


Testing Accreditation #: 77802

Test Certificate #: 116921-001

<p>Client Name, Sample Details</p> <p><b>Sample:</b> BBHD</p> <p><b>Type:</b> Flower</p> <p><b>Method:</b> FE04U HPLC1100-1</p>	<p>Test Conditions</p> <p><b>Prepsheet ID#:</b> MIP190514</p> <p><b>Scale:</b> XS205-MI2</p> <p><b>Temp:</b> 22.3 °C</p> <p><b>Baro PE:</b> 979.6 hPa</p> <p><b>Analyst:</b> KEB</p> <p><b>Technician:</b> KEB</p>	<p>Sample ID#: 116921</p> <p><b>Harvest/Process Date:</b> 05/14/2019</p> <p><b>Serving Size (g):</b> 1</p> <p><b>Date Received:</b> 05/14/2019</p> <p><b>Test Date:</b> 05/14/2019</p> <p><b>Valid Through:</b> 05/14/2020</p>	
---	--	--	---



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG*	CBC*	THCV*	CBDV*	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	0.9	21.0	N/D	0.3	N/D	N/D	N/D	N/D	N/D	22.2	19.3	0.3	19.6
Amount (mg/g)	8.8	210.2	N/D	3.1	N/D	N/D	N/D	N/D	N/D	222.1	193.1	2.7	195.8
Amount per Serving (mg)	8.8	210.2	N/D	3.1	N/D	N/D	N/D	N/D	N/D	222.1	<b>Serving Size~ (g):</b>		1.0
LOQ (mg/g)	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09	2.09		<b>%Decarb.</b>	<b>THC</b>	<b>CBD</b>
±%RPD	3.2	1.5	1.6	1.4	1.0	1.6	1.3	1.6	1.0			4	0%

LOQ = Limit of Quantitation; %RPD = Relative Percent Deviation; %RSD = Relative Standard Deviation; N/D = Not Detected

\*Designates values that are not currently included in the accredited scope of Iron Laboratories.

\*\*\* Designates tests that use the method FE-45.

Total THC and CBD is the calculated sum of THC or CBD and the amount of THC or CBD derived from THCA or CBDA, respectively. These values are calculated by applying a molar correction factor of 0.877 to the THCA or the CBDA value. Calc Max Total Cannabinoids is the sum of Total THC, Total CBD, CBN, CBG, CBC, THCV, and CBDV.

%Decarb. THC and CBD refers to the percentage of THC or CBD relative to THCA or CBDA, respectively.

This certificate shall not be reproduced except in full, without written approval of Iron Laboratories, LLC.



Andrea C. Ruppel, Lab Manager




Mackenzie E. Hyman, Quality Manager

Iron Laboratories, LLC is an ISO/IEC 17025:2005 Testing Laboratory laboratory, accredited by (PJLA) Perry Johnson Laboratory Accreditation, Certificate No. 77802

Tested by Iron Laboratories Michigan, 1825 E. West Maple Walled Lake, MI 48390

Testing Accreditation #: 77802

Test Certificate #: 116921-001

<b>Client Name, Sample Details</b>  <b>Sample:</b> BBHD  <b>Type:</b> Flower <b>Method:</b> FE04U HPLC1100-1	<b>Test Conditions</b> <b>Prepsheet ID#:</b> MIP190514 <b>Scale:</b> XS205-MI2 <b>Temp:</b> 22.3 °C <b>Baro PE:</b> 979.6 hPa <b>Analyst:</b> KEB <b>Technician:</b> KEB	<b>Sample ID#:</b> 116921 <b>Harvest/Process Date:</b> 05/14/2019 <b>Serving Size (g):</b> 1 <b>Date Received:</b> 05/14/2019 <b>Test Date:</b> 05/14/2019 <b>Valid Through:</b> 05/14/2020
---	--	--



Target Compound Name	Method Blank (µg/g)	LCS Spike (µg/g)	LCS Amount (µg/g)	Percent Recovery (%) LCS	LCS Duplicate Amount (µg/g)	Percent Recovery (%) LCSD	Relative Percent Difference (%)	QC Flag
Cannabidivarin (CBDV)	0	5.053843493	5.072419004	100.37	5.122084774	101.35	0.97%	
Cannabidiolic Acid (CBDA)	0	5.18208321	5.270890613	101.71	5.199107675	100.33	1.37%	
Cannabigerol (CBG)	0	5.160904001	5.243947944	101.61	5.161483291	100.01	1.59%	
Cannabidiol (CBD)	0	5.270103806	5.446064034	103.34	5.358711547	101.68	1.62%	
Δ9-Tetrahydrocannabivarin (THCV)	0	5.102409165	5.158659134	101.10	5.240859198	102.71	1.58%	
Cannabinol (CBN)	0	4.81760327	4.875050822	101.19	4.923708404	102.20	0.99%	
Δ9-Tetrahydrocannabinol (THC)	0	5.254390697	5.247128322	99.86	5.416069637	103.08	3.17%	
Cannabichromene (CBC)	0	4.706563352	4.815434414	102.31	4.877670472	103.64	1.28%	
Tetrahydrocannabinolic acid (THCA)	0	4.75329088	4.837690044	101.78	4.910435869	103.31	1.49%	

