



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

This is an amended version of report# 21-004658/D02.R00.
Reason: Updated potency testing.

Customer: Healthy Roots
Product identity: #140v2 1000 Horse
Client/Metric ID: .
Laboratory ID: 21-004658-0001

Sample Date: 04/27/21 09:30

Summary

Potency:

Analyte	Result	Limits	Units	Status	CBD-Total per 28.5g	995 mg/28.5g
CBC	0.0973		%			
CBD	3.49		%			
CBDV [†]	0.0194		%		THC-Total per 28.5g	44.2 mg/28.5g
CBG [†]	0.0296		%			
CBN	0.0104		%			
Δ9-THC	0.155		%			(Reported in milligrams per serving)
Analyte per 28.5g	Result	Limits	Units	Status		
CBC per 28.5g [†]	27.7		mg/28.5g			
CBD per 28.5g	995		mg/28.5g			
CBDV per 28.5g [†]	5.53		mg/28.5g			
CBG per 28.5g [†]	8.44		mg/28.5g			
CBN per 28.5g	2.96		mg/28.5g			
Δ9-THC per 28.5g	44.2		mg/28.5g			



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

Customer: Healthy Roots

Product identity: #140v2 1000 Horse
Client/Metric ID: .
Sample Date: 04/27/21 09:30
Laboratory ID: 21-004658-0001
Evidence of Cooling: No
Temp: 21.9 °C
Serving Size #1: 28.5 g

Sample Results

Potency	Method J AOAC 2015 V98-6 (mod)	Units %	Batch: 2104131	Analyze: 5/6/21 11:24:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC	0.0973		%	0.0033	
CBC-A†	< LOQ		%	0.0033	
CBC-Total†	0.0973		%	0.0061	
CBD	3.49		%	0.0327	
CBD-A	< LOQ		%	0.0033	
CBD-Total	3.49		%	0.0356	
CBDV†	0.0194		%	0.0033	
CBDV-A†	< LOQ		%	0.0033	
CBDV-Total†	0.0194		%	0.0061	
CBG†	0.0296		%	0.0033	
CBG-A†	< LOQ		%	0.0033	
CBG-Total	0.0296		%	0.0061	
CBL†	< LOQ		%	0.0033	
CBN	0.0104		%	0.0033	
Δ8-THC†	< LOQ		%	0.0033	
Δ9-THC	0.155		%	0.0033	
THC-A	< LOQ		%	0.0033	
THC-Total	0.155		%	0.0061	
THCV†	< LOQ		%	0.0033	
THCV-A†	< LOQ		%	0.0033	
THCV-Total†	< LOQ		%	0.0061	
Total Cannabinoids†	3.80		%		

Potency per 28.5g	Method J AOAC 2015 V98-6 (mod)		Units mg/se	Batch: 2104131	Analyze: 5/6/21	11:24:00 PM
Analyte	Result	Limits	Units	LOQ	Notes	
CBC per 28.5g†	27.7		mg/28.5g	0.933		
CBC-A per 28.5g†	< LOQ		mg/28.5g	0.933		
CBC-Total per 28.5g†	27.7		mg/28.5g	1.75		
CBD per 28.5g	995		mg/28.5g	9.33		
CBD-A per 28.5g	< LOQ		mg/28.5g	0.933		
CBD-Total per 28.5g	995		mg/28.5g	10.2		
CBDV per 28.5g†	5.53		mg/28.5g	0.933		
CBDV-A per 28.5g†	< LOQ		mg/28.5g	0.933		



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

Potency per 28.5g Method J AOAC 2015 V98-6 (mod) Units mg/se Batch: 2104131 Analyze: 5/6/21 11:24:00 PM

