



Report Number: 20-006062/D03.R00

Report Date: 06/18/2020 ORELAP#: OR100028

Purchase Order:

Received: 06/12/20 10:00

Customer: Healthy Roots Product identity: 1000 Berry #88

Client/Metrc ID:

20-006062-0002

Laboratory ID:

Summary

Analyte	Result	Limits	Units	Status	CBD-Total per 28.5g	994 mg/28.5g
CBC	0.201		%			
CBC-A [†]	0.0281		%			
CBD	3.17		%		THC-Total per 28.5g	12.3 mg/28.5g
CBD-A	0.362		%		Reported in milligr	ome per cerving)
CBDV [†]	0.0389		%		(Reported in milligi	ams per serving)
CBDV-A [†]	0.0116		%			
CBG [†]	0.0232		%			
CBG-A [†]	0.0117		%			
Δ9-THC	0.0430		%			
Analyte per 28.5g	Result	Limits	Units	Status		
CBC per 28.5g	57.3		mg/28.5g			
CBC-A per 28.5g	8.01		mg/28.5g			
CBD per 28.5g	903		mg/28.5g			
CBD-A per 28.5g	103		mg/28.5g			
CBDV per 28.5g	11.1		mg/28.5g			
CBDV-A per 28.5g	3.31		mg/28.5g			
CBG per 28.5g	6.61		mg/28.5g			
CBG-A per 28.5g	3.33		mg/28.5g			
Δ9-THC per 28.5g	12.3		mg/28.5g			

Microbiology:

Less than LOQ for all analytes.

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Customer: Healthy Roots

Product identity: 1000 Berry #88

Client/Metrc ID:

Sample Date:

20-006062-0002 **Laboratory ID:**

14 °C Temp:

Sample Results

Potency	Method J AOAC	2015 V98-6 (mod)	Batch: 2005059		Analyze: 6/16/20 9:03:00 PM
Analyte	Result	Limits	Units	LOQ	Notes
CBC	0.201		%	0.0032	
CBC-A [†]	0.0281		%	0.0032	
CBC-Total [†]	0.226		%	0.0060	
CBD	3.17		%	0.0321	
CBD-A	0.362		%	0.0032	
CBD-Total	3.49		%	0.0349	
CBDV [†]	0.0389		%	0.0032	
CBDV-A [†]	0.0116		%	0.0032	
CBDV-Total [†]	0.0490		%	0.0060	
CBG [†]	0.0232		%	0.0032	
CBG-A [†]	0.0117		%	0.0032	
CBG-Total	0.0335		%	0.0060	
CBL [†]	< LOQ		%	0.0032	
CBN	< LOQ		%	0.0032	
$\Delta 8 ext{-THC}^\dagger$	< LOQ		%	0.0032	
Δ9-THC	0.0430		%	0.0032	
THC-A	< LOQ		%	0.0032	
THC-Total	0.0430		%	0.0060	
THCV [†]	0.000		%	0.0032	
THCV-A [†]	< LOQ		%	0.0032	
THCV-Total [†]	< LOQ		%	0.0060	
Total Cannabinoids [†]	3.89		%		

Potency per 28.5g	Method J AOA	AC 2015 V98-6 (mod)	Batch: 2005059		Analyze: 6/16/20 9:03:00 PM
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 28.5g	57.3		mg/28.5g	0.914	
CBC-A per 28.5g	8.01		mg/28.5g	0.914	
CBC-Total per 28.5g	64.3		mg/28.5g	1.72	
CBD per 28.5g	903		mg/28.5g	9.14	
CBD-A per 28.5g	103		mg/28.5g	0.914	
CBD-Total per 28.5g	994		mg/28.5g	9.94	
CBDV per 28.5g	11.1		mg/28.5g	0.914	
CBDV-A per 28.5g	3.31		mg/28.5g	0.914	
CBDV-Total per 28.5g	14.0		mg/28.5g	1.71	
CBG per 28.5g	6.61		mg/28.5g	0.914	

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Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.





