

CONSOLIDATED TEST RESULTS SUMMARY

Please see the following pages for full test results.

BULK SKU TN.O.FS.SL50	BATCH # EC60(A)	LOQ: Limit Of Quantitation	
PRODUCT NAME Strawberry Lemonade CBD Tincture	SERVING SIZE 1 mL	LOD: Limit Of Detection	
LABORATORY: Columbia Laboratories	OREGON ACCREDITATION: OR100028	1 g = 10 ³ kg = 10 ³ mg = 10 ⁶ µg 1 mg/kg = 1 ppm = 1000 ppb	
POTENCY	PER SERVING	PER GRAM	Percent
Cannabidiol (CBD)	52.4 mg/serving	55.2 mg/g	5.52 %
Total THC (d9-THC, THCA)	2.0 mg/serving	2.15 mg/g	0.215 %
Cannabigerol (CBG)	1.1 mg/serving	1.15 mg/g	0.115 %
Cannabinol (CBN)	<LOQ mg/serving	<LOQ mg/g	<LOQ %
Cannabichromene (CBC)	2.2 mg/serving	2.35 mg/g	0.235 %
Tetrahydrocannabinolic Acid (THCA)	<LOQ mg/serving	<LOQ mg/g	<LOQ %
Delta-9-THC (d9-THC)	2.0 mg/serving	2.15 mg/g	0.215 %
Delta-8-THC (d8-THC)	<LOQ mg/serving	<LOQ mg/g	<LOQ %
HEAVY METALS	PER SERVING	PER GRAM	REGULATORY ACTION LEVEL
Arsenic	<LOQ µg/serving	<LOQ µg/g	10 µg/day ⁽¹⁾
Cadmium	<LOQ µg/serving	<LOQ µg/g	4.1 µg/day ⁽¹⁾
Lead	<LOQ µg/serving	<LOQ µg/g	3.5 µg/day ⁽²⁾
Mercury	<LOQ µg/serving	<LOQ µg/g	2 µg/day ⁽¹⁾
PESTICIDES	REGULATORY ACTION LEVEL		
None of the other 59 pesticides tested found above limit of detection in the sample.	10 ppb ⁽¹⁾		
RESIDUAL SOLVENTS	Results	REGULATORY ACTION LEVEL	
Ethanol	<LOQ	50,000 mg/day	
Heptane	<LOQ	50,000 mg/day	
None of the 34 residual solvents tested found above limit of quantitation in the sample.			
MICROBIAL	PASS/FAIL		
Yeast & Mold	Pass		
Coliform	Pass		
TERPENES	% OF SAMPLE		
Farnesene	28.31 %		
β-Caryophyllene	23.09 %		
α-Bisabolol	12.87 %		
Geraniol	<LOQ %		
Humulene	11.57 %		
Caryophyllene Oxide	6.67 %		



1. American Herbal Pharmacopoeia. (2014). Cannabis Inflorescence: Standards of Identity, Analysis, and Quality Control. Washington DC: AHP.

2. US Food and Drug Administration. (2019). Lead in Food, Foodware, and Dietary Supplements. Washington DC: FDA. US Food and Drug Administration. (2019). Lead in Food, Foodware, and Dietary Supplements. Washington DC: FDA.



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



Report Number: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

This is an amended version of report# 22-004174/D002.R001.
Reason: Report includes additional testing.

Customer: Etz Hayim Holdings
Product identity: FORM-EC60(A)-TN.O.FS.SL50
Client/Metric ID:
Laboratory ID: 22-004174-0001

Summary

Potency:

Analyte per 1g	Result	Limits	Units	Status	
CBC per 1g [†]	2.35		mg/1g		CBD-Total per 1g 55.2 mg/1g
CBD per 1g	55.2		mg/1g		
CBDV per 1g [†]	0.350		mg/1g		THC-Total per 1g 2.15 mg/1g
CBG per 1g [†]	1.15		mg/1g		(Reported in milligrams per serving)
CBT per 1g [†]	1.45		mg/1g		
Δ9-THC per 1g	2.15		mg/1g		

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

All analytes passing and less than LOQ.

Terpenes:

Analyte	Percent by weight	Percent of Total	Analyte	Percent by weight	Percent of Total
farnesene [†]	0.141	28.31%	β-Caryophyllene [†]	0.115	23.09%
α-Bisabolol [†]	0.0641	12.87%	Humulene [†]	0.0576	11.57%
(R)-(+)-Limonene [†]	0.0554	11.12%	(-)-caryophyllene oxide [†]	0.0332	6.67%
β-Myrcene [†]	0.0321	6.45%	Total Terpenes[†]	0.498	100.00%

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.



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Report Number: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

Customer: Etz Hayim Holdings
16427 NE Airport Way
PORTLAND 97230
United States of America (USA)

Product identity: FORM-EC60(A)-TN.O.FS.SL50

Client/Metric ID: .

Sample Date:

Laboratory ID: 22-004174-0001

Evidence of Cooling: No

Temp: 18.8 °C

Relinquished by: Client

Serving Size #1: 1 g

Serving Size #1: 1 g

Sample Results

Potency per 1g	Method J AOAC 2015 V98-6 (mod)	Units mg/se	Batch: 2203414	Analyze: 4/21/22 12:44:00 AM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 1g [†]	2.35		mg/1g	0.0317	
CBC-A per 1g [†]	< LOQ		mg/1g	0.0317	
CBC-Total per 1g [†]	2.35		mg/1g	0.0596	
CBD per 1g	55.2		mg/1g	0.317	
CBD-A per 1g	< LOQ		mg/1g	0.0317	
CBD-Total per 1g	55.2		mg/1g	0.345	
CBDV per 1g [†]	0.350		mg/1g	0.0317	
CBDV-A per 1g [†]	< LOQ		mg/1g	0.0317	
CBDV-Total per 1g [†]	0.350		mg/1g	0.0593	
CBE per 1g [†]	< LOQ		mg/1g	0.0317	
CBG per 1g [†]	1.15		mg/1g	0.0317	
CBG-A per 1g [†]	< LOQ		mg/1g	0.0317	
CBG-Total per 1g [†]	1.15		mg/1g	0.0593	
CBL per 1g [†]	< LOQ		mg/1g	0.0317	
CBL-A per 1g [†]	< LOQ		mg/1g	0.0317	
CBL-Total per 1g [†]	< LOQ		mg/1g	0.0596	
CBN per 1g	< LOQ		mg/1g	0.0317	
CBT per 1g [†]	1.45		mg/1g	0.0317	
Δ8-THCV per 1g [†]	< LOQ		mg/1g	0.0317	
Δ8-THC per 1g [†]	< LOQ		mg/1g	0.0317	
Δ9-THC per 1g	2.15		mg/1g	0.0317	
exo-THC per 1g [†]	< LOQ		mg/1g	0.0317	
THC-A per 1g	< LOQ		mg/1g	0.0317	
THC-Total per 1g	2.15		mg/1g	0.0596	
THCV per 1g [†]	< LOQ		mg/1g	0.0317	
THCV-A per 1g [†]	< LOQ		mg/1g	0.0317	
THCV-Total per 1g [†]	< LOQ		mg/1g	0.0596	
Total Cannabinoids per 1g	62.7		mg/1g		



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Report Number: 22-004174/D002.R002
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Received: 04/13/22 14:03

