



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



Report Number: 21-001144/D02.R00
Report Date: 02/08/2021
ORELAP#: OR100028
Purchase Order:
Received: 02/02/21 11:17

Customer: Treehouse Biotech
Product identity: 0051-02-006
Client/Metric ID: .
Laboratory ID: 21-001144-0001

Summary

Potency:

Analyte	Result (%)	Figure		
CBD	> 98.0		<ul style="list-style-type: none"> ● CBD ● CBDV 	CBD-Total > 98.0%
CBDV†	0.240			THC-Total < LOQ (Reported in percent of total sample)

Residual Solvents:

Analyte	Result (µg/g)	Limits (µg/g)	Status
n-Pentane	374		

Pesticides:

All analytes passing and less than LOQ.

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.



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Customer: Treehouse Biotech

Product identity: 0051-02-006
Client/Metric ID: .
Sample Date:
Laboratory ID: 21-001144-0001
Relinquished by: UPS
Temp: 17.1 °C

Sample Results

Potency **Method J AOAC 2015 V98-6 (mod) Batch: 2101029 Analyze: 2/3/21 2:00:00 AM**

Analyte	As Received	Dry weight	LOQ	Notes
CBC	< LOQ		0.0863	
CBC-A†	< LOQ		0.0863	
CBC-Total†	< LOQ		0.162	
CBD	> 98.0		0.863	
CBD-A	< LOQ		0.0863	
CBD-Total	> 98.0		0.939	
CBDV†	0.240		0.0863	
CBDV-A†	< LOQ		0.0863	
CBDV-Total†	0.240		0.161	
CBG†	< LOQ		0.0863	
CBG-A†	< LOQ		0.0863	
CBG-Total	< LOQ		0.161	
CBL†	< LOQ		0.0863	
CBN	< LOQ		0.0863	
Δ8-THC†	< LOQ		0.0863	
Δ9-THC	< LOQ		0.0863	
THC-A	< LOQ		0.0863	
THC-Total	< LOQ		0.162	
THCV†	< LOQ		0.0863	
THCV-A†	< LOQ		0.0863	
THCV-Total†	< LOQ		0.161	
Total Cannabinoids†	> 98.0			



Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Aerobic Plate Count	< LOQ		cfu/g	10	2100985	02/04/21	AOAC 990.12 (Petrifilm)	X, I
E.coli	< LOQ		cfu/g	10	2100986	02/04/21	AOAC 991.14 (Petrifilm)	X, I
Total Coliforms	< LOQ		cfu/g	10	2100986	02/04/21	AOAC 991.14 (Petrifilm)	X, I
Staphylococcus aureus	< LOQ		cfu/g	10	2100984	02/03/21	AOAC 2003.07	X, I
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2100983	02/04/21	AOAC 2014.05 (RAPID)	X, I
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2100983	02/04/21	AOAC 2014.05 (RAPID)	X, I
Salmonella spp. by PCR	Negative		/5g		2100964	02/03/21	AOAC 2020.02	X, I



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Solvents						Method EPA5021A		Units µg/g		Batch 2101005		Analyze 02/03/21 08:44 AM			
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-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane	< LOQ		200						
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass					
2,2-Dimethylbutane	< LOQ		30.0			2,2-Dimethylpropane	< LOQ		200						
2,3-Dimethylbutane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0						
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass					
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	5000	400	pass					
Cyclohexane	< LOQ	3880	200	pass		Ethanol ¹	< LOQ		200						
Ethyl acetate	< LOQ	5000	200	pass		Ethyl benzene	< LOQ		200						
Ethyl ether	< LOQ	5000	200	pass		Ethylene glycol	< LOQ	620	200	pass					
Ethylene oxide	< LOQ	50.0	30.0	pass		Hexanes (sum)	< LOQ	290	150	pass					
Isopropyl acetate	< LOQ	5000	200	pass		Isopropylbenzene	< LOQ	70.0	30.0	pass					
m,p-Xylene	< LOQ		200			Methanol	< LOQ	3000	200	pass					
Methylene chloride	< LOQ	600	200	pass		Methylpropane	< LOQ		200						
n-Butane	< LOQ		200			n-Heptane	< LOQ	5000	200	pass					
n-Hexane	< LOQ		30.0			n-Pentane	374		200						
o-Xylene	< LOQ		200			Pentanes (sum)	< LOQ	5000	600	pass					
Propane	< LOQ	5000	200	pass		Tetrahydrofuran	< LOQ	720	100	pass					
Toluene	< LOQ	890	100	pass		Total Xylenes	< LOQ		400						
Total Xylenes and Ethyl	< LOQ	2170	600	pass											



