



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



Report Number: 21-012273/D004.R000
Report Date: 10/21/2021
ORELAP#: OR100028
Purchase Order:
Received: 10/11/21 14:15

Customer: Healthy Roots
Product identity: #4 Orange Mango
Client/Metric ID: .
Laboratory ID: 21-012273-0002

Summary

Potency:

Analyte	Result	Limits	Units	Status	
CBD	0.799		%		CBD-Total per 3.7g 29.6 mg/3.7g
Analyte per 3.7g	Result	Limits	Units	Status	THC-Total per 3.7g <LOQ
CBD per 3.7g	29.6		mg/3.7g		(Reported in milligrams per serving)



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Customer: Healthy Roots
Product identity: #4 Orange Mango
Client/Metric ID: .
Sample Date:
Laboratory ID: 21-012273-0002
Evidence of Cooling: No
Temp: 20 °C
Relinquished by: Client
Serving Size #1: 3.7 g

Sample Results

Potency	Method J AOAC 2015 V98-6 (mod)	Units %	Batch: 2109491	Analyze: 10/20/21 7:44:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC	< LOQ		%	0.0033	
CBC-A [†]	< LOQ		%	0.0033	
CBC-Total [†]	< LOQ		%	0.0062	
CBD	0.799		%	0.0033	
CBD-A	< LOQ		%	0.0033	
CBD-Total	0.799		%	0.0062	
CBDV [†]	< LOQ		%	0.0033	
CBDV-A [†]	< LOQ		%	0.0033	
CBDV-Total [†]	< LOQ		%	0.0061	
CBE [†]	< LOQ		%	0.0033	
CBG [†]	< LOQ		%	0.0033	
CBG-A [†]	< LOQ		%	0.0033	
CBG-Total	< LOQ		%	0.0061	
CBL [†]	< LOQ		%	0.0033	
CBL-A [†]	< LOQ		%	0.0033	
CBL-Total [†]	< LOQ		%	0.0062	
CBN	< LOQ		%	0.0033	
CBT [†]	< LOQ		%	0.0033	
Δ8-THCV	< LOQ		%	0.0033	
Δ8-THC [†]	< LOQ		%	0.0033	
Δ9-THC	< LOQ		%	0.0033	
THC-A	< LOQ		%	0.0033	
THC-Total	< LOQ		%	0.0062	
THCV [†]	< LOQ		%	0.0033	
THCV-A [†]	< LOQ		%	0.0033	
THCV-Total [†]	< LOQ		%	0.0061	
Total Cannabinoids[†]	0.799		%		

Potency per 3.7g	Method J AOAC 2015 V98-6 (mod)	Units mg/se	Batch: 2109491	Analyze: 10/20/21 7:44:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBC-A per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBC-Total per 3.7g [†]	< LOQ		mg/3.7g	0.228	



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Potency per 3.7g **Method J AOAC 2015 V98-6 (mod)Units mg/se Batch: 2109491 Analyze: 10/20/21 7:44:00 PM**

Analyte	Result	Limits	Units	LOQ	Notes
CBD per 3.7g	29.6		mg/3.7g	0.122	
CBD-A per 3.7g	< LOQ		mg/3.7g	0.122	
CBD-Total per 3.7g	29.6		mg/3.7g	0.228	
CBDV per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBDV-A per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBDV-Total per 3.7g [†]	< LOQ		mg/3.7g	0.227	
CBE per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBG per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBG-A per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBG-Total per 3.7g [†]	< LOQ		mg/3.7g	0.227	
CBL per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBL-A per 3.7g [†]	< LOQ		mg/3.7g	0.122	
CBL-Total per 3.7g [†]	< LOQ		mg/3.7g	0.228	
CBN per 3.7g	< LOQ		mg/3.7g	0.122	
CBT per 3.7g [†]	< LOQ		mg/3.7g	0.122	
Δ8-THCV per 3.7g [†]	< LOQ		mg/3.7g	0.122	
Δ8-THC per 3.7g [†]	< LOQ		mg/3.7g	0.122	
Δ9-THC per 3.7g	< LOQ		mg/3.7g	0.122	
exo-THC per 3.7g [†]	< LOQ		mg/3.7g	0.122	
THC-A per 3.7g	< LOQ		mg/3.7g	0.122	
THC-Total per 3.7g	< LOQ		mg/3.7g	0.228	
THCV per 3.7g [†]	< LOQ		mg/3.7g	0.122	
THCV-A per 3.7g [†]	< LOQ		mg/3.7g	0.122	
THCV-Total per 3.7g [†]	< LOQ		mg/3.7g	0.229	
Total Cannabinoids per 3.7g	29.6		mg/3.7g		