Solvents						Method Residual Solvents by GC/MS					Units µg/g					Batch 2203537					Analyze 04/26/22 10:07 AM				
Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes		
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass		2-Butanol	< LOQ	5000	200	pass		2-Butanol	< LOQ	5000	200	pass			
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane (isopentane)	< LOQ		200			2-Methylbutane (isopentane)	< LOQ		200			2-Methylbutane (isopentane)	< LOQ		200				
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass		2-Propanol (IPA)	< LOQ	5000	200	pass		2-Propanol (IPA)	< LOQ	5000	200	pass			
2,2-Dimethyl butane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200			2,2-Dimethylpropane (neo-pentane)	< LOQ		200			2,2-Dimethylpropane (neo-pentane)	< LOQ		200				
2,3-Dimethyl butane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0				
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass		Acetonitrile	< LOQ	410	100	pass		Acetonitrile	< LOQ	410	100	pass			
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	5000	400	pass		Butanes (sum)	< LOQ	5000	400	pass		Butanes (sum)	< LOQ	5000	400	pass			
Cyclohexane	< LOQ	3880	200	pass		Ethanol	< LOQ		200			Ethanol	< LOQ		200			Ethanol	< LOQ		200				
Ethyl acetate	< LOQ	5000	200	pass		Ethyl benzene	< LOQ		200			Ethyl benzene	< LOQ		200			Ethyl benzene	< LOQ		200				
Ethyl ether	< LOQ	5000	200	pass		Ethylene glycol	< LOQ	620	200	pass		Ethylene glycol	< LOQ	620	200	pass		Ethylene glycol	< LOQ	620	200	pass			
Ethylene oxide	< LOQ	50.0	20.0	pass		Hexanes (sum)	< LOQ	290	150	pass		Hexanes (sum)	< LOQ	290	150	pass		Hexanes (sum)	< LOQ	290	150	pass			
Isopropyl acetate	< LOQ	5000	200	pass		Isopropylbenzene (Cumene)	< LOQ	70.0	30.0	pass		Isopropylbenzene (Cumene)	< LOQ	70.0	30.0	pass		Isopropylbenzene (Cumene)	< LOQ	70.0	30.0	pass			
m,p-Xylene	< LOQ		200			Methanol	< LOQ	3000	200	pass		Methanol	< LOQ	3000	200	pass		Methanol	< LOQ	3000	200	pass			
Methylene chloride	< LOQ	600	60.0	pass		Methylpropane (isobutane)	< LOQ		200			Methylpropane (isobutane)	< LOQ		200			Methylpropane (isobutane)	< LOQ		200				
n-Butane	< LOQ		200			n-Heptane	< LOQ	5000	200	pass		n-Heptane	< LOQ	5000	200	pass		n-Heptane	< LOQ	5000	200	pass			
n-Hexane	< LOQ		30.0			n-Pentane	< LOQ		200			n-Pentane	< LOQ		200			n-Pentane	< LOQ		200				
o-Xylene	< LOQ		200			Pentanes (sum)	< LOQ	5000	600	pass		Pentanes (sum)	< LOQ	5000	600	pass		Pentanes (sum)	< LOQ	5000	600	pass			
Propane	< LOQ	5000	200	pass		Tetrahydrofuran	< LOQ	720	100	pass		Tetrahydrofuran	< LOQ	720	100	pass		Tetrahydrofuran	< LOQ	720	100	pass			
Toluene	< LOQ	890	100	pass		Total Xylenes	< LOQ		400			Total Xylenes	< LOQ		400			Total Xylenes	< LOQ		400				
Total Xylenes and Ethyl benzene	< LOQ	2170	600	pass																					

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2203444	04/24/22	AOAC 991.14 (Petrifilm)		X
Total Coliforms	< LOQ		cfu/g	10	2203444	04/24/22	AOAC 991.14 (Petrifilm)		X
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2203445	04/25/22	AOAC 2014.05 (RAPID)		X
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2203445	04/25/22	AOAC 2014.05 (RAPID)		X



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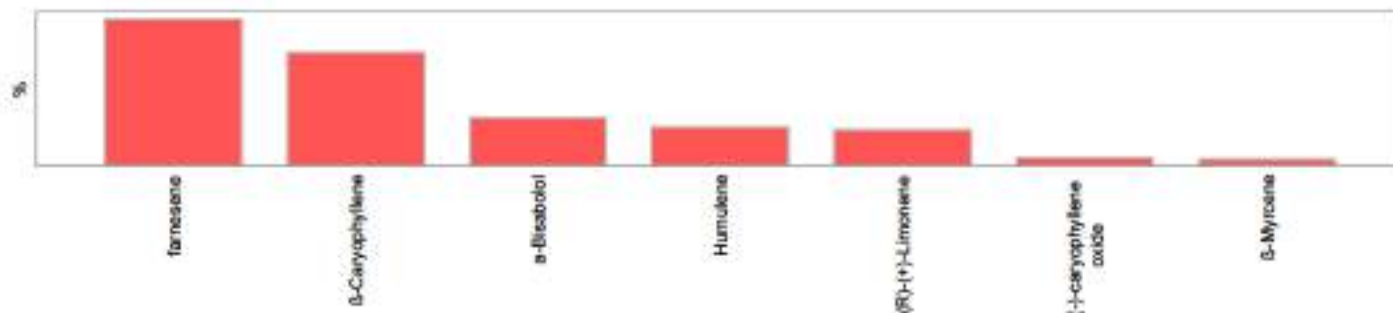


Report Number: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

Pesticides											
Method AOAC 2007.01 & EN 15662 (mod) Units mg/kg Batch 2203495 Analyze 04/25/22 08:28 AM											
Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
Abamectin	< LOQ	0.50	0.250	pass		Acephate	< LOQ	0.40	0.250	pass	
Acequinocyl	< LOQ	2.0	1.00	pass		Acetamiprid	< LOQ	0.20	0.100	pass	
Aldicarb	< LOQ	0.40	0.200	pass		Azoxystrobin	< LOQ	0.20	0.100	pass	
Bifenazate	< LOQ	0.20	0.100	pass		Bifenthrin	< LOQ	0.20	0.100	pass	
Boscalid	< LOQ	0.40	0.200	pass		Carbaryl	< LOQ	0.20	0.100	pass	
Carbofuran	< LOQ	0.20	0.100	pass		Chlorantranilprole	< LOQ	0.20	0.100	pass	
Chlorfenapyr	< LOQ	1.0	0.500	pass		Chlorpyrifos	< LOQ	0.20	0.100	pass	
Clofentezine	< LOQ	0.20	0.100	pass		Cyfluthrin	< LOQ	1.0	0.500	pass	
Cypermethrin	< LOQ	1.0	0.500	pass		Daminozide	< LOQ	1.0	0.500	pass	
Diazinon	< LOQ	0.20	0.100	pass		Dichlorvos	< LOQ	1.0	0.500	pass	
Dimethoate	< LOQ	0.20	0.100	pass		Ethoprophos	< LOQ	0.20	0.100	pass	
Etofenprox	< LOQ	0.40	0.200	pass		Etoxazole	< LOQ	0.20	0.100	pass	
Fenoxycarb	< LOQ	0.20	0.100	pass		Fenpyroximate	< LOQ	0.40	0.200	pass	
Fipronil	< LOQ	0.40	0.200	pass		Flonicamid	< LOQ	1.0	0.400	pass	
Fludioxonil	< LOQ	0.40	0.200	pass		Hexythiazox	< LOQ	1.0	0.400	pass	
Imazalil	< LOQ	0.20	0.100	pass		Imidacloprid	< LOQ	0.40	0.200	pass	
Kresoxim-methyl	< LOQ	0.40	0.200	pass		Malathion	< LOQ	0.20	0.100	pass	
Metalaxyl	< LOQ	0.20	0.100	pass		Methiocarb	< LOQ	0.20	0.100	pass	
Methomyl	< LOQ	0.40	0.200	pass		MGK-264	< LOQ	0.20	0.100	pass	
Myclobutanil	< LOQ	0.20	0.100	pass		Naled	< LOQ	0.50	0.250	pass	
Oxamyl	< LOQ	1.0	0.500	pass		Paclobutrazole	< LOQ	0.40	0.200	pass	
Parathion-Methyl	< LOQ	0.20	0.200	pass		Permethrin	< LOQ	0.20	0.100	pass	
Phosmet	< LOQ	0.20	0.100	pass		Piperonyl butoxide	< LOQ	2.0	1.00	pass	
Prallethrin	< LOQ	0.20	0.200	pass		Propiconazole	< LOQ	0.40	0.200	pass	
Propoxur	< LOQ	0.20	0.100	pass		Pyrethrin I (total)	< LOQ	1.0	0.500	pass	
Pyridaben	< LOQ	0.20	0.100	pass		Spinosad	< LOQ	0.20	0.100	pass	
Spiromesifen	< LOQ	0.20	0.100	pass		Spirotetramat	< LOQ	0.20	0.100	pass	
Spiroxamine	< LOQ	0.40	0.200	pass		Tebuconazole	< LOQ	0.40	0.200	pass	
Thiacloprid	< LOQ	0.20	0.100	pass		Thiamethoxam	< LOQ	0.20	0.100	pass	
Trifloxystrobin	< LOQ	0.20	0.100	pass							



