CBD, 7.14% total CBG, and 0.52% total CBC** on a dry weight basis with a **total cannabinoid content of 8.91%**.

**Methods:** Cannabinoid profiling is performed using a Waters ACQUITY UPLC® by comparing submitted samples to pure analytical standards. Values presented herein are mean ± standard deviation of at least three independent measurements.

Analysis performed by: Signed: 09/29/20   Patrick Abeli, Lab Manger	Reviewed by: Signed: 09/29/20   Tricia Jenkins, Graduate Research Assistant
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*Disclaimer: The results presented herein are certified only for the sample named on the date and location from which it was collected by the customer. Due to environmental and genetic factors, and sampling differences, these results may not reflect the values obtained from other research units or the value obtained at final harvest. Our testing procedures are validated through a rigorous internal and external process and were found to conform to our standards of analysis on the date performed; details available upon request at: phone: 913-307-7393 or ksu hemp@ksu.edu. ND: Not determined for this sample, <LLOQ: below the lower limit of quantification.*