



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 21-004139/D03.R00
Report Date: 04/21/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/15/21 11:25

Customer: Healthy Roots
Product identity: Orange/Mango
Client/Metric ID: .
Laboratory ID: 21-004139-0001

Sample Date: 04/15/21 09:30

Summary

Potency:

Analyte	Result	Limits	Units	Status	
CBD	0.753		%		CBD-Total per 3.7g 27.9 mg/3.7g
CBDV [†]	0.00422		%		
Analyte per 3.7g					THC-Total per 3.7g <LOQ
CBD per 3.7g	27.9		mg/3.7g		(Reported in milligrams per serving)
CBDV per 3.7g [†]	0.156		mg/3.7g		

Microbiology:

Less than LOQ for all analytes.



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Customer: Healthy Roots

Product identity: Orange/Mango
Client/Metric ID: .
Sample Date: 04/15/21 09:30
Laboratory ID: 21-004139-0001
Evidence of Cooling: No
Temp: 22.4 °C
Serving Size #1: 3.7 g

Sample Results

Potency	Method J AOAC 2015 V98-6 (mod)	Units %	Batch: 2103477	Analyze: 4/19/21 3:07:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC	< LOQ		%	0.0032	
CBC-A [†]	< LOQ		%	0.0032	
CBC-Total [†]	< LOQ		%	0.0060	
CBD	0.753		%	0.0032	
CBD-A	< LOQ		%	0.0032	
CBD-Total	0.753		%	0.0060	
CBDV [†]	0.00422		%	0.0032	
CBDV-A [†]	< LOQ		%	0.0032	
CBDV-Total [†]	< LOQ		%	0.0060	
CBG [†]	< LOQ		%	0.0032	
CBG-A [†]	< LOQ		%	0.0032	
CBG-Total	< LOQ		%	0.0060	
CBL [†]	< LOQ		%	0.0032	
CBL-Total [†]	< LOQ		%	0.0032	
CBN	< LOQ		%	0.0032	
Δ8-THC [†]	< LOQ		%	0.0032	
Δ9-THC	< LOQ		%	0.0032	
THC-A	< LOQ		%	0.0032	
THC-Total	< LOQ		%	0.0060	
THCV [†]	< LOQ		%	0.0032	
THCV-A [†]	< LOQ		%	0.0032	
THCV-Total [†]	< LOQ		%	0.0060	
Total Cannabinoids[†]	0.757		%		

Potency per 3.7g	Method J AOAC 2015 V98-6 (mod)	Units mg/se	Batch: 2103477	Analyze: 4/19/21 3:07:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBC-A per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBC-Total per 3.7g [†]	< LOQ		mg/3.7g	0.222	
CBD per 3.7g	27.9		mg/3.7g	0.118	
CBD-A per 3.7g	< LOQ		mg/3.7g	0.118	
CBD-Total per 3.7g	27.9		mg/3.7g	0.222	
CBDV per 3.7g [†]	0.156		mg/3.7g	0.118	

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.

Testing in accordance with: OAR 333-007-0430



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Potency per 3.7g **Method** J AOAC 2015 V98-6 (mod) **Units** mg/se **Batch:** 2103477 **Analyze:** 4/19/21 3:07:00 PM

Analyte	Result	Limits	Units	LOQ	Notes
CBDV-A per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBDV-Total per 3.7g [†]	< LOQ		mg/3.7g	0.221	
CBG per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBG-A per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBG-Total per 3.7g [†]	< LOQ		mg/3.7g	0.221	
CBL per 3.7g [†]	< LOQ		mg/3.7g	0.118	
CBL-Total per 3.7g [†]	< LOQ		mg/3.7g	69.6	
CBN per 3.7g	< LOQ		mg/3.7g	0.118	
Δ8-THC per 3.7g [†]	< LOQ		mg/3.7g	0.118	
Δ9-THC per 3.7g	< LOQ		mg/3.7g	0.118	
THC-A per 3.7g	< LOQ		mg/3.7g	0.118	
THC-Total per 3.7g	< LOQ		mg/3.7g	0.222	
THCV per 3.7g [†]	< LOQ		mg/3.7g	0.118	
THCV-A per 3.7g [†]	< LOQ		mg/3.7g	0.118	
THCV-Total per 3.7g [†]	< LOQ		mg/3.7g	0.222	

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
E.coli	< LOQ		cfu/g	10	2103364	04/17/21	AOAC 991.14 (Petrifilm)	X,I
Total Coliforms	< LOQ		cfu/g	10	2103364	04/17/21	AOAC 991.14 (Petrifilm)	X,I



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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 = Gram

mg/3.7g = Milligram per 3.7g

% = Percentage of sample

% wt = $\mu\text{g/g}$ divided by 10,000

Glossary of Qualifiers

I: Insufficient sample received to meet method requirements.