Terpenes				Method J AOAC 2015 V98-6	Units %	Batch 2203579	Analyze 04/26/22 05:47 PM		
Analyte	Result	LOQ	% of Total	Notes	Analyte	Result	LOQ	% of Total	Notes
farnesene [†]	0.141	0.018	28.313%		β-Caryophyllene [†]	0.115	0.018	23.092%	
α-Bisabolol [†]	0.0641	0.018	12.8715%		Humulene [†]	0.0576	0.018	11.5863%	
(R)-(+)-Limonene [†]	0.0554	0.018	11.1245%		(-)-caryophyllene oxide [†]	0.0332	0.018	6.6667%	
β-Myrcene [†]	0.0321	0.018	6.4458%		Linalool [†]	< LOQ	0.018	0.00%	
(-)-Guaiol [†]	< LOQ	0.018	0.00%		Sabinene [†]	< LOQ	0.018	0.00%	
(-)-β-Pinene [†]	< LOQ	0.018	0.00%		Geraniol [†]	< LOQ	0.018	0.00%	
(+)-Cedrol [†]	< LOQ	0.018	0.00%		Geranyl acetate [†]	< LOQ	0.018	0.00%	
(±)-trans-Nerolidol [†]	< LOQ	0.018	0.00%		nerol [†]	< LOQ	0.018	0.00%	
(+)-fenchol [†]	< LOQ	0.018	0.00%		valencene [†]	< LOQ	0.018	0.00%	
(-)-α-Terpineol [†]	< LOQ	0.018	0.00%		Sabinene hydrate [†]	< LOQ	0.018	0.00%	
(+)-Pulegone [†]	< LOQ	0.018	0.00%		(±)-Camphor [†]	< LOQ	0.018	0.00%	
α-pinene [†]	< LOQ	0.018	0.00%		Camphene [†]	< LOQ	0.018	0.00%	
(+)-Borneol [†]	< LOQ	0.018	0.00%		Menthol [†]	< LOQ	0.018	0.00%	
(-)-Isopulegol [†]	< LOQ	0.018	0.00%		(±)-cis-Nerolidol [†]	< LOQ	0.018	0.00%	
(±)-fenchone [†]	< LOQ	0.018	0.00%		α-cedrene [†]	< LOQ	0.018	0.00%	
α-phellandrene [†]	< LOQ	0.018	0.00%		α-Terpinene [†]	< LOQ	0.018	0.00%	
cis-β-Ocimene [†]	< LOQ	0.006	0.00%		d-3-Carene [†]	< LOQ	0.018	0.00%	
Eucalyptol [†]	< LOQ	0.018	0.00%		γ-Terpinene [†]	< LOQ	0.018	0.00%	
Isoborneol [†]	< LOQ	0.018	0.00%		p-Cymene [†]	< LOQ	0.018	0.00%	
Terpinolene [†]	< LOQ	0.018	0.00%		trans-β-Ocimene [†]	< LOQ	0.012	0.00%	
Total Terpenes	0.498								



Metals									
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
Arsenic	< LOQ	0.200	mg/kg	0.0817	2203481	04/22/22	AOAC 2013.06 (mod.)	pass	X
Cadmium	< LOQ	0.200	mg/kg	0.0817	2203481	04/22/22	AOAC 2013.06 (mod.)	pass	X
Lead	< LOQ	0.500	mg/kg	0.0817	2203481	04/22/22	AOAC 2013.06 (mod.)	pass	X
Mercury	< LOQ	0.100	mg/kg	0.0409	2203481	04/22/22	AOAC 2013.06 (mod.)	pass	X



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, CCR title 16-division 42. BCC-section 5723

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 = g

µg/g = Microgram per gram

mg/kg = Milligram per kilogram = parts per million (ppm)

mg/1g = Milligram per 1g

% = Percentage of sample

% wt = µg/g divided by 10,000

Glossary of Qualifiers

X: Not ORELAP accredited.

Approved Signatory



Derrick Tanner
General Manager



12423 NE Whitaker Way Portland OR 97230 p.503-254-1794

Cannabis Chain of Custody Record

ORELAP ID: OR100028

Field ID		Date/Time Collected	Pesticides - OR 59 compounds	Pesticide Multi-Residue - 379 compounds	Potency	Residual Solvents	Water Activity	Mold/Moisture	Terpenes	Micro: Yeast and Mold	Micro: E. Coli and Total Coliform	Heavy Metals	Mycotoxins	Other	Matrix	Weight	Serving size for edible	Comments/Matrix ID
FORM: ECAD-17-0-15-505					X										Liquid	mg/g		Lab. Mat. Discount
FORM: ECAD-17-0-15-505		4/12 5pm	X		X				X	X	X	X						Potency 1st

Collected By:	Relinquished By:	Date	Time	Received by:	Date	Time	Lab Use Only:
<input type="checkbox"/> Standard (5 day) <input checked="" type="checkbox"/> Rush (3-4 day) (1.5x Standard) <input type="checkbox"/> Priority Rush (2 day) (2x Standard)							Chain Alias: Order Number: Proper Container: Sample Condition: Temperature: 18.5°C Shipped Via: FedEx Evidence of cooling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

SUBMISSION OF SAMPLES WITH TESTING REQUIREMENTS TO PIXIS WILL BE UNDERSTOOD TO BE AN AGREEMENT FOR SERVICES IN ACCORDANCE WITH THE CONDITIONS LISTED ON THE BACK OF THIS FORM