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Pesticides											
Method AOAC 2007.01 & EN 15662 (mod) Units mg/kg Batch 2101096 Analyze 02/05/21 10:19 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		Chlorantraniliprole	< 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		Fonicamid	< 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							

Metals									
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes	
Arsenic	< LOQ		mg/kg	0.0388	2101082	02/04/21	AOAC 2013.06 (mod.)	X	
Cadmium	< LOQ		mg/kg	0.0388	2101082	02/04/21	AOAC 2013.06 (mod.)	X	
Lead	< LOQ		mg/kg	0.0388	2101082	02/04/21	AOAC 2013.06 (mod.)	X	
Mercury	< LOQ		mg/kg	0.0194	2101082	02/04/21	AOAC 2013.06 (mod.)	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

µg/g = Microgram per gram

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

/5g = Per 5 grams

% = Percentage of sample

% wt = µg/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
Chain of Custody Record**

21-001144

Revision: 3.01 Control#: CF023 Rev 02/26/2020 Eff: 02/27/2020
ORELAP ID: OR100028

Company: <u>Treehouse</u> Contact: <u>Julie Barich and Sean Colvin</u> Street: <u>4472 Hilltop Rd Unit A</u> City: <u>Longmont</u> State: <u>CO</u> Zip: <u>80504</u> <input checked="" type="checkbox"/> Email Results: <u>julie@treehousebiotech.com</u> Ph: (303) <u>550-5601</u> <input type="checkbox"/> Fx Results: () Billing (if different): <u>accounting@treehousebiotech.com</u>				Analysis Requested										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"/> Standard <input type="checkbox"/> Rush * <input type="checkbox"/> Priority Rush * <i>*Check for availability</i> 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: Micro Panel G	Sample Type †	Weight (Units)	Comments/Metrc ID
1	0051-02-006			✓		✓	✓					✓		✓	S		For Any Residual Solvent Analysis, please do Ethanol. This is required for Organic Certification. Thanks! Sample is an isolate (5 vials)
Relinquished By:		Date	Time	Received By:		Date	Time	Lab Use Only:									
		2/1	1:45	JB		2/2	11:17	<input checked="" type="checkbox"/> Shipped Via: <u>UPS</u> or <input type="checkbox"/> Client drop Evidence of cooling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No - Temp (°C): <u>17.1</u> 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: _____									

† - Sample Type Codes: Vegetation (V) ; Isolates (S) ; Extract/Concentrate (C)

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@columbiaboratories.com
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www.columbiaboratories.com



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Columbia Laboratories
Sample Receipt Form

Revision: 1.01 Document Control: CF015
Revised: 02/28/2020 Effective: 02/28/2020

Job Number: 21-001144 Search Name: _____

Package/Cooler opened on (if different than received date/time) Date: 2/2 Time: 11:17

Received By (Initials): JB

- 1) Were custody seals on outside of the package/cooler?
If YES, how many and where? _____ YES NO NA
- Were signature and date correct? _____ YES NO NA
- 2) Were custody papers included in the package/cooler? YES NO NA
- 3) Were custody papers properly filled out (ink, sign, date)? YES NO NA
- 4) Did you sign custody papers in the appropriate place? YES NO NA

5) How was the package/cooler delivered?
 UPS FEDEX USPS CLIENT COURIER OTHER: _____

Tracking Number (written in or copy of shipping label): 1Z 5EW 404 014675 6253

6) Was packing material used? YES NO NA

Peanuts Bubble Wrap Foam Paper Other:

7) Was sufficient ice used (if appropriate)?
What kind? YES NO NA

Blue Ice Ice Cooler Packs Dry Ice

- 8) Were all sample containers sealed in separate plastic bags? YES NO NA
- 9) Did all sample containers arrive in good condition? YES NO NA
- 10) Were all sample container labels complete? YES NO NA
- 11) Did all sample container labels and tags agree with the coc? YES NO NA
- 12) Were correct sample containers used for the tests indicated? YES NO NA
- 13) Were VOA vials checked for absence of air bubbles (note if found)? YES NO NA
- 14) Was a sufficient amount of sample sent in each sample container? YES NO NA

