



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



Report Number: 20-008178/D15.R01
Report Date: 12/08/2020
ORELAP#: OR100028
Purchase Order:
Received: 08/04/20 13:54

This is an amended version of report# 20-008178/D15.R00.
Reason: Updated Customer information.

Customer: Treehouse Biotech
Product identity: E2-BSHE-CON-RFS-20212-A
Client/Metric ID: .
Laboratory ID: 20-008178-0002

Summary

Potency:

Analyte	Result (%)	● CBD ● CBC ● CBN ● CBG ● CBDV ● CBL		
CBD	84.4		CBD-Total	84.4%
CBC	2.06			
CBN	1.32		THC-Total	<LOQ
CBG†	0.872			
CBDV†	0.520		(Reported in percent of total sample)	
CBL†	0.153			

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

Analyte	Result (mg/kg)	Limits (mg/kg)	Status
Ethoprophos	0.14	0.20	pass

Terpenes:

Analyte	Percent by weight	Percent of Total	Analyte	Percent by weight	Percent of Total
α-Bisabolol†	0.173	83.57%	(-)-Guaiaol†	0.0337	16.28%
Total Terpenes†	0.207	100.00%			

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.



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503-254-1794



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Customer: Treehouse Biotech

Product identity: E2-BSHE-CON-RFS-20212-A
Client/Metric ID: .
Sample Date:
Laboratory ID: 20-008178-0002
Temp: 14 °C
Relinquished by: Brian Ramos

Sample Results

Potency	Method J AOAC 2015 V98-6 (mod)			Batch: 2006532	Analyze: 8/7/20 9:59:00 PM
Analyte	As Received	Dry weight	LOQ	Notes	
CBC	2.06		0.0965		● CBD ● CBC ● CBN ● CBG ● CBDV ● CBL
CBC-A†	< LOQ		0.0965		
CBC-Total†	2.06		0.181		
CBD	84.4		0.965		
CBD-A	< LOQ		0.0965		
CBD-Total	84.4		1.05		
CBDV†	0.520		0.0965		
CBDV-A†	< LOQ		0.0965		
CBDV-Total†	0.520		0.180		
CBG†	0.872		0.0965		
CBG-A†	< LOQ		0.0965		
CBG-Total	0.872		0.180		
CBL†	0.153		0.0965		
CBN	1.32		0.0965		
Δ8-THC†	< LOQ		0.0965		
Δ9-THC	< LOQ		0.0965		
THC-A	< LOQ		0.0965		
THC-Total	< LOQ		0.181		
THCV†	< LOQ		0.0965		
THCV-A†	< LOQ		0.0965		
THCV-Total†	< LOQ		0.180		
Total Cannabinoids†	89.3				

Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
E.coli	< LOQ		cfu/g	10	2006441	08/08/20	AOAC 991.14 (Petrifilm)	X
Total Coliforms	< LOQ		cfu/g	10	2006441	08/08/20	AOAC 991.14 (Petrifilm)	X
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2006442	08/08/20	AOAC 2014.05 (RAPID)	X
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2006442	08/08/20	AOAC 2014.05 (RAPID)	X



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Solvents		Method EPA5021A				Units µg/g	Batch 2006438	Analyze 08/05/20 06:11 PM			
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		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 2006529	Analyze 08/10/20 10:17 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	0.14	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							

