

Testing Accreditation #: 77802

Test Certificate #: 117145-001

Client Name, Sample Details
Brandon Burke
Waterford Township, MI 48329
Sample: CBD Pain Gel
Type: Topical
Method: FE04U HPLC1100-1

Test Conditions
Prepsheet ID#: MIP190531
Scale: XS205-MI2
Temp: 23.2 °C
Baro PE: 975.1 hPa
Analyst: KEB
Technician: KEB

Sample ID#: 117145
Harvest/Process Date: 05/31/2019
Serving Size (g): 1
Date Received: 05/31/2019
Test Date: 05/31/2019
Valid Through: 05/31/2020



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG*	CBC*	THCV*	CBDV*	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	N/D	N/D	0.4	N/D	N/D	N/D	N/D	N/D	N/D	0.4	0.0	0.4	0.4
Amount (mg/g)	N/D	N/D	4.3	N/D	N/D	N/D	N/D	N/D	N/D	4.3	0.0	4.3	4.3
Amount per Serving (mg)	N/D	N/D	4.3	N/D	N/D	N/D	N/D	N/D	N/D	4.3	Serving Size~ (g):		1.0
LOQ (mg/g)	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08		%Decarb.	THC	CBD
±%RPD	4.3	4.4	0.3	2.7	1.5	0.3	7.3	3.2	1.4		N/A	100%	

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.

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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

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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
Cannabidiol (CBD)	0	4.784108509	4.799165246	100.31	4.864659909	101.68	1.36%	
Cannabidiolic Acid (CBDA)	0	5.008607052	5.301782211	105.85	5.160210727	103.03	2.71%	
Cannabigerol (CBG)	0	5.134201653	5.474314392	106.62	5.459920689	106.34	0.26%	
Cannabidiol (CBD)	0	5.455546998	5.842852251	107.10	5.826264515	106.80	0.28%	
Δ9-Tetrahydrocannabivarin (THCV)	0	5.315406967	5.503539074	103.54	5.328848488	100.25	3.23%	
Cannabinol (CBN)	0	5.354404146	5.713554882	106.71	5.628074893	105.11	1.51%	
Δ9-Tetrahydrocannabinol (THC)	0	5.105172846	5.771139528	113.04	6.023105681	117.98	4.27%	
Cannabichromene (CBC)	0	4.741749024	5.37672545	113.39	5.000013939	105.45	7.26%	
Tetrahydrocannabinolic acid (THCA)	0	4.91846283	5.677010034	115.42	5.433956358	110.48	4.38%	

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.

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Andrea C. Ruppel, Lab Manager



Mackenzie E. Hyman, Quality Manager

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