15) Temperature of the samples upon receipt (See SOP for proper temps) 17.1 °C

16) Sample location prior to login: R25 R39 R44 F44 Ambient Shelf Cannabis Table Other: _____

Explain any discrepancies: _____



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Laboratory Quality Control Results									
Residual Solvents				Batch ID: 2101005					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		624	595	µg/g	104.9	70	- 130
Isobutane	ND	< 200		799	761	µg/g	105.0	70	- 130
Butane	ND	< 200		809	761	µg/g	106.3	70	- 130
2,2-Dimethylpropane	ND	< 200		933	955	µg/g	97.7	70	- 130
Methanol	ND	< 200		1420	1610	µg/g	88.2	70	- 130
Ethylene Oxide	ND	< 30		55.4	58.3	µg/g	95.0	70	- 130
2-Methylbutane	ND	< 200		1340	1630	µg/g	82.2	70	- 130
Pentane	ND	< 200		1290	1610	µg/g	80.1	70	- 130
Ethanol	ND	< 200		1360	1620	µg/g	84.0	70	- 130
Ethyl Ether	ND	< 200		1420	1630	µg/g	87.1	70	- 130
2,2-Dimethylbutane	ND	< 30		166	176	µg/g	94.3	70	- 130
Acetone	ND	< 200		1410	1610	µg/g	87.6	70	- 130
2-Propanol	ND	< 200		1380	1620	µg/g	85.2	70	- 130
Acetonitrile	ND	< 100		409	499	µg/g	82.0	70	- 130
2,3-Dimethylbutane	ND	< 30		132	165	µg/g	80.0	70	- 130
Dichloromethane	ND	< 200		410	482	µg/g	85.1	70	- 130
2-Methylpentane	ND	< 30		156	164	µg/g	95.1	70	- 130
3-Methylpentane	ND	< 30		132	163	µg/g	81.0	70	- 130
Hexane	ND	< 30		121	166	µg/g	72.9	70	- 130
Ethyl acetate	ND	< 200		1200	1610	µg/g	74.5	70	- 130
2-Butanol	ND	< 200		1200	1620	µg/g	74.1	70	- 130
Tetrahydrofuran	ND	< 100		374	509	µg/g	73.5	70	- 130
Cyclohexane	ND	< 200		1320	1620	µg/g	81.5	70	- 130
Benzene	ND	< 1		23.9	30.2	µg/g	79.1	70	- 130
Isopropyl Acetate	ND	< 200		1400	1610	µg/g	87.0	70	- 130
Heptane	ND	< 200		1370	1610	µg/g	85.1	70	- 130
1,4-Dioxane	ND	< 100		449	493	µg/g	91.1	70	- 130
2-Ethoxyethanol	ND	< 30		134	168	µg/g	79.8	70	- 130
Ethylene Glycol	ND	< 200		374	483	µg/g	77.4	70	- 130
Toluene	ND	< 200		445	491	µg/g	90.6	70	- 130
Ethylbenzene	ND	< 200		883	966	µg/g	91.4	70	- 130
m,p-Xylene	ND	< 200		894	982	µg/g	91.0	70	- 130
o-Xylene	ND	< 200		930	976	µg/g	95.3	70	- 130
Cumene	ND	< 30		152	162	µg/g	93.8	70	- 130



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QC - Sample Duplicate Sample ID: 21-000947-0001

Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Accept/Fail	Notes
Propane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Isobutane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Butane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2,2-Dimethylpropane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Methanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethylene Oxide	ND	ND	30	µg/g	0.0	< 20	Acceptable	
2-Methylbutane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Pentane	243	243	200	µg/g	0.0	< 20	Acceptable	
Ethanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethyl Ether	ND	ND	30	µg/g	0.0	< 20	Acceptable	
2,2-Dimethylbutane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Acetone	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2-Propanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Acetonitrile	ND	ND	100	µg/g	0.0	< 20	Acceptable	
2,3-Dimethylbutane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Dichloromethane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2-Methylpentane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
3-Methylpentane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Hexane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Ethyl acetate	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2-Butanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Tetrahydrofuran	ND	ND	100	µg/g	0.0	< 20	Acceptable	
Cyclohexane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Benzene	ND	ND	1	µg/g	0.0	< 20	Acceptable	
Isopropyl Acetate	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Heptane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
1,4-Dioxane	ND	ND	100	µg/g	0.0	< 20	Acceptable	
2-Ethoxyethanol	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Ethylene Glycol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Toluene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethylbenzene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
m,p-Xylene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
o-Xylene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Cumene	ND	ND	30	µg/g	0.0	< 20	Acceptable	