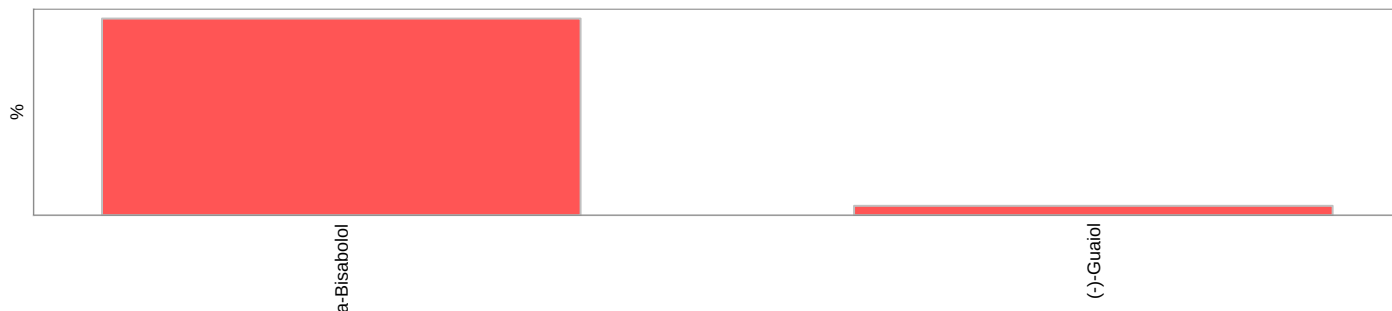


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Terpenes				Method J AOAC 2015 V98-6	Units %	Batch 2006439	Analyze 08/06/20 07:17 AM		
Analyte	Result	LOQ	% of Total	Notes	Analyte	Result	LOQ	% of Total	Notes
a-Bisabolol [†]	0.173	0.020	83.57%		(-)-Guaiol [†]	0.0337	0.020	16.28%	
(-)-a-Terpineol [†]	< LOQ	0.020	0.00%		(-)-caryophyllene oxide [†]	< LOQ	0.020	0.00%	
(-)-Isopulegol [†]	< LOQ	0.020	0.00%		(-)-β-Pinene [†]	< LOQ	0.020	0.00%	
(+)-Borneol [†]	< LOQ	0.020	0.00%		(+)-Cedrol [†]	< LOQ	0.020	0.00%	
(+)-fenchol [†]	< LOQ	0.020	0.00%		(+)-Pulegone [†]	< LOQ	0.020	0.00%	
(±)-Camphor [†]	< LOQ	0.020	0.00%		(±)-cis-Nerolidol [†]	< LOQ	0.020	0.00%	
(±)-fenchone [†]	< LOQ	0.020	0.00%		(±)-trans-Nerolidol [†]	< LOQ	0.020	0.00%	
(R)-(+)-Limonene [†]	< LOQ	0.020	0.00%		a-cedrene [†]	< LOQ	0.020	0.00%	
a-phellandrene [†]	< LOQ	0.020	0.00%		a-pinene [†]	< LOQ	0.020	0.00%	
a-Terpinene [†]	< LOQ	0.020	0.00%		Camphene [†]	< LOQ	0.020	0.00%	
cis-β-Ocimene [†]	< LOQ	0.006	0.00%		d-3-Carene [†]	< LOQ	0.020	0.00%	
Eucalyptol [†]	< LOQ	0.020	0.00%		farnesene [†]	< LOQ	0.020	0.00%	
gamma-Terpinene [†]	< LOQ	0.020	0.00%		Geraniol [†]	< LOQ	0.020	0.00%	
Geranyl acetate [†]	< LOQ	0.020	0.00%		Humulene [†]	< LOQ	0.020	0.00%	
Isoborneol [†]	< LOQ	0.020	0.00%		Linalool [†]	< LOQ	0.020	0.00%	
Menthol [†]	< LOQ	0.020	0.00%		nerol [†]	< LOQ	0.020	0.00%	
p-Cymene [†]	< LOQ	0.020	0.00%		Sabinene [†]	< LOQ	0.020	0.00%	
Sabinene hydrate [†]	< LOQ	0.020	0.00%		β-Caryophyllene [†]	< LOQ	0.020	0.00%	
β-Myrcene [†]	< LOQ	0.020	0.00%		Terpinolene [†]	< LOQ	0.020	0.00%	
trans-β-Ocimene [†]	< LOQ	0.013	0.00%		valencene [†]	< LOQ	0.020	0.00%	
Total Terpenes	0.207								



Individual Analyses

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Glyphosate [†]	< LOQ		mg/kg	0.0500	2006545	08/10/20	QuPPE-method, EURL-SR	

Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Arsenic	< LOQ		mg/kg	0.0585	2006497	08/07/20	AOAC 2013.06 (mod.)	X
Cadmium	< LOQ		mg/kg	0.0585	2006497	08/07/20	AOAC 2013.06 (mod.)	X
Lead	< LOQ		mg/kg	0.0585	2006497	08/07/20	AOAC 2013.06 (mod.)	X
Mercury	< LOQ		mg/kg	0.0293	2006497	08/07/20	AOAC 2013.06 (mod.)	X



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Mycotoxins

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Aflatoxin B1 [†]	< LOQ		µg/kg	5.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Aflatoxin B2 [†]	< LOQ		µg/kg	5.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Aflatoxin G1 [†]	< LOQ		µg/kg	5.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Aflatoxin G2 [†]	< LOQ		µg/kg	5.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Deoxynivalenol [†]	< LOQ		µg/kg	200	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Fumonisin B1 [†]	< LOQ		µg/kg	200	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Fumonisin B2 [†]	< LOQ		µg/kg	200	2006513	08/07/20	AOAC 2007.01 & EN 15662	
HT2-Toxin [†]	< LOQ		µg/kg	40.0	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Nivalenol [†]	< LOQ		µg/kg	400	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Ochratoxin A [†]	< LOQ		µg/kg	5.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Ochratoxin B [†]	< LOQ		µg/kg	2.00	2006513	08/07/20	AOAC 2007.01 & EN 15662	
T2-Toxin [†]	< LOQ		µg/kg	20.0	2006513	08/07/20	AOAC 2007.01 & EN 15662	
Zearalenone [†]	< LOQ		µg/kg	200	2006513	08/07/20	AOAC 2007.01 & EN 15662	



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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

µg/kg = Micrograms per kilogram = parts per billion (ppb)

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

% = Percentage of sample

% wt = µg/g divided by 10,000

Glossary of Qualifiers

X: Not ORELAP accredited.