Analyte	Result	Limits	Units	LOQ	Notes
CBDV-Total per 28.5g [†]	5.53		mg/28.5g	1.74	
CBG per 28.5g [†]	8.44		mg/28.5g	0.933	
CBG-A per 28.5g [†]	< LOQ		mg/28.5g	0.933	
CBG-Total per 28.5g [†]	8.44		mg/28.5g	1.74	
CBL per 28.5g [†]	< LOQ		mg/28.5g	0.933	
CBN per 28.5g	2.96		mg/28.5g	0.933	
Δ8-THC per 28.5g [†]	< LOQ		mg/28.5g	0.933	
Δ9-THC per 28.5g	44.2		mg/28.5g	0.933	
THC-A per 28.5g	< LOQ		mg/28.5g	0.933	
THC-Total per 28.5g	44.2		mg/28.5g	1.75	
THCV per 28.5g [†]	< LOQ		mg/28.5g	0.933	
THCV-A per 28.5g [†]	< LOQ		mg/28.5g	0.933	
THCV-Total per 28.5g [†]	< LOQ		mg/28.5g	1.75	



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

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/28.5g = Milligram per 28.5g

% = Percentage of sample

% wt = µg/g divided by 10,000

Approved Signatory

Derrick Tanner
General Manager



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00



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

21-004658

CHAIN OF CUSTODY				Analysis Requested										PO Number: _____				
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				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* *Check for availability										Sampled by: _____				
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/Metrc ID	
1	#140v2 1000 Horse	4/27				✓									T	28.5 gr		
2	#143 Soft Gel Capsule	4/27				✓									T	1 gr		
Relinquished By: Merritt				Received By: Jmw				Date: 4/27/21				Time: 16:00				Lab Use Only: <input type="checkbox"/> Shipped Via: _____ or <input checked="" type="checkbox"/> Client drop Evidence of cooling: <input type="checkbox"/> Yes <input type="checkbox"/> No - Temp (°C): 21.9 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
Portland, OR 97230

P: (503) 254-1794 | Fax: (503) 254-1452
info@columbialaboratories.com

Page 1 of 1
www.columbialaboratories.com



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

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				Batch ID: 2104131					
Laboratory Control Sample									
Analyte	Result	Spike	Units	% Rec	Limits			Evaluation	Notes
CBDV-A	0.00970	0.01	%	97.0	85.0	-	115	Acceptable	
CBDV	0.0101	0.01	%	101	85.0	-	115	Acceptable	
CBD-A	0.00998	0.01	%	99.8	85.0	-	115	Acceptable	
CBG-A	0.00963	0.01	%	96.3	85.0	-	115	Acceptable	
CBG	0.0101	0.01	%	101	85.0	-	115	Acceptable	
CBD	0.0114	0.01	%	114	85.0	-	115	Acceptable	
THCV	0.00999	0.01	%	99.9	85.0	-	115	Acceptable	
THCVA	0.00933	0.01	%	93.3	85.0	-	115	Acceptable	
CBN	0.0107	0.01	%	107	85.0	-	115	Acceptable	
THC	0.0104	0.01	%	104	85.0	-	115	Acceptable	
D8THC	0.00976	0.01	%	97.6	85.0	-	115	Acceptable	
CBL	0.00890	0.01	%	89.0	85.0	-	115	Acceptable	
CBC	0.0103	0.01	%	103	85.0	-	115	Acceptable	
THCA	0.0102	0.01	%	102	85.0	-	115	Acceptable	
CBCA	0.00959	0.01	%	95.9	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



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

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					Batch ID: 2104131			
Sample Duplicate					Sample ID: 21-004582-0001-01			
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDV	0.0892	0.0904	0.003	%	1.33	< 20	Acceptable	
CBD-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG-A	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG	0.0528	0.0534	0.003	%	1.24	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBN	0.127	0.128	0.003	%	0.698	< 20	Acceptable	
THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
D8THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBL	0.0185	0.0195	0.003	%	5.55	< 20	Acceptable	
CBC	0.203	0.204	0.003	%	0.703	< 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



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



Report Number: 21-004658/D02.R01
Report Date: 05/07/2021
ORELAP#: OR100028
Purchase Order:
Received: 04/27/21 16:00

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	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.