



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



Report Number: 20-013050/D02.R00
Report Date: 12/04/2020
ORELAP#: OR100028
Purchase Order:
Received: 11/30/20 10:57

Customer: Treehouse Biotech
Product identity: 7040
Client/Metric ID: .
Laboratory ID: 20-013050-0001

Summary

Residual Solvents:

All analytes passing and less than LOQ.

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: 7040
Client/Metric ID: .
Sample Date:
Laboratory ID: 20-013050-0001
Relinquished by: UPS
Temp: 18.2 °C

Sample Results

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Aerobic Plate Count	< LOQ		cfu/g	10	2009942	12/02/20	AOAC 990.12 (Petrifilm)	X, I
E.coli	< LOQ		cfu/g	10	2009941	12/02/20	AOAC 991.14 (Petrifilm)	X, I
Total Coliforms	< LOQ		cfu/g	10	2009941	12/02/20	AOAC 991.14 (Petrifilm)	X, I
Staphylococcus aureus	< LOQ		cfu/g	10	2009943	12/01/20	AOAC 2003.07	X, I
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2009940	12/02/20	AOAC 2014.05 (RAPID)	X, I
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2009940	12/02/20	AOAC 2014.05 (RAPID)	X, I
Salmonella spp.	Negative		/1g		2009919	12/01/20	AOAC 2016.01	X, I

Solvents						Method EPA5021A	Units µg/g	Batch 2009881	Analyze 11/30/20	11:48 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	< LOQ		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 2010053 Analyze 12/03/20 12:15 PM					
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		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							

Metals									
Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes	
Arsenic	< LOQ		mg/kg	0.0412	2010037	12/02/20	AOAC 2013.06 (mod.)	X	
Cadmium	< LOQ		mg/kg	0.0412	2010037	12/02/20	AOAC 2013.06 (mod.)	X	
Lead	< LOQ		mg/kg	0.0412	2010037	12/02/20	AOAC 2013.06 (mod.)	X	
Mercury	< LOQ		mg/kg	0.0206	2010037	12/02/20	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)

/1g = Per 1 gram

% 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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20-013050



Hemp / Cannabis Usable / Extract
Chain of Custody Record

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

Company: Treehouse Contact: Julie Barich and Sean Colvin Street: 4472 Hilltop Rd Unit A City: Longmont State: CO Zip: 80504 <input checked="" type="checkbox"/> Email Results: julie@treehousebiotech.com Ph: (303) 550-5601 <input type="checkbox"/> Fx Results: () Billing (if different): accounting@treehousebiotech.com				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 checked="" type="checkbox"/> Rush * <input type="checkbox"/> Priority Rush * <i>*Check for availability</i> Sampled by: <u>Julie</u>					
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	7040			✓			✓					✓		✓	S		For Any Residual Solvent Analysis, please do Ethanol. This is required for Organic Certification. Thanks!
																	Custom LOQ 0.01 on the following sample(s): none
Relinquished By: <u>Julie Barich</u> Date: 11-25-20 Time: 9:51				Received By: <u>Jmw</u> Date: 11-30 Time: 10:57				Lab Use Only: <input 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>18.2</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)

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Report Number: 20-013050/D02.R00
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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: 20-013050 Search Name: _____

Package/Cooler opened on (if different than received date/time) Date: 11-30 Time: 10:57