Revision: 1.03 Control# C023
Effective 01/31/2019 Revised 01/31/2025

www.columbialabs.com

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



Report Number: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

Revision 1 Document D 7148
Legacy D Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6								
Laboratory Control Sample								
Analyte	Result	Spillo	Units	% Rec	Limits	Evaluation	Notes	
CRDA	0.0526	0.033	%	97.8	80.0 - 120	Acceptable		
CRDV	0.0558	0.033	%	107	80.0 - 120	Acceptable		
CRE	0.0525	0.033	%	97.5	80.0 - 120	Acceptable		
CRDA	0.0526	0.033	%	97.8	80.0 - 110	Acceptable		
CRSA	0.0515	0.033	%	93.9	80.0 - 120	Acceptable		
CRG	0.0512	0.033	%	93.6	80.0 - 120	Acceptable		
CRD	0.0527	0.033	%	98.1	80.0 - 110	Acceptable		
THCV	0.0531	0.033	%	99.3	80.0 - 120	Acceptable		
89THCV	0.0528	0.033	%	98.3	80.0 - 120	Acceptable		
THCA	0.0513	0.033	%	93.9	80.0 - 120	Acceptable		
CBN	0.0553	0.033	%	100	80.0 - 110	Acceptable		
iso-THC	0.0515	0.033	%	94.5	80.0 - 120	Acceptable		
89THC	0.0541	0.033	%	102	80.0 - 110	Acceptable		
89THC	0.0520	0.033	%	96.0	80.0 - 110	Acceptable		
CBL	0.0511	0.033	%	93.4	80.0 - 120	Acceptable		
CB	0.0545	0.033	%	101	80.0 - 120	Acceptable		
THCA	0.0514	0.033	%	94.2	80.0 - 110	Acceptable		
CBCA	0.0551	0.033	%	99.2	80.0 - 120	Acceptable		
CBIA	0.0522	0.033	%	96.6	80.0 - 120	Acceptable		
CBT	0.0514	0.033	%	94.2	80.0 - 120	Acceptable		

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CRDA	< LOQ	0.005	%	< 0.005	Acceptable	
CRDV	< LOQ	0.005	%	< 0.005	Acceptable	
CRE	< LOQ	0.005	%	< 0.005	Acceptable	
CRDA	< LOQ	0.005	%	< 0.005	Acceptable	
CRSA	< LOQ	0.005	%	< 0.005	Acceptable	
CRG	< LOQ	0.005	%	< 0.005	Acceptable	
CRD	< LOQ	0.005	%	< 0.005	Acceptable	
THCV	< LOQ	0.005	%	< 0.005	Acceptable	
89THCV	< LOQ	0.005	%	< 0.005	Acceptable	
THCA	< LOQ	0.005	%	< 0.005	Acceptable	
CBN	< LOQ	0.005	%	< 0.005	Acceptable	
iso-THC	< LOQ	0.005	%	< 0.005	Acceptable	
89THC	< LOQ	0.005	%	< 0.005	Acceptable	
89THC	< LOQ	0.005	%	< 0.005	Acceptable	
CBL	< LOQ	0.005	%	< 0.005	Acceptable	
CB	< LOQ	0.005	%	< 0.005	Acceptable	
THCA	< LOQ	0.005	%	< 0.005	Acceptable	
CBCA	< LOQ	0.005	%	< 0.005	Acceptable	
CBIA	< LOQ	0.005	%	< 0.005	Acceptable	
CBT	< LOQ	0.005	%	< 0.005	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: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

Revision 1 Document D 7148
Legacy D Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6		Batch ID: 2203324						
Sample Duplicate		Sample ID: 22-003733-0001-01						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CRDA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRDV	0.0142	0.0139	0.003	%	2.59	< 20	Acceptable	
CRB	0.0230	0.0224	0.003	%	2.58	< 20	Acceptable	
CRDA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRDA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRG	0.0178	0.0156	0.003	%	3.62	< 20	Acceptable	
CRD	2.43	2.35	0.003	%	5.45	< 20	Acceptable	
THCV	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
Δ9THCV	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
THCVA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBN	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
iso-THC	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
Δ9THC	0.0185	0.0160	0.003	%	3.19	< 20	Acceptable	
Δ8THC	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBL	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBG	0.0658	0.0640	0.003	%	2.97	< 20	Acceptable	
THCA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBGA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBGA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBT	0.0656	0.0677	0.003	%	2.69	< 20	Acceptable	

Abbreviations

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Units of Measure:

% - Percent



Revision 1 Document D 7148
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Laboratory Quality Control Results

J AOAC 2015 V98-6									
Laboratory Control Sample									
Analyte	Result	Spillo	Units	% Rec	Limits	Evaluation	Notes		
CRVA	0.0522	0.033	%	96.6	80.0 - 120	Acceptable			
CRDV	0.0357	0.033	%	107	80.0 - 120	Acceptable			
CRE	0.0511	0.033	%	93.4	80.0 - 120	Acceptable			
CRDA	0.0323	0.033	%	96.9	80.0 - 110	Acceptable			
CRSA	0.0511	0.033	%	93.4	80.0 - 120	Acceptable			
CRG	0.0316	0.033	%	94.9	80.0 - 120	Acceptable			
CRD	0.0528	0.033	%	98.5	80.0 - 110	Acceptable			
THCV	0.0331	0.033	%	99.4	80.0 - 120	Acceptable			
89THCV	0.0331	0.033	%	99.4	80.0 - 120	Acceptable			
THCVA	0.0311	0.033	%	93.3	80.0 - 120	Acceptable			
CRN	0.0340	0.033	%	102	80.0 - 110	Acceptable			
iso-THC	0.0320	0.033	%	95.9	80.0 - 120	Acceptable			
89THC	0.0347	0.033	%	104	80.0 - 110	Acceptable			
89THC	0.0312	0.033	%	93.5	80.0 - 110	Acceptable			
CBL	0.0324	0.033	%	97.3	80.0 - 120	Acceptable			
CRB	0.0339	0.033	%	97.7	80.0 - 120	Acceptable			
THCA	0.0328	0.033	%	98.5	80.0 - 110	Acceptable			
CRCA	0.0329	0.033	%	98.8	80.0 - 120	Acceptable			
CRBA	0.0326	0.033	%	97.9	80.0 - 120	Acceptable			
CRF	0.0336	0.033	%	97.8	80.0 - 120	Acceptable			

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CRVA	< LOQ	0.003	%	< 0.003	Acceptable	
CRDV	< LOQ	0.003	%	< 0.003	Acceptable	
CRE	< LOQ	0.003	%	< 0.003	Acceptable	
CRDA	< LOQ	0.003	%	< 0.003	Acceptable	
CRSA	< LOQ	0.003	%	< 0.003	Acceptable	
CRG	< LOQ	0.003	%	< 0.003	Acceptable	
CRD	< LOQ	0.003	%	< 0.003	Acceptable	
THCV	< LOQ	0.003	%	< 0.003	Acceptable	
89THCV	< LOQ	0.003	%	< 0.003	Acceptable	
THCVA	< LOQ	0.003	%	< 0.003	Acceptable	
CRN	< LOQ	0.003	%	< 0.003	Acceptable	
iso-THC	< LOQ	0.003	%	< 0.003	Acceptable	
89THC	< LOQ	0.003	%	< 0.003	Acceptable	
89THC	< LOQ	0.003	%	< 0.003	Acceptable	
CBL	< LOQ	0.003	%	< 0.003	Acceptable	
CRB	< LOQ	0.003	%	< 0.003	Acceptable	
THCA	< LOQ	0.003	%	< 0.003	Acceptable	
CRCA	< LOQ	0.003	%	< 0.003	Acceptable	
CRBA	< LOQ	0.003	%	< 0.003	Acceptable	
CRF	< 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