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Potency per 28.5g	Method J AO	AC 2015 V98-6 (mod)	Batch: 2005059		Analyze: 6/16/20 9:03:00 PM
Analyte	Result	Limits	Units	LOQ	Notes
CBG-A per 28.5g	3.33		mg/28.5g	0.914	
CBG-Total per 28.5g	9.50		mg/28.5g	1.71	
CBL per 28.5g	< LOQ		mg/28.5g	0.914	
CBN per 28.5g	< LOQ		mg/28.5g	0.914	
$\Delta 8$ -THC per 28.5g	< LOQ		mg/28.5g	0.914	
Δ9-THC per 28.5g	12.3		mg/28.5g	0.914	
THC-A per 28.5g	< LOQ		mg/28.5g	0.914	
THC-Total per 28.5g	12.3		mg/28.5g	1.72	
THCV per 28.5g	< LOQ		mg/28.5g	0.914	
THCV-A per 28.5g	< LOQ		mg/28.5g	0.914	
THCV-Total per 28.5g	< LOQ		mg/28.5g	1.72	
Total Cannabinoids 28.5g [†]	1110		mg/28.5g		

Microbiology								
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
E.coli	< LOQ		cfu/g	10	2004933	06/15/20	AOAC 991.14 (Petrifilm)	X
Total Coliforms	< LOQ		cfu/g	10	2004933	06/15/20	AOAC 991.14 (Petrifilm)	X





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These test results are representative of the individual sample selected and submitted by the client.

Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

† = Analyte not NELAP accredited.

Units of Measure

cfu/g = Colony forming units per gram g = Grammg/28.5g = Milligram per 28.5g % = Percentage of sample % wt = μ g/g divided by 10,000

Glossary of Qualifiers

X: Not ORELAP accredited.

Approved Signatory

Derrick Tanner General Manager





20-006062/D03.R00 **Report Number:**

Report Date: 06/18/2020

ORELAP#: OR100028

Purchase Order:

06/12/20 10:00 Received:

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y: He Liz N 1433 Port ealth AG-L		spur	379 compounds							Coliform									Instructions:	
Company: Healthy Roots Contact: Liz Merritt Address: 14325 NE Airport Way, #113 Portland, OR 97230 Email: Healthyrootshemp@gmail.com Phone: 503-496-2329 License: AG-L 1052211FP USS: ate	X: X	spunodwoo	1 1							00									o State - METI Final Results:	RC
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113 com		Pesticides	Pesticide Multi-Residue	Potency	Residual Solvents	Water Activity	Moisture	Terpenes	Micro: Yeast and Mold	Micro: (E. Coli) and Total	Heavy Metals	Mycotoxins					Serving			
ient Sam	te/Time	Pesi	Pest	Pote	Resi	Wat	Moi	Terp	Micr	Micr	Heav	Myc	Other	Sample	14/-:		size			
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500 Berry #87			-	$\stackrel{\vee}{-}$						V					28.5	Sgra	ms		%	
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Report Number: 20-006062/D03.R00

Report Date: 06/18/2020 ORELAP#: OR100028

Purchase Order:

Received: 06/12/20 10:00

Revision #: 0.00 Control : CFL-D06 Revision Date: 05/31/2019 Effective Date: 05/31/2019

Laboratory Quality Control Results

J AOAC 2015	V98-6			Bate					
Laboratory Co	ontrol Sample								
Analyte	Result	Spike	Units	% Rec	Lir	mits		Evaluation	Notes
CBDV-A	0.00970	0.01	%	97.0	85.0	-	115	Acceptable	
CBDV	0.00992	0.01	%	99.2	85.0	-	115	Acceptable	
CBD-A	0.00962	0.01	%	96.2	85.0	-	115	Acceptable	
CBG-A	0.00966	0.01	%	96.6	85.0	-	115	Acceptable	
CBG	0.00970	0.01	%	97.0	85.0	-	115	Acceptable	
CBD	0.00915	0.01	%	91.5	85.0	-	115	Acceptable	
THCV	0.00932	0.01	%	93.2	85.0	-	115	Acceptable	
THCVA	0.00957	0.01	%	95.7	85.0	-	115	Acceptable	
CBN	0.00949	0.01	%	94.9	85.0	-	115	Acceptable	
THC	0.00970	0.01	%	97.0	85.0	-	115	Acceptable	
D8THC	0.00935	0.01	%	93.5	85.0	-	115	Acceptable	
CBL	0.00989	0.01	%	98.9	85.0	-	115	Acceptable	
CBC	0.00972	0.01	%	97.2	85.0	-	115	Acceptable	
THCA	0.00928	0.01	%	92.8	85.0	-	115	Acceptable	
CBCA	0.00964	0.01	%	96.4	85.0	-	115	Acceptable	