Received By (Initials): JV

- 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 07 485

6) Was packing material used? YES NO NA

Peanuts Bubble Wrap Foam Paper Other: 8375

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

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) 18.2 °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: 2009881					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		620	595	µg/g	104.2	70 - 130	
Isobutane	ND	< 200		820	761	µg/g	107.8	70 - 130	
Butane	ND	< 200		834	761	µg/g	109.6	70 - 130	
2,2-Dimethylpropane	ND	< 200		1010	955	µg/g	105.8	70 - 130	
Methanol	ND	< 200		1380	1610	µg/g	85.7	70 - 130	
Ethylene Oxide	ND	< 30		61.6	58.3	µg/g	105.7	70 - 130	
2-Methylbutane	ND	< 200		1420	1600	µg/g	88.8	70 - 130	
Pentane	ND	< 200		1420	1610	µg/g	88.2	70 - 130	
Ethanol	ND	< 200		1460	1610	µg/g	90.7	70 - 130	
Ethyl Ether	ND	< 200		1460	1610	µg/g	90.7	70 - 130	
2,2-Dimethylbutane	ND	< 30		150	168	µg/g	89.3	70 - 130	
Acetone	ND	< 200		1460	1610	µg/g	90.7	70 - 130	
2-Propanol	ND	< 200		1470	1600	µg/g	91.9	70 - 130	
Acetonitrile	ND	< 100		423	486	µg/g	87.0	70 - 130	
2,3-Dimethylbutane	ND	< 30		146	162	µg/g	90.1	70 - 130	
Dichloromethane	ND	< 200		451	490	µg/g	92.0	70 - 130	
2-Methylpentane	ND	< 30		155	164	µg/g	94.5	70 - 130	
3-Methylpentane	ND	< 30		146	166	µg/g	88.0	70 - 130	
Hexane	ND	< 30		147	167	µg/g	88.0	70 - 130	
Ethyl acetate	ND	< 200		1480	1610	µg/g	91.9	70 - 130	
2-Butanol	ND	< 200		1490	1610	µg/g	92.5	70 - 130	
Tetrahydrofuran	ND	< 100		478	484	µg/g	98.8	70 - 130	
Cyclohexane	ND	< 200		1500	1610	µg/g	93.2	70 - 130	
Benzene	ND	< 1		22.6	24.5	µg/g	92.2	70 - 130	
Isopropyl Acetate	ND	< 200		1460	1620	µg/g	90.1	70 - 130	
Heptane	ND	< 200		1400	1610	µg/g	87.0	70 - 130	
1,4-Dioxane	ND	< 100		445	484	µg/g	91.9	70 - 130	
2-Ethoxyethanol	ND	< 30		156	166	µg/g	83.9	70 - 130	
Ethylene Glycol	ND	< 200		391	509	µg/g	76.8	70 - 130	
Toluene	ND	< 200		456	492	µg/g	92.7	70 - 130	
Ethylbenzene	ND	< 200		908	971	µg/g	93.6	70 - 130	
m,p-Xylene	ND	< 200		903	975	µg/g	92.6	70 - 130	
o-Xylene	ND	< 200		905	966	µg/g	93.7	70 - 130	
Cumene	ND	< 30		148	167	µg/g	88.6	70 - 130	