Abbreviations

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

Units of Measure:

µg/g - Microgram per gram or ppm



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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: 2101029**

Laboratory Control Sample

Analyte	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDV-A	0.195	0.2	%	97.5	85.0 - 115	Acceptable	
CBDV	0.196	0.2	%	98.0	85.0 - 115	Acceptable	
CBD-A	0.203	0.2	%	101	85.0 - 115	Acceptable	
CBG-A	0.196	0.2	%	98.2	85.0 - 115	Acceptable	
CBG	0.197	0.2	%	98.5	85.0 - 115	Acceptable	
CBD	0.202	0.2	%	101	85.0 - 115	Acceptable	
THCV	0.194	0.2	%	96.9	85.0 - 115	Acceptable	
THCVA	0.183	0.2	%	91.5	85.0 - 115	Acceptable	
CBN	0.213	0.2	%	106	85.0 - 115	Acceptable	
THC	0.198	0.2	%	99.2	85.0 - 115	Acceptable	
D8THC	0.193	0.2	%	96.7	85.0 - 115	Acceptable	
CBL	0.181	0.2	%	90.5	85.0 - 115	Acceptable	
CBC	0.201	0.2	%	101	85.0 - 115	Acceptable	
THCA	0.199	0.2	%	99.3	85.0 - 115	Acceptable	
CBCA	0.190	0.2	%	95.0	85.0 - 115	Acceptable	

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDV-A	<LOQ	0.1	%	< 0.1	Acceptable	
CBDV	<LOQ	0.1	%	< 0.1	Acceptable	
CBD-A	<LOQ	0.1	%	< 0.1	Acceptable	
CBG-A	<LOQ	0.1	%	< 0.1	Acceptable	
CBG	<LOQ	0.1	%	< 0.1	Acceptable	
CBD	<LOQ	0.1	%	< 0.1	Acceptable	
THCV	<LOQ	0.1	%	< 0.1	Acceptable	
THCVA	<LOQ	0.1	%	< 0.1	Acceptable	
CBN	<LOQ	0.1	%	< 0.1	Acceptable	
THC	<LOQ	0.1	%	< 0.1	Acceptable	
D8THC	<LOQ	0.1	%	< 0.1	Acceptable	
CBL	<LOQ	0.1	%	< 0.1	Acceptable	
CBC	<LOQ	0.1	%	< 0.1	Acceptable	
THCA	<LOQ	0.1	%	< 0.1	Acceptable	
CBCA	<LOQ	0.1	%	< 0.1	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: 21-001144/D02.R00
Report Date: 02/08/2021
ORELAP#: OR100028
Purchase Order:
Received: 02/02/21 11:17

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: 2101029						
Sample Duplicate		Sample ID: 21-000916-0002						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBDV	0.167	0.165	0.1	%	0.911	< 20	Acceptable	
CBD-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBG-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBG	0.136	0.136	0.1	%	0.223	< 20	Acceptable	
CBD	35.3	34.8	0.1	%	1.45	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBN	0.338	0.334	0.1	%	1.17	< 20	Acceptable	
THC	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
D8THC	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBC	0.469	0.447	0.1	%	4.78	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.1	%	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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Revision: 1.00 Control: CFL-C21
Revised: 08/12/2019 Effective: 08/15/2019