Laboratory Quality Control Results

J AOAC 2015 V96-6		Batch ID: 2203414						
Sample Duplicate		Sample ID: 21-012857-0007						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CRVA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRDV	0.0318	0.0329	0.003	%	0.035	< 20	Acceptable	
CRB	0.139	0.140	0.003	%	0.664	< 20	Acceptable	
CRDA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRDB	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CRG	0.170	0.171	0.003	%	1.34	< 20	Acceptable	
CRD	5.84	5.84	0.003	%	0.00505	< 20	Acceptable	
THCV	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
Δ8THCV	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
THCVA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBN	0.0909	0.0905	0.003	%	0.543	< 20	Acceptable	
iso-THC	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
Δ9THC	0.142	0.142	0.003	%	0.538	< 20	Acceptable	
Δ8THC	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBL	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBG	0.236	0.237	0.003	%	0.446	< 20	Acceptable	
THCA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBGA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBDA	< 1.00	< 1.00	0.003	%	NA	< 20	Acceptable	
CBF	0.105	0.100	0.003	%	2.55	< 20	Acceptable	

Abbreviations

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Units of Measure:

% - Percent



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Legacy D C L C2 Worksheet Validated 0/30/2020

Laboratory Pesticide Quality Control Results

Method Blank	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS % Rec	Limits	Notes
Abamectin	0.000	< 0.250		0.997	1.000	99.7	50.0 120	
Acephate	0.000	= 0.250		1.004	1.000	100.4	50.0 120	
Acyprifos	0.000	< 1.000		4.526	4.000	113.2	50.0 120	
Azinphos	0.000	= 0.100		0.309	0.400	77.3	50.0 120	
Aldicarb	0.000	< 0.200		0.779	0.800	97.4	50.0 120	
Azinphos	0.000	= 0.100		0.398	0.400	99.4	50.0 120	
Bifenthrin	0.000	< 0.100		0.472	0.400	117.9	50.0 120	
Bifenthrin	0.000	= 0.100		0.382	0.400	95.6	50.0 120	
Boscalid	0.000	< 0.200		0.861	0.800	107.6	50.0 120	
Carbaryl	0.000	= 0.100		0.387	0.400	96.8	50.0 120	
Carbaryl	0.000	< 0.100		0.387	0.400	96.7	50.0 120	
Chlorantraniliprole	0.000	= 0.100		0.384	0.400	96.0	50.0 120	
Chlorpyrifos	0.000	< 0.500		1.498	1.000	149.8	50.0 120	
Chlorpyrifos	0.000	= 0.100		0.374	0.400	93.4	50.0 120	
Cyfluthrin	0.000	< 0.100		0.406	0.400	101.6	50.0 120	
Cyfluthrin	0.000	= 0.100		1.893	1.000	189.3	50.0 120	
Cypermethrin	0.000	< 0.500		1.954	1.000	195.4	50.0 120	
Cypermethrin	0.000	< 0.500		2.811	1.000	281.1	50.0 120	
Deltamethrin	0.000	= 0.100		0.419	0.400	104.8	50.0 120	
Deltamethrin	0.000	< 0.500		1.840	1.000	184.0	50.0 120	
Dimethoate	0.000	= 0.100		0.387	0.400	96.8	50.0 120	
Diflufenican	0.000	< 0.100		0.417	0.400	104.3	50.0 120	
Diflufenican	0.000	= 0.200		0.788	0.800	98.5	50.0 120	
Ethioniazole	0.000	< 0.100		0.409	0.400	102.3	50.0 120	
Fenoxycarb	0.000	= 0.100		0.410	0.400	102.4	50.0 120	
Fenpyroximate	0.000	< 0.200		0.754	0.800	94.3	50.0 120	
Flonit	0.000	= 0.200		0.762	0.800	95.2	50.0 120	
Flonicamid	0.000	< 0.250		0.823	1.000	82.3	50.0 120	
Fludioxonil	0.000	= 0.200		0.751	0.800	93.9	50.0 120	
Flupyradifurone	0.000	< 0.250		0.973	1.000	97.3	50.0 120	
Imidacloprid	0.000	= 0.100		0.415	0.400	103.8	50.0 120	
Imidacloprid	0.000	< 0.200		0.776	0.800	97.0	50.0 120	
Insecten methal	0.000	= 0.200		0.817	0.800	102.1	50.0 120	
Malathion	0.000	< 0.100		0.410	0.400	102.5	50.0 120	
Methidathion	0.000	= 0.100		0.408	0.400	102.0	50.0 120	
Methidathion	0.000	= 0.100		0.392	0.400	97.9	50.0 120	
Methidathion	0.000	< 0.200		0.802	0.800	100.3	50.0 120	
MGT 254	0.000	= 0.100		0.378	0.400	94.5	50.0 120	
Mylodanil	0.000	< 0.100		0.416	0.400	104.0	50.0 120	
Neel	0.000	= 0.250		0.958	1.000	95.8	50.0 120	
Osilip	0.000	< 0.500		2.306	1.000	230.6	50.0 120	
Pachystrobin	0.000	= 0.200		0.806	0.800	100.8	50.0 120	
Permethrin Methyl	0.000	< 0.200		0.794	0.800	99.3	50.0 120	
Permethrin	0.000	= 0.100		0.379	0.400	94.7	50.0 120	
Phosmet	0.000	< 0.100		0.404	0.400	101.0	50.0 120	
Piperonyl butoxide	0.000	= 0.200		1.976	1.000	197.6	50.0 120	
Prothion	0.000	< 0.100		0.400	0.400	100.0	50.0 120	
Propiconazole	0.000	= 0.200		0.804	0.800	100.5	50.0 120	
Propoxur	0.000	< 0.100		0.384	0.400	96.0	50.0 120	
Pyrethrin (Summed)	0.000	= 0.100		0.417	0.415	100.5	50.0 120	
Pyriproxyfen	0.000	< 0.100		0.404	0.400	101.0	50.0 120	
Spinosad	0.000	= 0.100		0.375	0.385	97.4	50.0 120	
Spinosad	0.000	< 0.100		0.409	0.400	102.3	50.0 120	
Spinetoram	0.000	< 0.100		0.410	0.400	102.5	50.0 120	
Spinetoram	0.000	= 0.200		0.810	0.800	101.3	50.0 120	
Thiobencarb	0.000	< 0.200		0.801	0.800	100.1	50.0 120	
Thiobencarb	0.000	= 0.100		0.385	0.400	96.3	50.0 120	
Thiobencarb	0.000	< 0.100		0.806	0.800	102.0	50.0 120	
Thioproprazine	0.000	= 0.100		0.384	0.400	96.0	50.0 120	

Q1



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Report Number: 22-004174/D002.R002
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Legacy D C L C2 Worksheet Validated 0/30/2020