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QC - Sample Duplicate		Sample ID: 20-012933-0001						
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	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethyl Ether	ND	ND	200	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: 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: 2010053			
Method Blank			Laboratory Control Sample					
Analyte	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS % Rec	Limits	Notes
Acephate	0.000	< 0.200		0.867	1.000	86.7	72.4 - 126	
Acequinocyl	0.666	< 1.000		3.509	4.000	87.7	79.8 - 122	
Acetamiprid	0.000	< 0.100		0.411	0.400	102.6	84.3 - 119	
Aldicarb	0.000	< 0.200		0.687	0.800	85.9	82.9 - 120	
Abamectin	0.000	< 0.288		0.991	1.000	99.1	79.6 - 124	
Azoxystrobin	0.000	< 0.100		0.408	0.400	102.0	79.4 - 127	
Bifenazate	0.000	< 0.100		0.413	0.400	103.3	81.6 - 124	
Bifenthrin	0.000	< 0.100		0.357	0.400	89.2	71.5 - 133	
Boscalid	0.000	< 0.100		0.819	0.800	102.4	74.0 - 131	
Carbaryl	0.001	< 0.100		0.400	0.400	99.9	82.1 - 121	
Carbofuran	0.024	< 0.100		0.396	0.400	99.1	85.1 - 125	
Chlorantraniliprol	0.000	< 0.100		0.395	0.400	98.7	70.6 - 131	
Chlorfenapyr	0.000	< 1.000		2.091	2.000	104.6	71.0 - 132	
Chlorpyrifos	0.002	< 0.100		0.431	0.400	107.7	72.3 - 134	
Clofentezine	0.002	< 0.100		0.381	0.400	95.3	80.1 - 117	
Cyfluthrin	0.337	< 1.000		1.786	2.000	89.3	71.8 - 133	
Cypermethrin	0.000	< 1.000		1.893	2.000	94.7	83.1 - 126	
Daminozide	0.000	< 1.000		1.869	2.000	93.5	74.6 - 124	
Diazinon	0.003	< 0.100		0.407	0.400	101.9	78.9 - 126	
Dichlorvos	0.000	< 0.500		1.986	2.000	99.3	76.1 - 124	
Dimethoat	0.003	< 0.100		0.384	0.400	96.1	82.8 - 119	
Ethoprophos	0.005	< 0.100		0.398	0.400	99.4	69.5 - 129	
Etofenprox	0.000	< 0.100		0.735	0.800	91.9	85.2 - 128	
Etoxazol	0.001	< 0.100		0.391	0.400	97.8	79.7 - 126	
Fenoxycarb	0.000	< 0.100		0.384	0.400	95.9	84.1 - 122	
Fenpyroximat	0.013	< 0.100		0.788	0.800	98.5	82.4 - 126	
Fipronil	0.000	< 0.100		0.841	0.800	105.1	80.6 - 125	
Flonicamid	0.047	< 0.400		1.022	1.000	102.2	80.9 - 119	
Fludioxonil	0.000	< 0.100		0.838	0.800	104.8	73.0 - 136	
Hexythiazox	0.000	< 0.400		0.932	1.000	93.2	82.5 - 125	
Imazalil	0.014	< 0.100		0.422	0.400	105.5	81.4 - 128	
Imidacloprid	0.009	< 0.200		0.777	0.800	97.1	76.9 - 125	
Kresoxim-Methyl	0.000	< 0.100		0.744	0.800	92.9	82.6 - 124	
Malathion	0.008	< 0.100		0.401	0.400	100.3	74.1 - 130	
Metaxalyl	0.000	< 0.100		0.401	0.400	100.3	79.7 - 124	
Methiocarb	0.000	< 0.100		0.316	0.400	79.0	81.0 - 123	Q6
Methomyl	0.000	< 0.200		0.865	0.800	108.1	79.4 - 118	
M/GK 264	0.004	< 0.100		0.380	0.400	95.0	77.2 - 128	
Myclobutanil	0.000	< 0.100		0.410	0.400	102.4	80.6 - 123	
Naled	0.000	< 0.200		0.969	1.000	96.9	80.3 - 126	
Oxamyl	0.000	< 0.400		1.816	2.000	90.8	80.1 - 117	
Paclobutrazol	0.000	< 0.200		0.773	0.800	96.6	81.6 - 126	
Parathion Methyl	0.000	< 0.200		0.805	0.800	100.7	72.5 - 135	
Permethrin	0.033	< 0.100		0.358	0.400	89.6	75.0 - 139	
Phosmet	0.000	< 0.100		0.393	0.400	98.3	82.0 - 122	
Piperonyl butoxide	0.013	< 1.000		1.849	2.000	92.5	81.3 - 137	
Prallethrin	0.154	< 0.200		0.324	0.400	81.1	81.3 - 127	Q6
Propiconazole	0.000	< 0.200		0.802	0.800	100.2	84.7 - 121	
Propoxur	0.002	< 0.100		0.391	0.400	97.6	84.2 - 121	
Pyrethrins	0.096	< 0.500		0.416	0.413	100.7	76.1 - 141	
Pyridaben	0.002	< 0.100		0.488	0.400	122.0	79.2 - 147	
Spinosad	0.000	< 0.100		0.416	0.388	107.2	88.4 - 127	
Spiromesifen	0.000	< 0.100		0.344	0.400	86.0	79.9 - 127	
Spirotetramat	0.000	< 0.100		0.395	0.400	98.7	81.1 - 121	
Spiroxamine	0.010	< 0.100		0.820	0.800	102.4	78.4 - 133	
Tebuconazol	0.001	< 0.200		0.796	0.800	99.5	83.1 - 122	
Thiadoprid	0.000	< 0.100		0.401	0.400	100.2	84.3 - 120	
Thiamethoxam	0.000	< 0.100		0.408	0.400	102.1	80.1 - 121	
Trifloxystrobin	0.003	< 0.100		0.372	0.400	93.0	81.4 - 125	