Laboratory Pesticide Quality Control Results

AOAC 2007.1 & EN 15662		Units: mg/Kg				Batch ID: 2101096				
Matrix Spike/Matrix Spike Duplicate Recoveries		Sample ID: 21-001120-0004								
Analyte	Result	MS Res	MSD Res	Spike	RPD%	Limit	MS % Rec	MSD % Rec	Limits	Notes
Acephate	0.013	0.989	0.963	1.000	2.7%	< 30	97.6%	95.0%	50 - 150	
Acequinocyl	0.000	3.636	2.473	4.000	38.1%	< 30	90.9%	61.8%	50 - 150	R
Acetamiprid	0.000	0.408	0.395	0.400	3.2%	< 30	102.1%	98.8%	50 - 150	
Aldicarb	0.000	0.830	0.789	0.800	5.1%	< 30	103.8%	98.6%	50 - 150	
Abamectin	0.000	0.991	0.981	1.000	1.0%	< 30	99.1%	98.1%	50 - 150	
Azoxystrobin	0.012	0.375	0.365	0.400	2.9%	< 30	90.9%	88.3%	50 - 150	
Bifenazate	0.000	0.445	0.436	0.400	2.0%	< 30	111.3%	109.1%	50 - 150	
Bifenthrin	0.000	0.342	0.366	0.400	6.9%	< 30	85.4%	91.5%	50 - 150	
Boscalid	0.000	0.765	0.746	0.800	2.5%	< 30	95.6%	93.2%	50 - 150	
Carbaryl	0.000	0.397	0.394	0.400	0.7%	< 30	99.2%	98.4%	50 - 150	
Carbofuran	0.000	0.386	0.367	0.400	4.9%	< 30	96.4%	91.8%	50 - 150	
Chlorantraniliprol	0.000	0.383	0.422	0.400	9.7%	< 30	95.7%	105.5%	50 - 150	
Chlorfenapyr	0.000	2.160	2.106	2.000	2.6%	< 30	108.0%	105.3%	50 - 150	
Chlorpyrifos	0.000	0.227	0.220	0.400	3.3%	< 30	56.8%	55.0%	50 - 150	
Clofentezine	0.000	0.383	0.369	0.400	3.7%	< 30	95.8%	92.3%	50 - 150	
Cyfluthrin	0.000	2.131	2.116	2.000	0.7%	< 30	106.5%	105.8%	30 - 150	
Cypermethrin	0.000	2.064	2.076	2.000	0.6%	< 30	103.2%	103.8%	50 - 150	
Daminozide	0.076	1.781	1.757	2.000	1.4%	< 30	85.2%	84.1%	30 - 150	
Diazinon	0.000	0.385	0.378	0.400	1.8%	< 30	96.3%	94.6%	50 - 150	
Dichlorvos	0.000	1.987	1.878	2.000	5.7%	< 30	99.4%	93.9%	50 - 150	
Dimethoat	0.000	0.408	0.384	0.400	6.0%	< 30	102.0%	96.0%	50 - 150	
Ethoprophos	0.000	0.405	0.381	0.400	6.1%	< 30	101.3%	95.4%	50 - 150	
Etofenprox	0.000	0.725	0.765	0.800	5.4%	< 30	90.6%	95.6%	50 - 150	
Etoxazol	0.000	0.386	0.365	0.400	5.5%	< 30	96.5%	91.4%	50 - 150	
Fenoxycarb	0.000	0.384	0.396	0.400	3.0%	< 30	96.0%	98.9%	50 - 150	
Fenpyroximat	0.000	0.714	0.684	0.800	4.2%	< 30	89.2%	85.5%	50 - 150	
Fipronil	0.000	0.737	0.732	0.800	0.7%	< 30	92.2%	91.5%	50 - 150	
Fonicamid	0.000	1.001	0.918	1.000	8.7%	< 30	100.1%	91.8%	50 - 150	