Laboratory Pesticide Quality Control Results

MNC2007.1 GEN Y9902		Units: mg/kg				Batch ID: 2100001		Sample ID: 22004233002		
Matrix Spike	Matrix Spike	Duplicate	Recovery							
Analyte	Result	MSD Res	MSD Res	Spike	RPDs	Unit	MS% Res	MSD % Res	Units	Note
Abamectin	0.000	1.191	1.072	1.000	10.6%	< 30	124.1%	127.2%	50	150
Acephate	0.000	0.952	0.857	1.000	10.3%	< 30	95.2%	85.7%	50	150
Acyprifos	0.000	2.145	2.359	1.000	7.2%	< 30	53.0%	57.6%	50	150
Azinphosmethyl	0.000	0.330	0.322	1.000	2.4%	< 30	81.5%	80.6%	50	150
Aldicarb	0.000	0.743	0.712	1.000	4.3%	< 30	83.9%	80.0%	50	150
Azinphosmethyl	0.000	0.274	0.281	1.000	4.6%	< 30	88.4%	91.3%	50	150
Bifenthrin	0.000	0.508	0.489	1.000	2.9%	< 30	127.1%	124.0%	50	150
Bifenthrin	0.000	0.150	0.155	1.000	3.3%	< 30	37.4%	38.6%	50	150
Boscalid	0.000	0.644	0.574	1.000	13.0%	< 30	81.0%	72.0%	50	150
Carbaryl	0.000	0.164	0.165	1.000	3.2%	< 30	85.0%	85.3%	50	150
Carbaryl	0.000	0.299	0.279	1.000	4.9%	< 30	74.3%	69.9%	50	150
Chlorantraniliprole	0.000	0.433	0.407	1.000	2.7%	< 30	164.5%	157.8%	50	150
Chlorfenvinphos	0.000	0.452	0.417	1.000	10.4%	< 30	22.6%	18.9%	50	150
Chlorpyrifos	0.000	0.525	0.536	1.000	2.3%	< 30	131.1%	133.9%	50	150
Cyfluthrin	0.000	0.465	0.281	1.000	23.7%	< 30	81.3%	72.7%	50	150
Cyfluthrin	0.001	0.945	0.981	1.000	1.8%	< 30	47.2%	48.0%	50	150
Cypermethrin	0.000	0.654	0.781	1.000	1.4%	< 30	60.3%	69.5%	50	150
Deltamethrin	0.000	2.924	2.788	1.000	4.3%	< 30	145.3%	139.0%	50	150
Deltamethrin	0.000	0.597	0.593	1.000	1.8%	< 30	95.2%	94.2%	50	150
Disulfoton	0.000	1.547	1.454	1.000	5.5%	< 30	76.9%	72.7%	50	150
Dimethoate	0.000	0.371	0.370	1.000	1.3%	< 30	37.8%	37.6%	50	150
Diflufenican	0.000	0.322	0.339	1.000	4.8%	< 30	80.6%	84.6%	50	150
Diflufenican	0.000	0.309	0.351	1.000	5.8%	< 30	62.3%	63.9%	50	150
Ethion	0.000	0.177	0.184	1.000	2.4%	< 30	67.3%	70.8%	50	150
Fenoxycarb	0.000	0.480	0.377	1.000	5.9%	< 30	100.0%	74.3%	50	150
Fenpyroximate	0.000	0.387	0.384	1.000	0.8%	< 30	35.9%	35.9%	50	150
Flonit	0.000	0.435	0.411	1.000	5.8%	< 30	54.4%	51.4%	50	150
Flonicamid	0.000	0.465	0.424	1.000	5.9%	< 30	46.5%	41.5%	50	150
Fludioxonil	0.000	1.127	1.095	1.000	2.8%	< 30	120.5%	116.9%	50	150
Hexachlorocyclopentadiene	0.000	0.944	0.924	1.000	4.7%	< 30	54.6%	53.4%	50	150
Imazalil	0.000	0.384	0.360	1.000	6.8%	< 30	92.1%	86.0%	50	150
Imidacloprid	0.000	0.756	0.721	1.000	4.8%	< 30	94.5%	90.3%	50	150
Imidacloprid	0.000	0.678	0.632	1.000	7.8%	< 30	84.7%	79.0%	50	150
Imidacloprid	0.000	0.189	0.184	1.000	8.0%	< 30	72.1%	69.5%	50	150
Imidacloprid	0.000	0.185	0.170	1.000	4.2%	< 30	95.4%	87.5%	50	150
Imidacloprid	0.000	0.180	0.151	1.000	2.3%	< 30	89.3%	87.7%	50	150
Imidacloprid	0.000	0.680	0.588	1.000	14.7%	< 30	86.7%	74.8%	50	150
ISOY 254	0.000	0.168	0.181	1.000	7.8%	< 30	41.3%	45.3%	50	150
Mythostatin	0.001	0.378	0.419	1.000	18.8%	< 30	64.4%	70.2%	50	150
Neol	0.000	0.645	0.629	1.000	4.2%	< 30	84.3%	81.9%	50	150
Osipryl	0.000	1.929	1.781	1.000	9.9%	< 30	96.1%	87.0%	50	150
Pachystrobin	0.000	0.681	0.545	1.000	8.8%	< 30	75.2%	58.3%	50	150
Permethrin	0.000	0.488	0.452	1.000	7.8%	< 30	61.0%	56.4%	50	150
Permethrin	0.000	0.158	0.180	1.000	1.3%	< 30	30.6%	40.0%	50	150
Phosmet	0.000	0.328	0.314	1.000	4.2%	< 30	81.9%	78.5%	50	150
Piperonyl butoxide	0.005	1.027	1.024	1.000	0.3%	< 30	51.3%	51.3%	50	150
Profluthrin	0.001	0.638	0.740	1.000	14.8%	< 30	158.7%	184.7%	50	150
Propiconazole	0.000	0.895	0.839	1.000	3.8%	< 30	100.0%	104.5%	50	150
Propiconazole	0.000	0.301	0.299	1.000	0.4%	< 30	75.3%	74.8%	50	150
Pyrethrin (Summed)	0.005	2.634	2.711	1.413	4.4%	< 30	684.0%	654.0%	50	150
Pyriproxyfen	0.000	0.329	0.304	1.000	7.9%	< 30	82.2%	75.9%	50	150
Spinosad	0.000	0.312	0.305	1.000	2.3%	< 30	80.4%	78.6%	50	150
Spinosad	0.000	0.211	0.182	1.000	14.9%	< 30	51.7%	45.4%	50	150
Spinosad	0.000	0.438	0.389	1.000	11.8%	< 30	109.0%	97.3%	50	150
Spinosad	0.000	0.853	0.830	1.000	5.2%	< 30	106.0%	101.2%	50	150
Thiobencarb	0.000	0.609	0.640	1.000	3.8%	< 30	87.4%	90.0%	50	150
Thiobencarb	0.000	0.365	0.350	1.000	4.2%	< 30	51.1%	47.4%	50	150
Thiobencarb	0.000	0.487	0.451	1.000	14.0%	< 30	101.7%	97.7%	50	150
Thiobencarb	0.000	0.175	0.162	1.000	4.8%	< 30	86.7%	85.5%	50	150

Test results relate only to the parameters listed 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



