



ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Marijuana Potency Analysis by
High Performance Liquid Chromatography

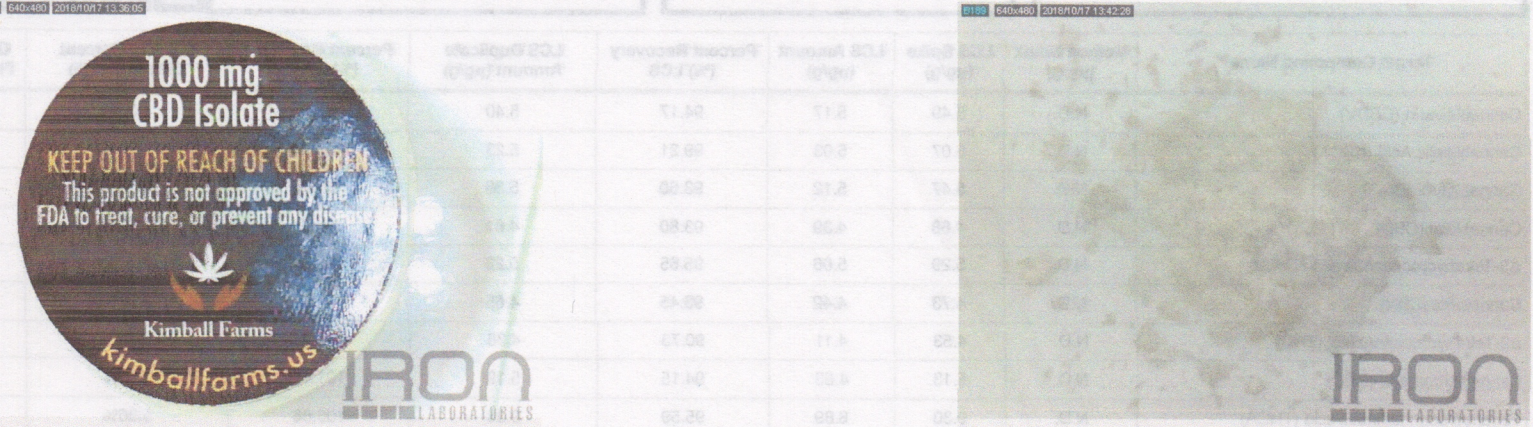
Testing Accreditation #: 4092-002

Test Certificate #: 112360-001

Client Name, Sample Details
Kimball Farms LLC
Address: 97846
Sample: 1000 mg CBD Isolate
License: R1044317HG
Type: Extract
Method: FE04-OR4 HPLC1100-OR1

Test Conditions
Prepsheet ID#: ORP181019a
Scale: XS205-OR1
Temp: 21.3 °C
Baro PE: 1006 hPa
Analyst: HRM
Technician: EDT

Sample ID#: 112360
Batch #: 112360
Process Date: 10/15/2018
Date Received: 10/15/2018
Test Date: 10/19/2018
Valid Through: 10/19/2019



Test Compounds	GBDV	CBDA	CBD	CBC	CBG	CBN	THC	THCA	THCV	Total THC	Total CBD
Amount	0.87%	N/D	109.88%	N/D	N/D	N/D	N/D	N/D	N/D		
LOQ	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.00%	109.88%
Uncertainty	4.35% RPD	3.90% RPD	4.89% RPD	7.19% RPD	4.58% RPD	5.07% RPD	5.90% RPD	5.36% RPD	3.11% RPD		

Q = Limit of Quantitation
D is relative percent difference between the LCS and LCS duplicate.
RPD = Relative Percent Difference; Min. Value = Minimum Detectable Amount, CFU = Colony Forming Units, N/D = Not Detected.
Designated tests that use the method: FE-45.

Total CBD or THC is the calculated sum of CBD or THC and the amount of CBD or THC derived from CBDA or THCA, respectively. These values are calculated by adding a molar reaction factor of 0.877 to the CBDA or THCA value.

Method FE-01-OR9 was used in accordance with OAR 333-007 for sampling. All marijuana items are sampled and tested in accordance with OAR 333-007-0300 to 333-007-490 and OAR 333-064-0100 to 333-064-0110.

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Joseph Rutkowski, Quality Manager



Himashi Mead, Technical Manager

Iron Labs Oregon complies with 2009 TNI Environmental Laboratory Standards.
Tested by Iron Laboratories Oregon, 71 Centennial Loop Suite D Eugene, OR 97401



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QC Report

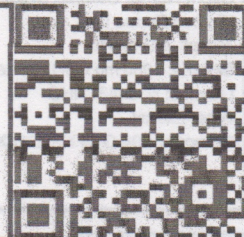
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Client Name, Sample Details
 Simball Farms LLC
 Joseph, OR 97846
 Sample: 1000 mg CBD Isolate
 License: R1044317IHG
 Type: Extract
 Method: FE04-OR4:HPLC1100-OR1

Test Conditions
 Prepsheet ID#: ORP181019a
 Scale: XS205-OR1
 Temp: 21.3 °C
 Baro PE: 1006 hPa
 Analyst: HRM
 Technician: EDT

Sample ID#: 112360
 Batch #: 112360
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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)	N.D.	5.49	5.17	94.17	5.40	98.36	4.35%	
cannabidiolic Acid (CBDA)	N.D.	5.07	5.03	99.21	5.23	103.16	3.90%	
cannabigerol (CBG)	N.D.	5.47	5.12	93.60	5.36	97.99	4.58%	
cannabidiol (CBD)	N.D.	4.68	4.39	93.80	4.61	98.50	4.89%	
-Tetrahydrocannabinol (THCV)	N.D.	5.29	5.06	95.65	5.22	98.68	3.11%	
cannabinol (CBN)	N.D.	4.73	4.42	93.45	4.65	98.31	5.07%	
-Tetrahydrocannabinol (THC)	N.D.	4.53	4.11	90.73	4.36	96.25	5.90%	
cannabinol (CBC)	N.D.	5.13	4.83	94.15	5.19	101.17	7.19%	
tetrahydrocannabinolic acid (THCA)	N.D.	9.30	8.89	95.59	9.38	100.86	5.36%	

N.D. = Not Detected
 = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) Low recovery should be scrutinized for possible fall as it could indicate more compound present than is detected.
 = 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 item or consumables.
 = indicates that the relative percent difference of two identically prepared Matrix Spike samples for a target analyte was greater than 20%
 = 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.

OP FE-01-OR9 was used in accordance with OAR 333-007 for sampling. All marijuana items are sampled and tested in accordance with OAR 333-007-0300 to 333-007-490 and OAR 333-064-0100 to 333-064-0110.

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