Fludioxonil	0.000	0.853	0.782	0.800	8.7%	< 30	106.6%	97.7%	50 - 150	
Hexythiazox	0.000	0.367	0.360	1.000	1.9%	< 30	36.7%	36.0%	50 - 150	Q
Imazalil	0.000	0.473	0.473	0.400	0.1%	< 30	118.1%	118.3%	50 - 150	
Imidacloprid	0.000	0.809	0.761	0.800	6.1%	< 30	101.1%	95.2%	50 - 150	
Kresoxim-Methyl	0.000	0.818	0.779	0.800	4.9%	< 30	102.3%	97.4%	50 - 150	
Malathion	0.000	0.384	0.392	0.400	1.9%	< 30	96.1%	97.9%	50 - 150	
Metaxalyl	0.000	0.386	0.372	0.400	3.7%	< 30	96.6%	93.0%	50 - 150	
Methiocarb	0.000	0.378	0.378	0.400	0.1%	< 30	94.5%	94.5%	50 - 150	
Methomyl	0.000	0.875	0.836	0.800	4.6%	< 30	109.4%	104.5%	50 - 150	
MGK 264	0.000	0.386	0.393	0.400	1.8%	< 30	96.6%	98.3%	50 - 150	
Myclobutanil	0.000	0.372	0.390	0.400	4.7%	< 30	93.1%	97.6%	50 - 150	
Naled	0.000	0.974	0.973	1.000	0.1%	< 30	97.4%	97.3%	50 - 150	
Oxamyl	0.000	2.205	2.201	2.000	0.2%	< 30	110.3%	110.0%	50 - 150	
Paclobutrazol	0.000	0.784	0.740	0.800	5.9%	< 30	98.0%	92.4%	50 - 150	
Parathion Methyl	0.045	0.776	0.818	0.800	5.6%	< 30	91.4%	96.7%	30 - 150	
Permethrin	0.000	0.452	0.450	0.400	0.5%	< 30	113.1%	112.5%	50 - 150	
Phosmet	0.000	0.396	0.378	0.400	4.8%	< 30	99.1%	94.4%	50 - 150	
Piperonyl butoxide	0.000	1.894	1.843	2.000	2.8%	< 30	94.7%	92.1%	50 - 150	
Prallethrin	0.000	0.325	0.313	0.400	3.8%	< 30	81.2%	78.2%	50 - 150	
Propiconazole	0.000	0.749	0.759	0.800	1.4%	< 30	93.6%	94.9%	50 - 150	
Propoxur	0.000	0.394	0.390	0.400	1.0%	< 30	98.6%	97.6%	50 - 150	
Pyrethrins	0.018	0.422	0.409	0.413	3.3%	< 30	97.9%	94.7%	50 - 150	
Pyridaben	0.000	0.342	0.336	0.400	1.7%	< 30	85.5%	84.1%	50 - 150	
Spinosad	0.000	0.472	0.461	0.388	2.5%	< 30	121.7%	118.7%	50 - 150	
Spiromesifen	0.021	0.396	0.395	0.400	0.4%	< 30	93.9%	93.5%	50 - 150	
Spirotetramat	0.000	0.401	0.391	0.400	2.5%	< 30	100.2%	97.7%	50 - 150	
Spiroxamine	0.000	0.764	0.738	0.800	3.6%	< 30	95.5%	92.2%	50 - 150	
Tebuconazol	0.000	0.769	0.716	0.800	7.2%	< 30	96.2%	89.5%	50 - 150	
Thiadoprid	0.000	0.396	0.391	0.400	1.2%	< 30	99.0%	97.8%	50 - 150	
Thiamethoxam	0.000	0.344	0.388	0.400	12.1%	< 30	86.1%	97.1%	50 - 150	
Trifloxystrobin	0.000	0.383	0.372	0.400	3.1%	< 30	95.9%	92.9%	50 - 150	