Revision: Document D
Legacy: D Effective

Laboratory Quality Control Results

Residual Solvents				Batch ID: 220557					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec.	Limits	Notes
Propane	ND	= 200		491	172	140%	78.8	400	130
Isobutane	ND	= 200		605	731	140%	91.0	500	130
Benzene	ND	= 200		662	731	140%	92.3	500	130
1,1-Dimethylpropane	ND	= 200		804	736	140%	85.9	500	130
Methanol	ND	< 200		1360	1620	140%	96.3	400	130
Ethyl Acetate	ND	< 80		34.2	36.2	140%	96.8	400	130
1-Methylbutane	ND	= 200		1570	1220	140%	94.9	500	130
Pentane	ND	= 200		1550	1610	140%	96.3	400	130
Ethanol	ND	= 200		1360	1620	140%	96.3	700	140
Ethyl Ether	ND	= 200		1340	1620	140%	96.3	400	130
1,1-Dimethylbenzene	ND	= 30		301	174	140%	92.5	500	130
Acetone	ND	= 200		1600	1650	140%	97.0	500	130
1-Propanol	ND	= 200		1510	1610	140%	93.8	400	130
Ethyl Acrylate	ND	< 600		1470	1600	140%	95.4	700	140
Acetonitrile	ND	< 200		416	480	140%	96.2	400	130
Methyl Acrylate	ND	= 500		1510	1220	140%	92.6	700	130
1,1-Dimethylbenzene	ND	= 30		172	176	140%	97.7	500	130
Dichloromethane	ND	< 60		476	416	140%	92.7	400	130
1-Methylpentane	ND	< 80		237	176	140%	89.2	400	130
M-EE	ND	< 600		1470	1600	140%	95.6	700	140
1-Methylpropane	ND	= 30		300	175	140%	91.4	400	130
Hexane	ND	= 30		301	177	140%	91.0	400	130
1-Propanol	ND	< 600		1360	1440	140%	98.1	700	140
Methylcyclohexane	ND	< 600		1340	1600	140%	96.4	700	140
Ethyl acetate	ND	= 200		1520	1230	140%	95.1	500	130
1-Octanol	ND	= 200		1490	1620	140%	92.0	500	130
acrylonitrile	ND	< 300		860	900	140%	92.0	400	130
Cyclohexane	ND	< 200		1460	1620	140%	96.1	400	130
1-methyl-2-propanol	ND	< 600		1400	1620	140%	96.2	700	140
Benzene	ND	= 1		4.0	5.21	140%	86.5	500	130
Isopropyl Acetate	ND	= 200		1570	1620	140%	96.9	400	130
Heptane	ND	< 200		1590	1770	140%	89.8	400	130
1-Octanol	ND	< 600		1760	1620	140%	79.1	700	140
Propyl Acetate	ND	= 500		1610	1630	140%	100.0	700	130
1,4-Dioxane	ND	= 200		420	504	140%	89.3	400	130
1-Ethoxyethane	ND	= 30		307	181	140%	100.0	400	130
Methylcyclopentane	ND	< 600		1470	1640	140%	93.9	700	140
1-Methyl-1-butanol	ND	< 600		1200	1640	140%	84.9	700	140
Ethyl Acrylate	ND	= 200		416	494	140%	85.9	500	130
Styrene	ND	= 200		435	491	140%	88.6	400	130
Isobutyl Acrylate	ND	< 600		1610	1600	140%	100.6	700	140
1-Pentanol	ND	< 600		1490	1640	140%	92.1	700	140
Butyl Acrylate	ND	< 600		1490	1640	140%	96.9	700	140
Ethylbenzene	ND	= 200		874	973	140%	89.8	400	130
n-Butyl Acrylate	ND	= 200		894	996	140%	89.8	400	130
n-Butane	ND	< 200		840	971	140%	96.8	400	130
Cyclohexane	ND	< 80		146	170	140%	87.1	400	130
Anisole	ND	= 500		1520	1210	140%	74.3	700	130
DMSO	ND	= 500		1570	1630	140%	96.3	700	130
1,1-Dimethylbenzene	ND	< 30		210	164	140%	94.1	700	140
ethylbenzene	ND	< 600		1460	1600	140%	94.8	700	140
N,N-dimethylacetamide	ND	= 210		412	497	140%	86.9	700	140
N,N-dimethylacetamide	ND	= 250		407	490	140%	93.3	700	130
Pentane	ND	= 50		160	180	140%	92.2	700	140
1,1-Dichloroethane	ND	= 1		1.07	1	140%	107.0	700	140
Chloroform	ND	< 1		1.09	1	140%	109.0	700	140
trichloroethylene	ND	= 1		1.05	1	140%	105.0	700	130



Revision Document D
Legacy D Effective

QC- Sample Duplicate

Sample ID: 22-004352-0001

Analyte	Result	Org. Result	LOQ Units	RPD	Limit	Accept/ Fail	Notes
Propane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Isobutane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
Butane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
1,1-Dimethylpropane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Methanol	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Ethylene Glycol	ND	ND	30 µg/g	0.0	< 30	Acceptable	
1-Methylbutane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
Pentane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
Ethanol	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Ethyl Ether	ND	ND	200 µg/g	0.0	= 30	Acceptable	
1,1-Dimethylcyclohexane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Acetone	ND	ND	200 µg/g	0.0	< 30	Acceptable	
1-Propanol	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Ethyl Acrylate	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Acrylonitrile	ND	ND	100 µg/g	0.0	< 30	Acceptable	
Methyl Acrylate	ND	ND	100 µg/g	0.0	< 30	Acceptable	
1,1-Dimethylcyclohexane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Dichloromethane	ND	ND	60 µg/g	0.0	= 30	Acceptable	
1-Methylcyclohexane	ND	ND	30 µg/g	0.0	= 30	Acceptable	
M 88	ND	ND	100 µg/g	0.0	< 30	Acceptable	
1-Methylpentane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Hexane	ND	ND	30 µg/g	0.0	= 30	Acceptable	
1-Propanol	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Methylcyclohexane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Ethyl acetate	ND	ND	200 µg/g	0.0	< 30	Acceptable	
1-Butanol	ND	ND	200 µg/g	0.0	< 30	Acceptable	
ethylhexane	ND	ND	100 µg/g	0.0	= 30	Acceptable	
Cyclohexane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
1-methyl-2-propanol	ND	ND	100 µg/g	0.0	< 30	Acceptable	
Hexane	ND	ND	1 µg/g	0.0	< 30	Acceptable	
Isopropyl Acetate	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Heptane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
1-Butanol	ND	ND	100 µg/g	0.0	< 30	Acceptable	
Propyl Acetate	ND	ND	500 µg/g	0.0	= 30	Acceptable	
1,4-Dioxane	ND	ND	100 µg/g	0.0	= 30	Acceptable	
1-Ethoxyethane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Methylcyclohexane	ND	ND	100 µg/g	0.0	< 30	Acceptable	
1-Methyl-1-butanol	ND	ND	100 µg/g	0.0	< 30	Acceptable	
Ethylene Glycol	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Hexane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
Isobutyl Acetate	ND	ND	100 µg/g	0.0	< 30	Acceptable	
1-Pentanol	ND	ND	100 µg/g	0.0	< 30	Acceptable	
Dicyl Acetate	ND	ND	500 µg/g	0.0	= 30	Acceptable	
1-Hexene	ND	ND	200 µg/g	0.0	= 30	Acceptable	
n-p. Hexane	ND	ND	200 µg/g	0.0	= 30	Acceptable	
n-Heptane	ND	ND	200 µg/g	0.0	< 30	Acceptable	
Octane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Nonane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
Decane	ND	ND	500 µg/g	0.0	= 30	Acceptable	
DMSO	ND	ND	500 µg/g	0.0	= 30	Acceptable	
1,1-Dimethylcyclohexane	ND	ND	30 µg/g	0.0	< 30	Acceptable	
ethylcyclohexane	ND	ND	100 µg/g	0.0	< 30	Acceptable	
N,N-dimethylformamide	ND	ND	150 µg/g	0.0	= 30	Acceptable	
N,N-dimethylacetamide	ND	ND	150 µg/g	0.0	= 30	Acceptable	
Pyridine	ND	ND	30 µg/g	0.0	= 30	Acceptable	
1,1-Dichloroethane	ND	ND	1 µg/g	0.0	< 30	Acceptable	
Chloroform	ND	ND	1 µg/g	0.0	< 30	Acceptable	
trichloroethylene	ND	ND	1 µg/g	0.0	= 30	Acceptable	

Abbreviations

ND: None Detected at or above MRL
RPD: Relative Percent Difference

Units of Measure:

µg/g: Microgram per gram or ppm



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



Report Number: 22-004174/D002.R002
Report Date: 04/27/2022
ORELAP#: OR100028
Purchase Order:
Received: 04/13/22 14:03