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503-254-1794



Report Number: 20-013050/D02.R00
Report Date: 12/04/2020
ORELAP#: OR100028
Purchase Order:
Received: 11/30/20 10:57

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: 2010053										
Matrix Spike/Matrix Spike Duplicate Recoveries Sample ID: 20-013050-0001										
Analyte	Result	MS Res	MSD Res	Spike	RPD%	Limit	MS % Rec	MSD % Rec	Limits	Notes
Acaphate	0.000	0.905	0.879	1.000	2.9%	< 30	90.5%	87.9%	50 - 150	
Acequinocyl	0.059	5.704	6.429	4.000	12.1%	< 30	141.1%	159.3%	50 - 150	Q1
Acetamidrid	0.000	0.414	0.412	0.400	0.3%	< 30	103.4%	103.1%	50 - 150	
Aldicarb	0.000	0.995	0.844	0.800	16.4%	< 30	124.4%	105.5%	50 - 150	
Abamectin	0.000	1.416	1.158	1.000	20.0%	< 30	141.6%	115.8%	50 - 150	
Azoxystrobin	0.000	0.391	0.482	0.400	20.8%	< 30	97.8%	120.4%	50 - 150	
Bifenazate	0.000	0.451	0.438	0.400	2.8%	< 30	112.7%	109.6%	50 - 150	
Bifenthrin	0.000	0.895	0.941	0.400	5.0%	< 30	223.8%	235.2%	50 - 150	Q1
Boscalid	0.000	0.876	0.751	0.800	15.4%	< 30	109.5%	93.8%	50 - 150	
Carbaryl	0.000	0.391	0.369	0.400	5.9%	< 30	97.8%	92.2%	50 - 150	
Carbofuran	0.000	0.375	0.396	0.400	5.3%	< 30	93.9%	99.0%	50 - 150	
Chlorantraniliprol	0.000	0.375	0.358	0.400	4.6%	< 30	93.7%	89.5%	50 - 150	
Chlorfenapyr	0.000	1.939	1.768	2.000	9.2%	< 30	96.9%	88.4%	50 - 150	
Chlorpyrifos	0.000	0.597	0.581	0.400	2.8%	< 30	149.4%	145.3%	50 - 150	
Clofentezine	0.000	0.414	0.397	0.400	4.2%	< 30	103.5%	99.2%	50 - 150	
Cyfluthrin	0.142	4.002	3.481	2.000	14.5%	< 30	193.0%	166.9%	30 - 150	Q1
Cypermethrin	0.000	3.781	3.848	2.000	1.8%	< 30	189.0%	192.4%	50 - 150	Q1
Daminozide	0.000	1.922	1.927	2.000	0.2%	< 30	96.1%	96.3%	30 - 150	
Diazinon	0.003	0.456	0.427	0.400	6.5%	< 30	113.3%	106.1%	50 - 150	
Dichlorvos	0.078	1.982	1.942	2.000	2.1%	< 30	95.2%	93.2%	50 - 150	
Dimethoat	0.000	0.385	0.371	0.400	3.6%	< 30	96.2%	92.8%	50 - 150	
Ethoprophos	0.003	0.422	0.387	0.400	8.7%	< 30	104.8%	96.0%	50 - 150	
Etofenprox	0.098	1.220	1.141	0.800	7.3%	< 30	140.3%	130.4%	50 - 150	
Etoxazol	0.001	0.550	0.549	0.400	0.0%	< 30	137.2%	137.1%	50 - 150	
Fenoxycarb	0.000	0.440	0.421	0.400	4.3%	< 30	109.9%	105.2%	50 - 150	
Fenpyroximat	0.000	1.028	1.024	0.800	0.4%	< 30	128.5%	128.0%	50 - 150	
Fipronil	0.000	1.032	0.952	0.800	8.1%	< 30	129.0%	119.0%	50 - 150	
