

CBD Sour Tsunami

Lab ID: 2009129-07

Whole Circle Farms

Harvest / Process Lot: WCF-2020-Sour-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	0.298	0.328	0.0780
delta 9-THC	< LOQ	< LOQ	0.0780
delta 8-THC	< LOQ	< LOQ	0.0780
CBGA	0.591	0.650	0.0780
CBDA	7.86	8.65	0.0780
CBD	0.216	0.238	0.0780
CBN	< LOQ	< LOQ	0.0780
CBG	< LOQ	< LOQ	0.0780
CBC	0.218	0.240	0.0780
Total CBG	0.518	0.570	0.0780
Total Cannabinoids	8.11	8.92	0.0780

Total THC
0.288 %

Total CBD
7.82 %

<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×0.877) + Δ9THC] / (100%-MC)

Moisture

Analysis Method/SOP: SOP 7

Moisture: 9.11 %

Erik Werstler
Lab Director

CBD Sour Tsunami

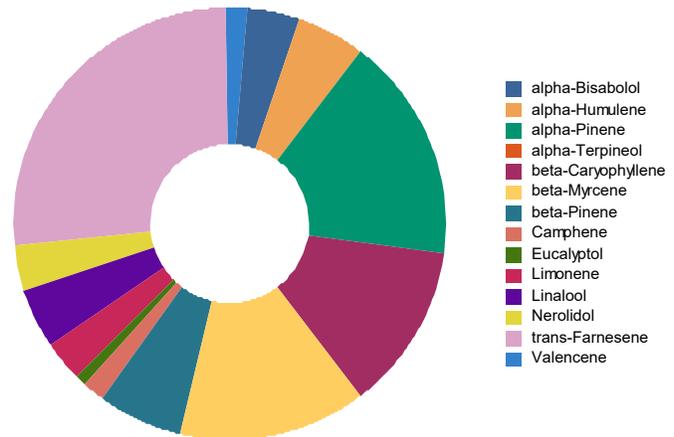
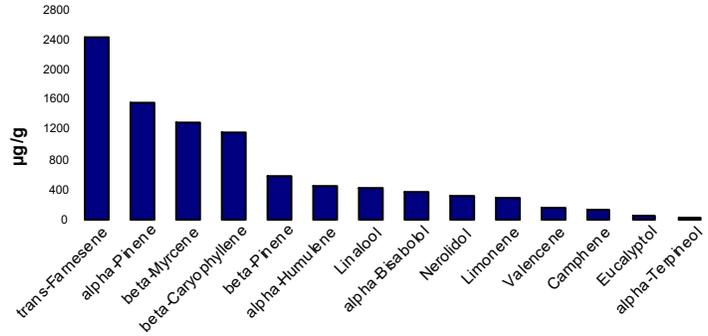
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Terpene Test Report

Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
alpha-Bisabolol	365.3	0.03653
Camphene	144.9	0.01449
Camphor	< LOQ	< LOQ
delta-3-Carene	< LOQ	< LOQ
beta-Caryophyllene	1154	0.1154
Caryophyllene Oxide	< LOQ	< LOQ
alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ
p-Cymene	< LOQ	< LOQ
(1R)-endo-(+)-Fenchyl alcohol	< LOQ	< LOQ
Eucalyptol	68.1	0.006810
Geraniol	< LOQ	< LOQ
Geranyl acetate	< LOQ	< LOQ
Guaial	< LOQ	< LOQ
alpha-Humulene	457	0.04570
Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ
Limonene	282.9	0.02829
Linalool	418.1	0.04181
beta-Myrcene	1293	0.1293
Nerolidol	324	0.03240
Ocimene	< LOQ	< LOQ
alpha-Pinene	1564	0.1564
beta-Pinene	597.6	0.05976
Pulegone	< LOQ	< LOQ
Sabinene	< LOQ	< LOQ
Sabinene hydrate	< LOQ	< LOQ
gamma-Terpinene	< LOQ	< LOQ
alpha-Terpinene	< LOQ	< LOQ
Terpinolene	< LOQ	< LOQ
Valencene	155.9	0.01559
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	2437	0.2437
alpha-Terpineol	22.72	0.002272
gamma-Terpineol	< LOQ	< LOQ
Total Terpenes	9284	0.9284



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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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