LOQ: Limit of Quantitation

revision: Document D
Legacy: D Effective


 Revisor: 1 Document ID: 7066
 Legacy ID: CPL-E57Worksheet Validated 11/04/2020

Terpenes Quality Control Results

Method Reference: EPA/8235				Batch ID: 2203579					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	LCS	Units	LC% Rec	Limits	Notes
α -pinene	<LOQ	< 200		427	500	$\mu\text{g/g}$	85%	70 - 130	
Camphene	<LOQ	< 200		400	500	$\mu\text{g/g}$	80%	70 - 130	
Sabinene	<LOQ	< 200		435	500	$\mu\text{g/g}$	87%	70 - 130	
β -Pinene	<LOQ	< 200		431	500	$\mu\text{g/g}$	86%	70 - 130	
β -Myrcene	<LOQ	< 200		364	500	$\mu\text{g/g}$	73%	70 - 130	
α -phellandrene	<LOQ	< 200		353	500	$\mu\text{g/g}$	71%	70 - 130	
d-3-Carene	<LOQ	< 200		374	500	$\mu\text{g/g}$	75%	70 - 130	
α -Terpinene	<LOQ	< 200		414	500	$\mu\text{g/g}$	83%	70 - 130	
p-Cymene	<LOQ	< 200		360	500	$\mu\text{g/g}$	72%	70 - 130	
D-Limonene	<LOQ	< 200		423	500	$\mu\text{g/g}$	85%	70 - 130	
Eucalyptol	<LOQ	< 200		350	500	$\mu\text{g/g}$	70%	70 - 130	
β -cis-Camphene	<LOQ	< 67		117	167	$\mu\text{g/g}$	70%	70 - 130	
β -trans-Camphene	<LOQ	< 133		242	333	$\mu\text{g/g}$	73%	70 - 130	
γ -Terpinene	<LOQ	< 200		403	500	$\mu\text{g/g}$	81%	70 - 130	
Sabinene Hydrate	<LOQ	< 200		414	500	$\mu\text{g/g}$	83%	70 - 130	
Terpinolene	<LOQ	< 200		401	500	$\mu\text{g/g}$	80%	70 - 130	
D-Fenchone	<LOQ	< 200		402	500	$\mu\text{g/g}$	80%	70 - 130	
Linalool	<LOQ	< 200		366	500	$\mu\text{g/g}$	73%	70 - 130	
Fenchol	<LOQ	< 200		443	500	$\mu\text{g/g}$	89%	70 - 130	
Camphor	<LOQ	< 200		388	500	$\mu\text{g/g}$	78%	70 - 130	
Isopulego	<LOQ	< 200		379	500	$\mu\text{g/g}$	76%	70 - 130	
Isoborneol	<LOQ	< 200		371	500	$\mu\text{g/g}$	74%	70 - 130	
Borneol	<LOQ	< 200		427	500	$\mu\text{g/g}$	85%	70 - 130	
DL-Menthol	<LOQ	< 200		376	500	$\mu\text{g/g}$	75%	70 - 130	
Terpinol	<LOQ	< 200		407	500	$\mu\text{g/g}$	81%	70 - 130	
Neod	<LOQ	< 200		364	500	$\mu\text{g/g}$	73%	70 - 130	
Pulegone	<LOQ	< 200		399	500	$\mu\text{g/g}$	80%	70 - 130	
Geraniol	<LOQ	< 200		358	500	$\mu\text{g/g}$	72%	70 - 130	
Geranyl Acetate	<LOQ	< 200		390	500	$\mu\text{g/g}$	78%	70 - 130	
α -Cedrene	<LOQ	< 200		415	500	$\mu\text{g/g}$	83%	70 - 130	
β -Caryophyllene	<LOQ	< 200		382	500	$\mu\text{g/g}$	76%	70 - 130	
α -Humulene	<LOQ	< 200		410	500	$\mu\text{g/g}$	82%	70 - 130	
Valerene	<LOQ	< 200		367	500	$\mu\text{g/g}$	73%	70 - 130	
cis-Nerolidol	<LOQ	< 200		401	500	$\mu\text{g/g}$	80%	70 - 130	
α -Farnesene	<LOQ	< 200		403	500	$\mu\text{g/g}$	81%	70 - 130	
trans-Nerolidol	<LOQ	< 200		407	500	$\mu\text{g/g}$	81%	70 - 130	
Caryophyllene Oxide	<LOQ	< 200		377	500	$\mu\text{g/g}$	75%	70 - 130	
Guaiol	<LOQ	< 200		413	500	$\mu\text{g/g}$	83%	70 - 130	
Cedrol	<LOQ	< 200		381	500	$\mu\text{g/g}$	76%	70 - 130	
α -Bisabolol	<LOQ	< 200		392	500	$\mu\text{g/g}$	78%	70 - 130	

Definitions

LOQ	Limit of Quantitation
LCS	Laboratory Control Sample
%REC	Percent Recovery



Revision: 1 Document ID: 7066
Legacy ID: CPL-E57Worksheet Validated 11/04/2020

Terpenes Quality Control Results

Method Reference: EPA5035		Batch ID: 2203579					
Sample/Sample Duplicate		Sample ID: 22-004174-001					
Analyte	Result	Org. Result	LOQ	Units	% RPD	LIMIT	Notes
a-pinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-pinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
β-pinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
γ-pinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-phellandrene	<LOQ	<LOQ	186	µg/g	0%	< 20	
δ-3-carene	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-terpinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
p-cymene	<LOQ	<LOQ	186	µg/g	0%	< 20	
D-limonene	550	554	186	µg/g	1%	< 20	
Eucalyptol	<LOQ	<LOQ	186	µg/g	0%	< 20	
β-cs-cimene	<LOQ	<LOQ	618	µg/g	0%	< 20	
β-trans-cimene	<LOQ	<LOQ	124	µg/g	0%	< 20	
γ-terpinene	<LOQ	<LOQ	186	µg/g	0%	< 20	
Sabinene Hydrate	<LOQ	<LOQ	186	µg/g	0%	< 20	
Terpinolene	<LOQ	<LOQ	186	µg/g	0%	< 20	
D-Fenchone	<LOQ	<LOQ	186	µg/g	0%	< 20	
Unalool	<LOQ	<LOQ	186	µg/g	0%	< 20	
Finchol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Camphor	<LOQ	<LOQ	186	µg/g	0%	< 20	
Isopulego	<LOQ	<LOQ	186	µg/g	0%	< 20	
Isoborneol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Borneol	<LOQ	<LOQ	186	µg/g	0%	< 20	
DL-Menthol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Terpineol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Nerd	<LOQ	<LOQ	186	µg/g	0%	< 20	
Pulegone	<LOQ	<LOQ	186	µg/g	0%	< 20	
Carosol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Geranyl Acetate	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-Cedrene	<LOQ	<LOQ	186	µg/g	0%	< 20	
β-Caryophyllene	1170	1150	186	µg/g	2%	< 20	
α-Humulene	578	575	186	µg/g	0%	< 20	
Valerene	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-Nerolidol	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-Farnesene	1400	1410	186	µg/g	1%	< 20	
trans-Nerolidol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Caryophyllene Oxide	334	332	186	µg/g	1%	< 20	
Osaiol	<LOQ	<LOQ	186	µg/g	0%	< 20	
Cedrol	<LOQ	<LOQ	186	µg/g	0%	< 20	
α-Bisabolol	674	641	186	µg/g	5%	< 20	

Definitions

RPD Relative Percent Difference



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



Report Number: 22-004174/D002.R002
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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.