ISO/IEC 17025:2005 Accredited

Marihuana Potency Analysis by High Performance Liquid Chromatography

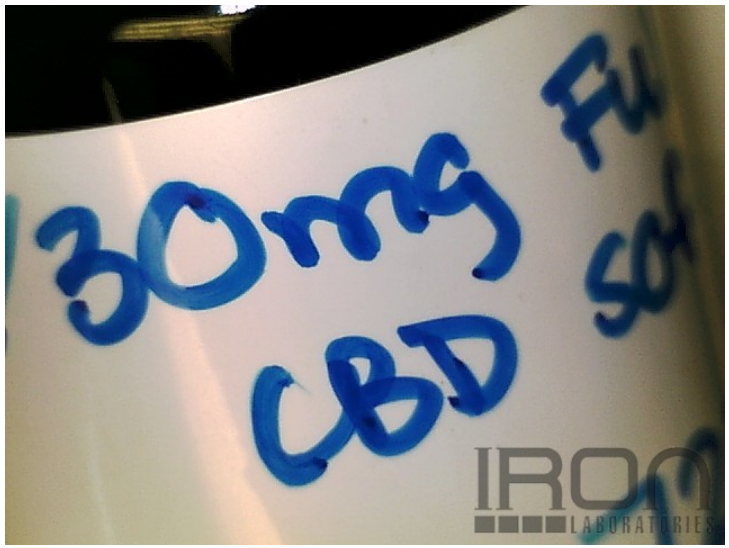
Testing Accreditation #: 77802

Test Certificate #: 118890-001

Client Name, Sample Details
Merissa Wisniewski
East Lansing, MI 48823
Sample: 30mg Full Spectrum CBD Softgels Batch 7273-01
Type: Other Cannabinoid Product
Method: FE04U HPLC-UV

Test Conditions
Prepsheet ID#: MIP190814
Scale: XS205-MI2
Temp: 22.1 °C
Baro PE: 978.6 hPa
Analyst: KEB
Technician: KEB

Sample ID#: 118890
Harvest/Process Date: 08/15/2019
Serving Size (g): 0.5
Date Received: 08/15/2019
Test Date: 08/14/2019
Valid Through: 08/14/2020
Report Issued: 08/15/2019



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG*	CBC*	THCV*	CBDV*	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	0.2	N/D	5.3	0.2	N/D	0.1	0.4	N/D	0.1	6.3	0.2	5.5	5.7
Amount (mg/g)	2.4	N/D	52.7	2.4	N/D	0.8	3.6	N/D	0.7	62.6	2.4	54.7	62.3
Amount per Serving (mg)	1.2	N\D	26.4	1.2	N\D	0.4	1.8	N\D	0.4	31.3	**Serving Size~** (g):		0.5
LOQ (mg/g)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2		**%Decarb.**	**THC**	**CBD**
±%RPD	1.87	2.30	2.09	2.48	1.20	2.42	0.61	1.63	1.63			100%	96

Serving size = contents of 1 capsule

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. FE-45 is performed using AOAC 966.02 and 32.004-32.009. FE-45 has relative expanded (k=2) uncertainties of 1.098% for moisture, 1.754% for water activity for unprocessed plant materials, and 13.102% for water activity for infused products. Vitamin E acetate analysis has a relative expanded (k=2) uncertainty of 18.614%.

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 refer to the percentage of THC or CBD relative to THCA or CBDA, respectively.

Andrea C. Ruppel, Lab Manager

Mackenzie E. Hyman, Quality Manager

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

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QC Report

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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
Cannabidivarin (CBDV)	0	4.843296636	4.797486983	99.05	4.87614141	100.68	1.63	
Cannabidiolic Acid (CBDA)	0	4.764299047	4.810374075	100.97	4.9311367	103.50	2.48	
Cannabigerol (CBG)	0	4.787749957	4.870699406	101.73	4.990127427	104.23	2.42	
Cannabidiol (CBD)	0	4.252188501	4.276455152	100.57	4.366991578	102.70	2.09	
Δ9-Tetrahydrocannabivarin (THCV)	0	4.673283659	4.704095782	100.66	4.78151392	102.32	1.63	
Cannabinol (CBN)	0	4.702710272	4.772404857	101.48	4.829792808	102.70	1.20	
Δ9-Tetrahydrocannabinol (THC)	0	5.117077497	5.570007849	108.85	5.466598234	106.83	1.87	
Cannabichromene (CBC)	0	5.394122894	5.656778221	104.87	5.622135466	104.23	0.61	
Tetrahydrocannabinolic acid (THCA)	0	4.927917169	5.372178437	109.02	5.250017134	106.54	2.30	

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 diference of two identicly 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.

Andrea C. Ruppel, Lab Manager

Mackenzie E. Hyman, Quality Manager

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