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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

g = Gram

mg/3.7g = Milligram per 3.7g

% = Percentage of sample

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

Approved Signatory

Derrick Tanner
General Manager



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

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

Company: _____ CHAIN OF CUSTODY 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 105221FP Billing (if different): _____				Analysis Requested 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 <i>Aerobic Plate Count, Salmonella, Staphylococcus, Pseudomonas</i>										PO Number: _____ Project Number: _____ Project Name: _____ Custom Reporting: _____ Report to State: <input type="checkbox"/> METRC or <input type="checkbox"/> Other: Turnaround time: <input checked="" type="checkbox"/> 5 Business Day Standard Turnaround <input type="checkbox"/> 3 Business Day Rush Turnaround* <input type="checkbox"/> 2 Business Day Rush Turnaround* *Check for availability			
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	Sample Type †	Weight (Units)	Comments/Metric ID	
	#4 Tropical Punch					X								E	4	Report in mg/gr and % (percentage)	
	#4 Orange Mango					X								E	3.7		
	#4 Blue Razzberry					X								E	3.4		
	#4 Watermelon					X								E	3.8		
Relinquished By: _____			Date	Time	Received By: _____			Date	Time	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): 20.6 Sample in good condition: <input 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: _____							

† - 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
 12423 NE Whitaker Way
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 P: (503) 254-1794 | Fax: (503) 254-1452
 info@columbialaboratories.com
 Page _____ of _____
 www.columbialaboratories.com



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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: 2109491**

Laboratory Control Sample							
Analyte	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDVA	0.0100	0.01	%	100	85.0 - 115	Acceptable	
CBDV	0.0104	0.01	%	104	85.0 - 115	Acceptable	
CBE	0.0107	0.01	%	107	85.0 - 115	Acceptable	
CBD A	0.00998	0.01	%	99.8	85.0 - 115	Acceptable	
CBGA	0.00996	0.01	%	99.6	85.0 - 115	Acceptable	
CBG	0.0105	0.01	%	105	85.0 - 115	Acceptable	
CBD	0.0102	0.01	%	102	85.0 - 115	Acceptable	
THCV	0.0104	0.01	%	104	85.0 - 115	Acceptable	
d8THCV	0.0102	0.01	%	102	85.0 - 115	Acceptable	
THCVA	0.00960	0.01	%	96.0	85.0 - 115	Acceptable	
CBN	0.0101	0.01	%	101	85.0 - 115	Acceptable	
exo-THC	0.00977	0.01	%	97.7	85.0 - 115	Acceptable	
d9THC	0.00983	0.01	%	98.3	85.0 - 115	Acceptable	
d8THC	0.00976	0.01	%	97.6	85.0 - 115	Acceptable	
CBL	0.00940	0.01	%	94.0	85.0 - 115	Acceptable	
CBC	0.0101	0.01	%	101	85.0 - 115	Acceptable	
THCA	0.0106	0.01	%	106	85.0 - 115	Acceptable	
CBCA	0.0106	0.01	%	106	85.0 - 115	Acceptable	
CBLA	0.0101	0.01	%	101	85.0 - 115	Acceptable	
CBT	0.00933	0.01	%	93.3	85.0 - 115	Acceptable	

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDVA	<LOQ	0.003	%	< 0.003	Acceptable	
CBDV	<LOQ	0.003	%	< 0.003	Acceptable	
CBE	<LOQ	0.003	%	< 0.003	Acceptable	
CBD A	<LOQ	0.003	%	< 0.003	Acceptable	
CBGA	<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	
d8THCV	<LOQ	0.003	%	< 0.003	Acceptable	
THCVA	<LOQ	0.003	%	< 0.003	Acceptable	
CBN	<LOQ	0.003	%	< 0.003	Acceptable	
exo-THC	<LOQ	0.003	%	< 0.003	Acceptable	
d9THC	<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	
CBLA	<LOQ	0.003	%	< 0.003	Acceptable	
CBT	<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: 2109491						
Sample Duplicate		Sample ID: 21-012273-0001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBD	0.769	0.770	0.003	%	0.118	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.003	%	NA	< 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	
CBLA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBT	<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.