

CBD Lemon Diesel

Lab ID: 2009129-05

Whole Circle Farms

Harvest / Process Lot: WCF-2020-LmD-001

METRC Batch ID: NA

Date Sampled: 09/18/20

Date Printed: 09/23/20

Report cannot be used for OLCC/OHA compliance.

Potency Analysis

Analytical Method: De Backer, Journal of Chromatography b.2009. 11.004 - SOP 102

Cannabinoids (% weight)		Moisture Adjusted	LOQ
THCA	0.426	0.466	0.0758
delta 9-THC	< LOQ	< LOQ	0.0758
delta 8-THC	< LOQ	< LOQ	0.0758
CBGA	0.420	0.460	0.0758
CBDA	11.8	12.9	0.0758
CBD	0.382	0.418	0.0758
CBN	< LOQ	< LOQ	0.0758
CBG	< LOQ	< LOQ	0.0758
CBC	0.274	0.299	0.0758
Total CBG	0.369	0.403	0.0758
Total Cannabinoids	11.7	12.8	0.0758

Total THC
0.409 %

Total CBD
11.7 %

<LOQ - Results below the Limit of Quantitation

Acid form of THC/CBD are decarboxylated by heat, lose 12% of original mass as CO₂. Result = *bioactive*

"Total" Cannabinoid accounts for decarboxylation and moisture content. Total THC = $[(THCA \times 0.877) + \Delta 9THC] / (100\% - MC)$

Moisture

Analysis Method/SOP: SOP 7

Moisture: 8.60 %



Erik Werstler

Lab Director

CBD Lemon Diesel

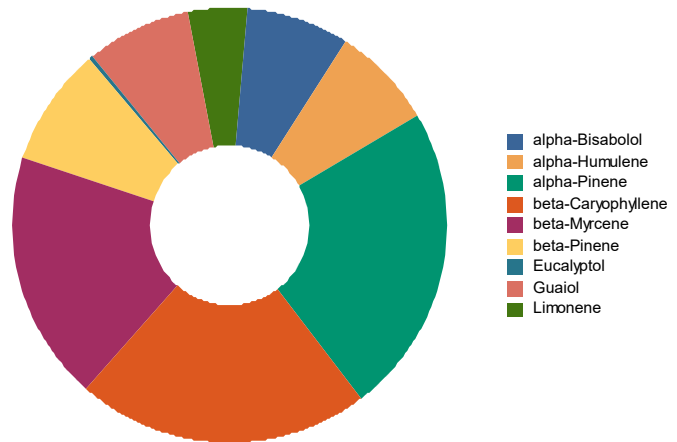
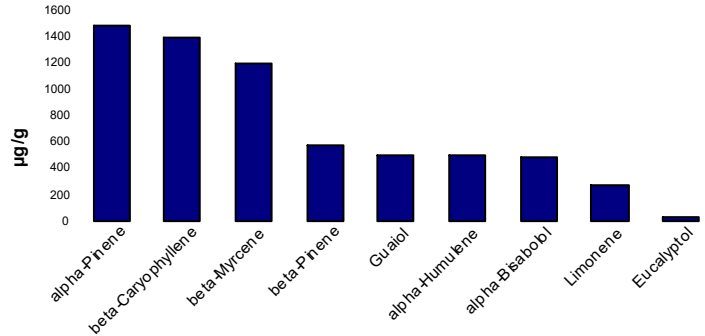
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Terpene Test Report

Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
alpha-Bisabolol	482.5	0.04825
Camphene	< LOQ	< LOQ
Camphor	< LOQ	< LOQ
delta-3-Carene	< LOQ	< LOQ
beta-Caryophyllene	1386	0.1386
Caryophyllene Oxide	< LOQ	< LOQ
alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ
p-Cymene	< LOQ	< LOQ
(1R)-endo-(+)-Fenchyl alcohol	< LOQ	< LOQ
Eucalyptol	31.32	0.003132
Geraniol	< LOQ	< LOQ
Geranyl acetate	< LOQ	< LOQ
Guaiol	498.5	0.04985
alpha-Humulene	497.6	0.04976
Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ
Limonene	279.3	0.02793
Linalool	< LOQ	< LOQ
beta-Myrcene	1190	0.1190
Nerolidol	< LOQ	< LOQ
Ocimene	< LOQ	< LOQ
alpha-Pinene	1483	0.1483
beta-Pinene	568.8	0.05688
Pulegone	< LOQ	< LOQ
Sabinene	< LOQ	< LOQ
Sabinene hydrate	< LOQ	< LOQ
gamma-Terpinene	< LOQ	< LOQ
alpha-Terpinene	< LOQ	< LOQ
Terpinolene	< LOQ	< LOQ
Valencene	< LOQ	< LOQ
Nerol	< LOQ	< LOQ
(+/-)-Borneol	< LOQ	< LOQ




