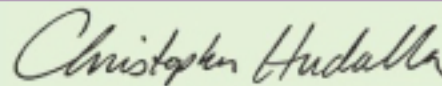


Certificate ID: **19463 (Preliminary)**  
 Client Sample ID: **CC17113**  
 Matrix: **Concentrates/Extracts - Isolate**  
 Date Received: **7/11/2017**



This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

Authorization: Chris Hudalla, Chief Science Officer	Signature: 	Date: 7/12/2017
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**CN: Cannabinoid Profile & Potency [WI-10-04]**

Analyst: JDP

Test Date: 7/11/2017

The client sample was analyzed for plant-based cannabinoids by Convergence Chromatography (CC). The collected data was compared to data collected for certified reference standards at known concentrations.

**19463-CN**



ID	Weight %	Conc.
$\Delta^9$ -THC	-	-
THCV	-	-
CBD	99.46 wt %	994.60 mg/g
CBDV	0.23 wt %	2.33 mg/g
CBG	-	-
CBC	-	-
CBN	-	-
THCA	-	-
CBDA	0.06 wt %	0.56 mg/g
CBGA	-	-
Total	99.75 wt%	997.49 mg/g
Max THC	-	-
Max CBD	99.51 wt%	995.09 mg/g



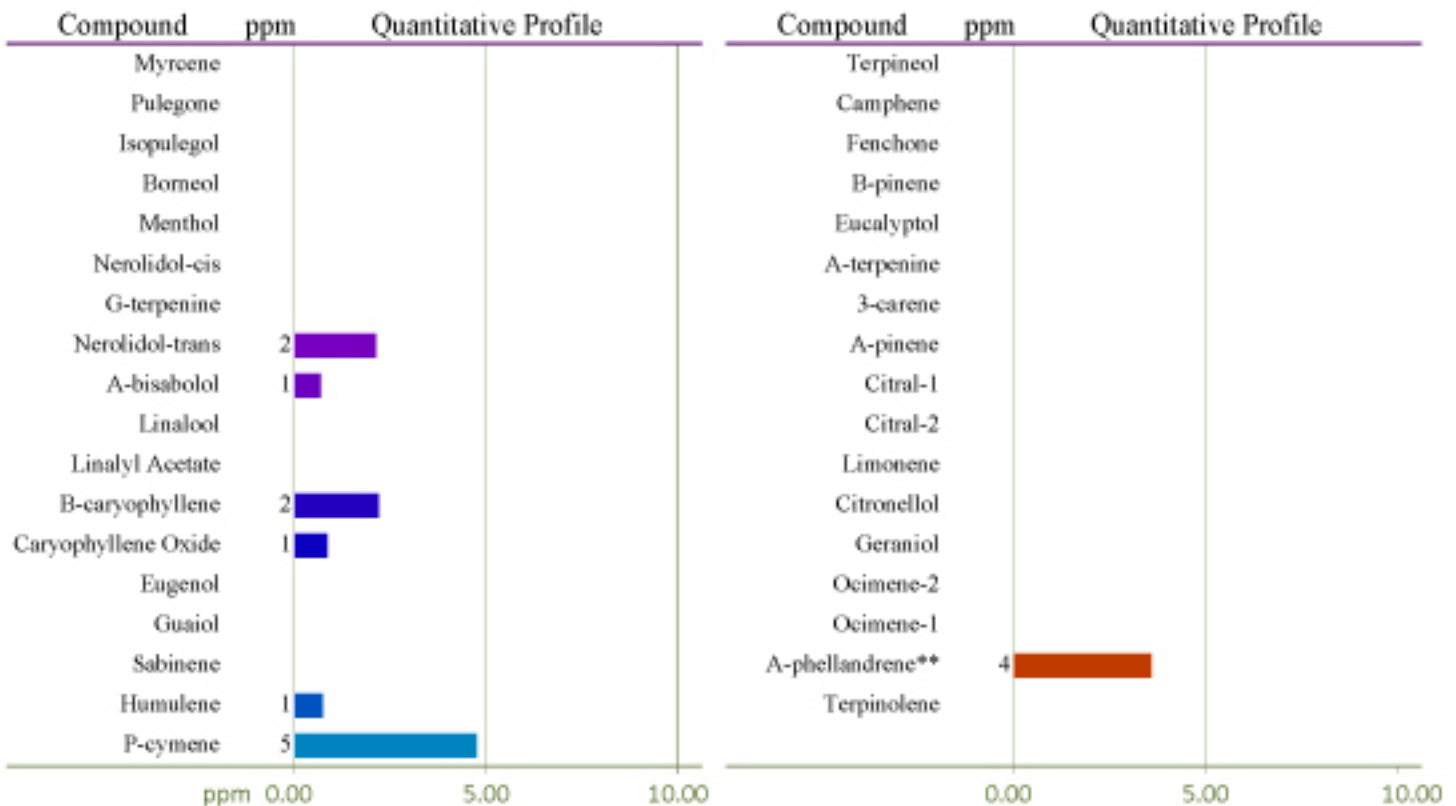
Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation:  $\text{Max THC} = (0.877 \times \text{THCA}) + \text{THC}$ .

**TP: Terpenes Profile [WI-10-08]**

Analyst: CJH

Test Date: 7/12/2017

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

**19463-TP**

Total Terpene: &lt;0.1 wt%

\* Indicates qualitative calculation based on recorded peak areas.

**VC: Analysis of Volatile Organic Compounds [WI-10-07]**

Analyst: CJH

Test Date: 7/12/2017

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

**19463-VC**

Compound	CAS	Amount <sup>1</sup>	Limit <sup>2</sup>	Status
Butane	106-97-8	ND	5,000 ppm	PASS
Methanol	67-56-1	ND	3,000 ppm	PASS
Ethanol	64-17-5	ND	5,000 ppm	PASS
Acetone	67-64-1	ND	5,000 ppm	PASS
Isopropanol	67-63-0	ND	5,000 ppm	PASS
Hexane	110-54-3	ND	290 ppm	PASS

1) ND = None detected above 5 ppm.

2) In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

**END OF REPORT**