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDV-A	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBDV	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBD-A	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBG-A	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBG	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBD	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
THCV	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
THCVA	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBN	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
THC	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
D8THC	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBL	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBC	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
THCA	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	
CBCA	<loq< td=""><td>0.003</td><td>%</td><td>< 0.003</td><td>Acceptable</td><td></td></loq<>	0.003	%	< 0.003	Acceptable	

Abbreviations

ND - None Detected at or above MRL RPD - Relative Percent Difference LOQ - Limit of Quantitation

Units of Measure:

% - Percent





Report Number: 20-006062/D03.R00

Report Date: 06/18/2020 ORELAP#: OR100028

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Received: 06/12/20 10:00

Revision #: 0.00 Control : CFL-D06 Revision Date: 05/31/2019 Effective Date: 05/31/2019

Laboratory Quality Control Results

J AOAC 2015 V	98-6				Bato	h ID: 2005059	1	
Sample Duplicat	te				Samı	ole ID: 20-00597	77-0001	
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
CBDV	0.0341	0.0334	0.003	%	2.24	< 20	Acceptable	
CBD-A	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
CBG-A	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
CBG	0.0294	0.0288	0.003	%	2.17	< 20	Acceptable	
CBD	2.20	2.16	0.003	%	1.47	< 20	Acceptable	
THCV	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
THCVA	<loq< td=""><td><l0q< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></l0q<></td></loq<>	<l0q< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></l0q<>	0.003	%	NA	< 20	Acceptable	
CBN	0.00490	0.00493	0.003	%	0.504	< 20	Acceptable	
THC	0.0830	0.0816	0.003	%	1.73	< 20	Acceptable	
D8THC	0.00321	0.00339	0.003	%	5.47	< 20	Acceptable	
CBL	0.00886	0.00891	0.003	%	0.538	< 20	Acceptable	
CBC	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
THCA	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	
CBCA	<loq< td=""><td><loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<></td></loq<>	<loq< td=""><td>0.003</td><td>%</td><td>NA</td><td>< 20</td><td>Acceptable</td><td></td></loq<>	0.003	%	NA	< 20	Acceptable	

Abbreviations

ND - None Detected at or above MRL RPD - Relative Percent Difference LOQ - Limit of Quantitation

NA - Calculation Not Applicable given non-numerical results

Units of Measure:

% - Percent





20-006062/D03.R00 **Report Number:**

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Purchase Order:

Received: 06/12/20 10:00

Explanation of QC Flag Comments:

Code	Explanation
Q	Matrix interferences affecting spike or surrogate recoveries.
Q1	Quality control result biased high. Only non-detect samples reported.
Q2	Quality control outside QC limits. Data considered estimate.
Q3	Sample concentration greater than four times the amount spiked.
Q4	Non-homogenous sample matrix, affecting RPD result and/or % recoveries.
Q5	Spike results above calibration curve.
Q6	Quality control outside QC limits. Data acceptable based on remaining QC.
R	Relative percent difference (RPD) outside control limit.
R1	RPD non-calculable, as sample or duplicate results are less than five times the LOQ.
R2	Sample replicates RPD non-calculable, as only one replicate is within the analytical range.
LOQ1	Quantitation level raised due to low sample volume and/or dilution.
LOQ2	Quantitaion level raised due to matrix interference.
В	Analyte detected in method blank, but not in associated samples.
B1	The sample concentration is greater than 5 times the blank concentration.
B2	The sample concentration is less than 5 times the blank concentration.