

CBD Blue Delica

Lab ID: 2010033-02

Whole Circle Farms

Harvest / Process Lot: 09/2020

METRC Batch ID: WCF-2020-BluD-001

Date Sampled: 10/05/20

Date Printed: 10/12/20

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	0.335	0.362	0.0752
delta 9-THC	< LOQ	< LOQ	0.0752
delta 8-THC	< LOQ	< LOQ	0.0752
CBGA	0.661	0.714	0.0752
CBDA	9.45	10.2	0.0752
CBD	0.247	0.267	0.0752
CBN	< LOQ	< LOQ	0.0752
CBG	< LOQ	< LOQ	0.0752
CBC	< LOQ	< LOQ	0.0752
Total CBG	0.580	0.626	0.0752
Total Cannabinoids	9.41	10.2	0.0752

Total THC
0.317 %

Total CBD
9.22 %

<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: 7.41 %

Erik Werstler
Lab Director

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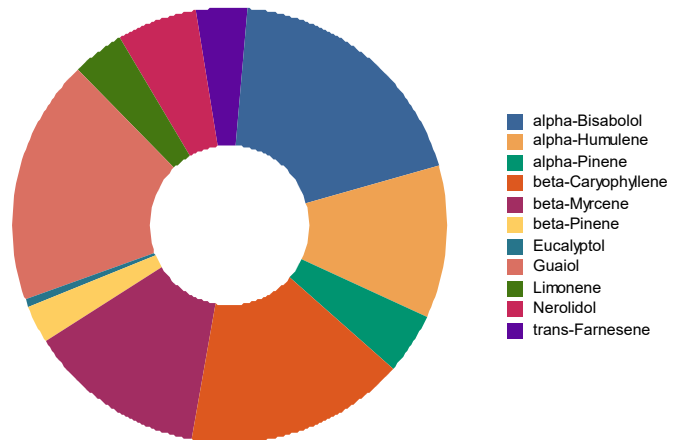
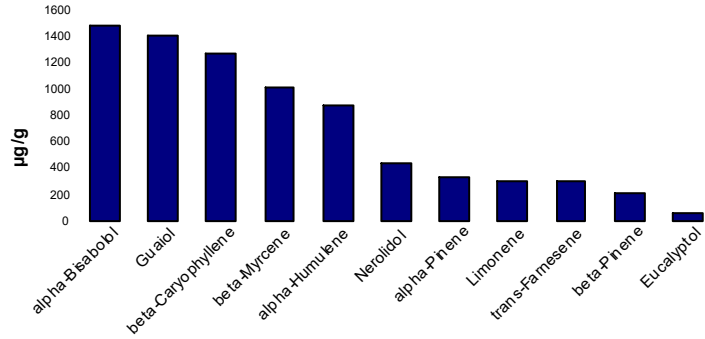
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Terpene Test Report

Analysis Method/SOP: Terp

Analyte	Result µg/g	Result %
alpha-Bisabolol	1481	0.1481
Camphene	< LOQ	< LOQ
Camphor	< LOQ	< LOQ
delta-3-Carene	< LOQ	< LOQ
beta-Caryophyllene	1266	0.1266
Caryophyllene Oxide	< LOQ	< LOQ
alpha-Cedrene	< LOQ	< LOQ
Cedrol	< LOQ	< LOQ
p-Cymene	< LOQ	< LOQ
(1R)-endo-(+)-Fenchyl alcohol	< LOQ	< LOQ
Eucalyptol	57.03	0.005703
Geraniol	< LOQ	< LOQ
Geranyl acetate	< LOQ	< LOQ
Guaiol	1401	0.1401
alpha-Humulene	871.3	0.08713
Isoborneol	< LOQ	< LOQ
Isopulegol	< LOQ	< LOQ
Limonene	311	0.03110
Linalool	< LOQ	< LOQ
beta-Myrcene	1019	0.1019
Nerolidol	435	0.04350
Ocimene	< LOQ	< LOQ
alpha-Pinene	341.5	0.03415
beta-Pinene	206.5	0.02065
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	304.9	0.03049
alpha-Terpineol	< LOQ	< LOQ
gamma-Terpineol	< LOQ	< LOQ
Total Terpenes	7694	0.7694



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Quality Control Potency

Batch: B20J036 - Potency

Blank(B20J036-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
delta 9-THC	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBGA	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBDA	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBD	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBN	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBG	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
delta 8-THC	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	
CBC	< LOQ	0.0734	%		10/08/20 11:46	10/08/20 15:48	

LCS(B20J036-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
THCA	91.9	0.0709	%	85-115	10/08/20 11:46	10/08/20 15:58	
delta 9-THC	97.9	0.0709	%	85-115	10/08/20 11:46	10/08/20 15:58	
CBDA	94.4	0.0709	%	85-115	10/08/20 11:46	10/08/20 15:58	
CBD	96.3	0.0709	%	85-115	10/08/20 11:46	10/08/20 15:58	



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Quality Control Moisture Content

Batch: B20J030 - Moisture Content

Blank(B20J030-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	0.200	0.00	%		10/07/20 13:07	10/07/20 13:07	

LCS(B20J030-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Percent Moisture	97.9	0.00	%	80-120	10/07/20 13:07	10/07/20 13:07	

Batch: B20J040 - Terp

Blank(B20J040-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Camphene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Camphor	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
delta-3-Carene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
beta-Caryophyllene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Caryophyllene Oxide	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
alpha-Cedrene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Cedrol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
p-Cymene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
(1R)-endo-(+)-Fenchyl alcohol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Eucalyptol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Geraniol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Geranyl acetate	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Guaiol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
alpha-Humulene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Isoborneol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Isopulegol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Limonene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Linalool	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
beta-Myrcene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Nerolidol	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
Ocimene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
alpha-Pinene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
beta-Pinene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Pulegone	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Sabinene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Sabinene hydrate	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	



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Quality Control

Terpene Analysis (Continued)

Batch: B20J040 - Terp (Continued)

Blank(B20J040-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
gamma-Terpinene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
alpha-Terpinene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Terpinolene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Valencene	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
Nerol	< LOQ	0.001250	%		10/09/20 15:51	10/09/20 23:54	
(+/-)-Borneol	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
(+/-)-Fenchone	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
alpha-Phellandrene	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
cis-Farnesene	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
Menthol	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
trans-Farnesene	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
alpha-Terpineol	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	
gamma-Terpineol	< LOQ	5.000E-4	%		10/09/20 15:51	10/09/20 23:54	

LCS(B20J040-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
alpha-Bisabolol	113	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Camphene	116	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
beta-Caryophyllene	78.7	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Caryophyllene Oxide	87.0	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
(1R)-endo-(+)-Fenchyl alcol	117	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Guaiol	133	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
alpha-Humulene	127	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Limonene	97.4	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Linalool	110	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
beta-Myrcene	77.3	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Ocimene	137	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
alpha-Pinene	140	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
beta-Pinene	140	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
Terpinolene	128	0.001312	%	50-150	10/09/20 15:51	10/10/20 00:27	
(+/-)-Borneol	152	5.250E-4	%	50-150	10/09/20 15:51	10/10/20 00:27	Q1
trans-Farnesene	102	5.250E-4	%	50-150	10/09/20 15:51	10/10/20 00:27	



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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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