Flonicamid	0.040	0.993	0.947	1.000	4.9%	< 30	95.3%	90.7%	50 - 150	
Fludoxonil	0.000	1.185	0.745	0.800	45.7%	< 30	148.2%	93.1%	50 - 150	R
Hexythiazox	0.000	2.150	2.230	1.000	3.6%	< 30	215.0%	223.0%	50 - 150	Q1
Imazalil	0.009	0.399	0.398	0.400	0.3%	< 30	97.5%	97.2%	50 - 150	
Imidacloprid	0.053	0.878	0.827	0.800	6.3%	< 30	103.2%	96.8%	50 - 150	
Kresoxim-Methyl	0.000	0.797	0.729	0.800	8.9%	< 30	99.6%	91.1%	50 - 150	
Malathion	0.074	0.533	0.498	0.400	8.0%	< 30	114.8%	106.0%	50 - 150	
Metaxalyl	0.000	0.424	0.423	0.400	0.1%	< 30	105.9%	105.8%	50 - 150	
Methiocarb	0.004	0.390	0.380	0.400	2.5%	< 30	96.5%	94.1%	50 - 150	
Methomyl	0.000	0.912	0.870	0.800	4.7%	< 30	114.0%	108.8%	50 - 150	
M/GK 264	0.000	0.386	0.367	0.400	5.1%	< 30	96.5%	91.7%	50 - 150	
Mydobutanil	0.006	0.439	0.433	0.400	1.2%	< 30	108.2%	106.9%	50 - 150	
Naled	0.000	0.954	0.942	1.000	1.2%	< 30	95.4%	94.2%	50 - 150	
Oxamyl	0.000	1.954	1.710	2.000	13.3%	< 30	97.7%	85.5%	50 - 150	
Paclobutrazol	0.000	0.886	0.892	0.800	0.7%	< 30	110.7%	111.5%	50 - 150	
Parathion Methyl	0.000	0.821	0.679	0.800	19.0%	< 30	102.7%	84.9%	30 - 150	
Permethrin	0.000	0.551	0.463	0.400	17.5%	< 30	137.8%	115.7%	50 - 150	
Phosmet	0.000	0.396	0.372	0.400	6.1%	< 30	98.9%	93.1%	50 - 150	
Piperonyl butoxide	0.000	2.516	2.314	2.000	8.3%	< 30	125.8%	115.7%	50 - 150	
Prallethrin	0.000	0.768	0.726	0.400	5.6%	< 30	192.0%	181.6%	50 - 150	Q1
Propiconazole	0.000	0.884	0.847	0.800	4.3%	< 30	110.5%	105.8%	50 - 150	
Propoxur	0.017	0.384	0.365	0.400	5.3%	< 30	91.7%	87.0%	50 - 150	
Pyrethrins	0.012	0.496	0.498	0.413	0.4%	< 30	117.2%	117.7%	50 - 150	
Pyridaben	0.002	0.644	0.609	0.400	5.5%	< 30	160.5%	151.8%	50 - 150	Q1
Spinosad	0.000	0.410	0.408	0.388	0.3%	< 30	105.5%	105.3%	50 - 150	
Spiromesifen	0.000	0.713	0.696	0.400	2.4%	< 30	178.2%	174.0%	50 - 150	Q1
Spirotetramat	0.000	0.403	0.383	0.400	5.0%	< 30	100.8%	95.8%	50 - 150	
Spiroxamine	0.009	0.741	0.736	0.800	0.6%	< 30	91.5%	90.9%	50 - 150	
Tebuconazol	0.000	0.875	0.841	0.800	3.9%	< 30	109.4%	105.2%	50 - 150	
Thiadoprid	0.001	0.404	0.396	0.400	2.0%	< 30	100.7%	98.7%	50 - 150	
Thiamethoxam	0.000	0.437	0.452	0.400	3.4%	< 30	109.1%	113.0%	50 - 150	
Trifloxystrobin	0.000	0.438	0.442	0.400	0.9%	< 30	109.5%	110.5%	50 - 150	



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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.