N.D. = Not Detected

LR = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) Low recovery should be scrutinized for possible fail as it could indicate more compound present than is detected.

I = indicates that an amount of an interfering compound greater than the methods limit of detection was detected in the method blank sample. May indicate contamination of analytical system or consumables.


Q = indicates that the relative percent difference of two identically prepared Matrix Spike samples for a target analyte was greater than 20%

HR = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) high recoveries should be scrutinized for passing as more compound may be detected than is actually present in the sample.

This certificate shall not be reproduced except in full, without written approval of Iron Laboratories, LLC.




Andrea C. Ruppel, Lab Manager

Mackenzie E. Hyman, Quality Manager

Iron Laboratories, LLC is an ISO/IEC 17025:2005 Testing Laboratory laboratory, accredited by (PJLA) Perry Johnson Laboratory Accreditation, Certificate No. 77802

Tested by Iron Laboratories Michigan, 1825 E. West Maple Walled Lake, MI 48390

<p>Client Name, Sample Details</p> <p><b>Sample:</b> BBHD</p> <p><b>Type:</b> Flower</p> <p><b>Method:</b> SOP FE-44-OR3</p>	<p>Test Conditions</p> <p><b>Scale:</b> XS205-MI2</p> <p><b>Temp:</b> 22.3 °C</p> <p><b>Baro Pressure:</b> 979.6 hPa</p> <p><b>Analyst:</b> JRT</p> <p><b>Technician:</b> JRT</p>	<p>Sample ID#: 116921</p> <p><b>Harvest/Process Date:</b> 05/14/2019</p> <p><b>Serving Size (g):</b> 1</p> <p><b>Date Received:</b> 05/14/2019</p>	
--	---	--	---

### Mono Terpenes

Weight Percentage Dry Matter (wt/wt%)

<b>α-Pinene:</b>	0.040 %	<b>β-Ocimene:</b>	N/D
<b>Camphene:</b>	0.010 %	<b>Eucalyptol (1,8-Cineol):</b>	N/D
<b>Sabinene:</b>	N/D	<b>γ-Terpinene:</b>	N/D
<b>Myrcene:</b>	0.190 %	<b>α-Terpinolene:</b>	0.010 %
<b>β-Pinene:</b>	N/D	<b>Linalool:</b>	0.100 %
<b>Δ3-Carene:</b>	N/D	<b>Fenchone:</b>	N/D
<b>α-Terpinene:</b>	N/D	<b>Fenchol:</b>	0.090 %
<b>Ocimene:</b>	N/D	<b>Isopulegol:</b>	N/D
<b>Limonene:</b>	0.830 %	<b>Geraniol:</b>	0.010 %
<b>4-Cymene:</b>	N/D		

### Sequi Terpenes

Weight Percentage Dry Matter (wt/wt%)

<b>β-Caryophyllene:</b>	1.920 %
<b>α-Humulene:</b>	0.430 %
<b>Nerolidol 1:</b>	N/D
<b>Nerolidol 2:</b>	0.210 %
<b>Guaiol:</b>	N/D
<b>Caryophyllene Oxide:</b>	N/D
<b>α-Bisabolol:</b>	0.230 %

### Other Terpenes

**Total: 4.070%**

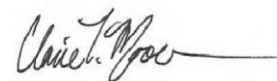
a-Phellandrene = 0.00% a-Terpineol = 0.08% Valencene = 0.00% (Other terpenes are not included in the total)

This sample has not undergone random sampling and has not been tested for compliant state, batch representative testing. These results should therefore be used for research and development or quality control purposes only.

This certificate shall not be reproduced except in full, without written approval of Iron Laboratories, LLC.



Joseph Rutkowski, Quality Manager

Claire T. Moore, Lab Manager

Tested by Iron Laboratories Michigan, 1825 E. West Maple Walled Lake, MI 48390