X: Not ORELAP accredited.

Approved Signatory

Derrick Tanner
General Manager



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**Hemp / Cannabis Usable / Extract / Finished Products
 Chain of Custody Record**

21-004139

Revision: 4.00 Control#: CF023 Rev 02/24/2021 Eff: 03/04/2021
 ORELAP ID: OR100028

CHAIN OF CUSTODY				Analysis Requested										Sampled by:			
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 Ph: () _____ <input type="checkbox"/> Fx Results: () _____ Billing (if different): _____				Pesticides - OR 59 compounds Pesticide Multi-Residue - 379 compounds Potency Residual Solvents Moisture & Water Activity Terpenes Micro: Yeast and Mold Micro: E.Coli and Total Coliform Heavy Metals Mycotoxins Other:										PO Number: _____ Project Number: _____ Project Name: _____ Custom Reporting: _____ Report to State - <input type="checkbox"/> METRC or <input type="checkbox"/> Other: _____ Turnaround time: <input type="checkbox"/> 5 Business Day Standard Turnaround <input type="checkbox"/> 3 Business Day Rush Turnaround* <input type="checkbox"/> 2 Business Day Rush Turnaround* <i>*Check for availability</i>			
Lab ID	Client Sample Identification	Date	Time	Pesticides - OR 59 compounds	Pesticide Multi-Residue - 379 compounds	Potency	Residual Solvents	Moisture & Water Activity	Terpenes	Micro: Yeast and Mold	Micro: E.Coli and Total Coliform	Heavy Metals	Mycotoxins	Other:	Sample Type †	Weight (Units)	Comments/Metric ID
1	Orange Mango	04/15/21				✓					✓				E	3.7gr	
2	Watermelon	04/15/21				✓					✓				E	39gr	
Relinquished By: <i>Merritt</i>				Date: <i>04/15/21</i>	Time:	Received By: <i>JMV</i>				Date: <i>4-15-21</i>	Time: <i>11:25</i>	Lab Use Only:					
<input type="checkbox"/> Shipped Via: _____ or <input type="checkbox"/> Client drop Evidence of cooling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No - Temp (°C): <i>22.4</i> Sample in good condition: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Cash <input type="checkbox"/> Check <input type="checkbox"/> CC <input type="checkbox"/> Net: _____ Prelog storage: _____																	

Report in
 mg/gr
 and
 % (percentage)

† - Sample Type Codes: Vegetation (V) ; Isolates (S) ; Extract/Concentrate (C) ; Tincture/Topical (T) ; Edible (E) ; Beverage (B)

Samples submitted to Columbia Laboratories with testing requirements constitute an agreement for services in accordance with the current terms of service associated with this COC. By signing "Relinquished by" you are agreeing to these terms
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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 **Batch ID: 2103477**

Laboratory Control Sample								
Analyte	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBDV-A	0.0101	0.01	%	101	85.0	- 115	Acceptable	
CBDV	0.0101	0.01	%	101	85.0	- 115	Acceptable	
CBD-A	0.0104	0.01	%	104	85.0	- 115	Acceptable	
CBG-A	0.00997	0.01	%	99.7	85.0	- 115	Acceptable	
CBG	0.0102	0.01	%	102	85.0	- 115	Acceptable	
CBD	0.0105	0.01	%	105	85.0	- 115	Acceptable	
THCV	0.0103	0.01	%	103	85.0	- 115	Acceptable	
THCVA	0.00959	0.01	%	95.9	85.0	- 115	Acceptable	
CBN	0.0112	0.01	%	112	85.0	- 115	Acceptable	
THC	0.0110	0.01	%	110	85.0	- 115	Acceptable	
D8THC	0.0103	0.01	%	103	85.0	- 115	Acceptable	
CBL	0.0101	0.01	%	101	85.0	- 115	Acceptable	
CBC	0.0103	0.01	%	103	85.0	- 115	Acceptable	
THCA	0.0106	0.01	%	106	85.0	- 115	Acceptable	
CBCA	0.0102	0.01	%	102	85.0	- 115	Acceptable	

Method Blank

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



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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		Batch ID: 2103477						
Sample Duplicate		Sample ID: 21-004061-0001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDV	0.00306	0.00308	0.003	%	0.424	< 20	Acceptable	
CBD-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBD	0.486	0.483	0.003	%	0.606	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THC	0.0250	0.0248	0.003	%	0.442	< 20	Acceptable	
D8THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBCA	<LOQ	<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



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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	Quantitation level raised due to matrix interference.
B	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.