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Received: 02/02/21 11:17

Revision: 1.00 Control: CFL-C21
Revised: 08/12/2019 Effective: 08/15/2019

Laboratory Pesticide Quality Control Results

AOAC 2007.1 & EN 15662		Units: mg/Kg		Laboratory Control Sample			Batch ID: 2101096	
Method Blank	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS % Rec	Limits	Notes
Accephate	0.047	< 0.200		1.030	1.000	103.0	72.4 - 126	
Acequinocyl	0.000	< 1.000		3.779	4.000	94.5	79.8 - 122	
Acetamiprid	0.000	< 0.100		0.401	0.400	100.3	84.3 - 119	
Aldicarb	0.000	< 0.200		0.796	0.800	99.5	82.9 - 120	
Abamectin	0.000	< 0.288		1.013	1.000	101.3	79.6 - 124	
Azoxystrobin	0.000	< 0.100		0.385	0.400	96.3	79.4 - 127	
Bifenazate	0.000	< 0.100		0.418	0.400	104.6	81.6 - 124	
Bifenthrin	0.000	< 0.100		0.399	0.400	99.8	71.5 - 133	
Boscalid	0.000	< 0.100		0.863	0.800	107.8	74.0 - 131	
Carbaryl	0.013	< 0.100		0.407	0.400	101.8	82.1 - 121	
Carbofuran	0.016	< 0.100		0.396	0.400	98.9	85.1 - 125	
Chlorantraniliprol	0.000	< 0.100		0.416	0.400	103.9	70.6 - 131	
Chlorfenapyr	0.000	< 1.000		1.870	2.000	93.5	71.0 - 132	
Chlorpyrifos	0.000	< 0.100		0.412	0.400	103.1	72.3 - 134	
Clofentezine	0.000	< 0.100		0.391	0.400	97.6	80.1 - 117	
Cyfluthrin	0.000	< 1.000		1.967	2.000	98.4	71.8 - 133	
Cypermethrin	0.000	< 1.000		2.027	2.000	101.4	83.1 - 126	
Daminozide	0.060	< 1.000		1.841	2.000	92.1	74.6 - 124	
Diazinon	0.000	< 0.100		0.386	0.400	96.5	78.9 - 126	
Dichlorvos	0.000	< 0.500		2.016	2.000	100.8	76.1 - 124	
Dimethoat	0.000	< 0.100		0.399	0.400	99.6	82.8 - 119	
Ethoprophos	0.000	< 0.100		0.394	0.400	98.6	69.5 - 129	
Etofenprox	0.000	< 0.100		0.740	0.800	92.5	85.2 - 128	
Etoxazol	0.000	< 0.100		0.411	0.400	102.9	79.7 - 126	
Fenoxycarb	0.000	< 0.100		0.404	0.400	101.0	84.1 - 122	
Fenpyroximat	0.000	< 0.100		0.771	0.800	96.3	82.4 - 126	
Fipronil	0.000	< 0.100		0.763	0.800	95.4	80.6 - 125	
Flonicamid	0.000	< 0.400		0.977	1.000	97.7	80.9 - 119	
Fludoxonil	0.000	< 0.100		0.797	0.800	99.6	73.0 - 136	
Hexythiazox	0.000	< 0.400		0.979	1.000	97.9	82.5 - 125	
Imazalil	0.000	< 0.100		0.431	0.400	107.7	81.4 - 128	
Imidacloprid	0.000	< 0.200		0.806	0.800	100.7	76.9 - 125	
Kresoxim-Methyl	0.000	< 0.100		0.831	0.800	103.9	82.6 - 124	
Malathion	0.000	< 0.100		0.397	0.400	99.2	74.1 - 130	
Metaxalyl	0.000	< 0.100		0.398	0.400	99.6	79.7 - 124	
Methiocarb	0.019	< 0.100		0.380	0.400	95.1	81.0 - 123	
Methomyl	0.000	< 0.200		0.871	0.800	108.8	79.4 - 118	
MGK 264	0.000	< 0.100		0.401	0.400	100.2	77.2 - 128	
Myclobutanil	0.000	< 0.100		0.402	0.400	100.5	80.6 - 123	
Naled	0.000	< 0.200		0.993	1.000	99.3	80.3 - 126	
Oxamyl	0.000	< 0.400		2.215	2.000	110.7	80.1 - 117	
Paclobutrazol	0.000	< 0.200		0.803	0.800	100.4	81.6 - 126	
Parathion Methyl	0.000	< 0.200		0.809	0.800	101.1	72.5 - 135	
Permethrin	0.000	< 0.100		0.455	0.400	113.6	75.0 - 139	
Phosmet	0.000	< 0.100		0.384	0.400	95.9	82.0 - 122	
Piperonyl butoxide	0.000	< 1.000		2.003	2.000	100.1	81.3 - 137	
Prallethrin	0.000	< 0.200		0.427	0.400	106.7	81.3 - 127	
Propiconazole	0.000	< 0.200		0.779	0.800	97.3	84.7 - 121	
Propoxur	0.015	< 0.100		0.406	0.400	101.6	84.2 - 121	
Pyrethrins	0.000	< 0.500		0.403	0.413	97.5	76.1 - 141	
Pyridaben	0.000	< 0.100		0.401	0.400	100.2	79.2 - 147	
Spinosad	0.000	< 0.100		0.455	0.388	117.2	88.4 - 127	
Spiromesifen	0.000	< 0.100		0.390	0.400	97.6	79.9 - 127	
Spirotetramat	0.000	< 0.100		0.392	0.400	97.9	81.1 - 121	
Spiroxamine	0.000	< 0.100		0.782	0.800	97.7	78.4 - 133	
Tebuconazol	0.000	< 0.200		0.823	0.800	102.9	83.1 - 122	
Thiadoprid	0.000	< 0.100		0.398	0.400	99.4	84.3 - 120	
Thiamethoxam	0.000	< 0.100		0.376	0.400	94.0	80.1 - 121	
Trifloxystrobin	0.000	< 0.100		0.398	0.400	99.6	81.4 - 125	



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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.