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Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
(+/-)-Fenchone	< LOQ	< LOQ
alpha-Phellandrene	< LOQ	< LOQ
cis-Farnesene	< LOQ	< LOQ
Menthol	< LOQ	< LOQ
trans-Farnesene	< LOQ	< LOQ
alpha-Terpineol	< LOQ	< LOQ
gamma-Terpineol	< LOQ	< LOQ
Total Terpenes	6417	0.6417



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Quality Control Potency

Batch: B20I074 - Potency

Blank(B20I074-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
delta 9-THC	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBGA	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBDA	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBD	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBN	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBG	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
delta 8-THC	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	
CBC	< LOQ	0.0729	%		09/21/20 15:44	09/21/20 19:43	

LCS(B20I074-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	102	0.0728	%	85-115	09/21/20 15:44	09/21/20 19:52	
delta 9-THC	101	0.0728	%	85-115	09/21/20 15:44	09/21/20 19:52	
CBDA	99.7	0.0728	%	85-115	09/21/20 15:44	09/21/20 19:52	
CBD	98.7	0.0728	%	85-115	09/21/20 15:44	09/21/20 19:52	



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Quality Control Terpene Analysis

Batch: B20I076 - Terp

Blank(B20I076-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Camphene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Camphor	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
delta-3-Carene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
beta-Caryophyllene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Caryophyllene Oxide	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
alpha-Cedrene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Cedrol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
p-Cymene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
(1R)-endo-(+)-Fenchyl alcol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Eucalyptol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Geraniol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Geranyl acetate	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Guaiol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
alpha-Humulene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Isoborneol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Isopulegol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Limonene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Linalool	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
beta-Myrcene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Nerolidol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Ocimene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
alpha-Pinene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
beta-Pinene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Pulegone	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Sabinene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Sabinene hydrate	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
gamma-Terpinene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
alpha-Terpinene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Terpinolene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Valencene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Nerol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
(+/-)-Borneol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
(+/-)-Fenchone	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	



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Quality Control

Terpene Analysis (Continued)

Batch: B20I076 - Terp (Continued)

Blank(B20I076-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Phellandrene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
cis-Farnesene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
Menthol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
trans-Farnesene	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
alpha-Terpineol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	
gamma-Terpineol	< LOQ	5.000E-4	%		09/21/20 19:36	09/22/20 12:03	

LCS(B20I076-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	51.1	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Camphene	95.5	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
beta-Caryophyllene	109	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Caryophyllene Oxide	108	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
(1R)-endo-(+)-Fenchyl alcohol	83.1	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Guaiol	58.5	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
alpha-Humulene	72.7	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Limonene	86.1	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Linalool	68.5	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
beta-Myrcene	124	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Ocimene	85.3	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
alpha-Pinene	89.3	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
beta-Pinene	89.2	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
Terpinolene	86.2	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
(+/-)-Borneol	65.1	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	
trans-Farnesene	78.1	5.250E-4	%	50-150	09/21/20 19:36	09/22/20 12:35	

Batch: B20I077 - Moisture Content

Blank(B20I077-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.160	0.00	%		09/21/20 22:39	09/21/20 22:39	

LCS(B20I077-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	94.0	0.00	%	80-120	09/21/20 22:39	09/21/20 22:39	



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Notes and Definitions

- B Analyte detected in method blank, but not associated samples.
 - B2 Analyte detected in sample and associate method blank.
 - C Interference due to co-elution.
 - D Initial result exceeded calibration range, reported data are based on analysis of a dilution.
 - H Non-homogenous sample matrix affecting RPD and/or QC.
 - I Manual Integration was performed.
 - L Duplicate sample relative percent difference (RPD) exceeds QC limits.
 - M Anomalous results due to matrix interference
 - P Peaks manually split.
 - Q1 QC out of limits but still ok
 - Q2 Quality Control outside QC limits. Data considered estimate.
 - Q3 CCV was above the acceptance criteria. Non-detect samples are considered acceptable.
 - Q4 CCV was below the acceptance criteria, however the sample still exceeds the regulatory limit.
 - R Marginal Exceedence.
 - U Reported result is an estimate. The analyte was detected above the calibration range.
 - X Problems with initial analysis, reported data are from reinjection of prepared sample.
- <LOQ - Results below the Limit of Quantitation - Compound not detected



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Lab Director