Approved Signatory

Derrick Tanner
General Manager



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Hemp / Cannabis Usable / Extract

Chain of Custody Record

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

KLERSUNEXTRACT 20-008178



Klersun Extractions

Company: Klersun LLC Contact: Jason Martin Street: 18224 SW 100th Ct City: Tualatin State: OR Zip: 97062 ☒ Email Results: Jason@klersun.com ryan.sholes@klersun.com Ph: (503) 401-8059 ☐ Fx Results: () Billing (if different):				Analysis Requested										PO Number: Project Number: Project Name: Custom Reporting: Report to State - ☐ METRC or ☐ Other: Turnaround time: ☒ Standard ☐ Rush * ☐ 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:	Sample Type †	Weight (Units)	Comments/Metrc ID
1	DIW-FSHE-CON-WIP-20211-A	8/4	9:30			✓										5g	
2	E2-BSHE-CON-RFS-20212-A	8/4	9:30	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
3	E2-BSHE-CON-RFS-20216-A	8/4	9:30	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
4	E2-BSHE-CON-RFS-20213-A	8/4	9:30	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
5	E2-BSHE-CON-RFS-20211-A	8/4	11:00	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
6	E2-BSHE-CON-RFS-20203-A	8/4	11:00	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
7	E2-BSHE-CON-RFS-20215-A	8/4	11:00	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
8	T1-TERP-CON-WIP-20190-A	8/4	11:00			✓			✓							5G	
9	E2-BSHE-CON-RFS-20214-A	8/4	11:00	✓		✓	✓		✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
10	DIW-FSD-CON-WIP-20212-A	8/4	11:00			✓										5g	
11	DIW-FSHE-CON-WIP-20216-A	8/4	11:00			✓										5g	
Relinquished By:				Date	Time	Received By:				Date	Time	Lab Use Only:					
Summer				8/4/20	11AM	[Signature]				8.4.20	1200	☐ Shipped Via: _____ or ☐ Client drop Evidence of cooling: ☐ Yes ☐ No - Temp (°C): 13.6c Sample in good condition: ☐ Yes ☐ No ☐ Cash ☐ Check ☐ CC ☐ Net: _____ Prelog storage: _____					
[Signature]				8.4.20	1354	[Signature]				8/4/20	1354						

† - 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
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Page 1 of 3
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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: Klersun LLC Contact: Jason Martin Street: 18224 SW 100th Ct City: Tualatin State: OR Zip: 97062 ☒ Email Results: Jason@klersun.com ryan.sholes@klersun.com Ph: (520) 401-8059 ☐ Fx Results: () Billing (if different):				Analysis Requested										PO Number: _____ Project Number: _____ Project Name: _____ Custom Reporting: _____ Report to State - ☐ METRC or ☐ Other: _____ Turnaround time: ☒ Standard ☒ Rush * ☐ 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:	Sample Type †	Weight (Units)	Comments/Metrc ID
12	DIW-FSHE-CON-WIP-20210-A	8/4	9:30			✓										5g	
13	BSS-FSHD-BSHE-CON-RFS-20212-A	8/4	9:30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
14	PX-19246-NDT	8/4	9:30	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		10g	GLYPHOSATE
Relinquished By: <i>Summer</i>				Date: 8/4/10	Time: 11AM	Received By: <i>[Signature]</i>				Date: 8.4.20	Time: 1200	Lab Use Only: ☐ Shipped Via: _____ or ☐ Client drop Evidence of cooling: ☐ Yes ☐ No - Temp (°C): 13.6 Sample in good condition: ☐ Yes ☐ No ☐ Cash ☐ Check ☐ CC ☐ Net: _____ Prelog storage: _____					
<i>[Signature]</i>				8.4.20	1354	<i>[Signature]</i>				8/4/20	1354						

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

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Page 2 of 3
www.columbialaboratories.com



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

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

PRICING AND CHARGES

Prices to be charged for work performed for CUSTOMER are those currently published in the Columbia Laboratories (herein referred to as "the LAB". Standard pricing applies unless otherwise agreed in writing by the CUSTOMER and the LAB. CUSTOMER must notify the LAB of price quotation at the time of the transfer of sample(s) to the LAB. Any cancellation of testing requirements will result in charges being assessed on all testing completed prior to the notice of cancellation. Unless otherwise agreed upon, samples containing hazardous material will be shipped back to client at their expense, or disposed of at a certain fee, waste category dependent. New accounts are accepted with full payment in advance by cash, check, Visa or Mastercard. A credit line may be established with an approved credit application.

DELIVERY AND LIABILITY LIMITATIONS

The specific format of the goods will be defined by CUSTOMER to the LAB upon delivery of the sample(s) to the LAB. The LAB will analyze samples provided by CUSTOMER as requested by CUSTOMER in accordance with the procedures documented in the Quality Assurance Plan (QAP). Samples are retained for 30 days after receipt. If additional time is desired, then a written request is required, and an additional monthly fee will apply.

CONFIDENTIALITY

The LAB will treat all information regarding work performed for CUSTOMER as proprietary and confidential. No CUSTOMER information will be released to third persons without the written request of the CUSTOMER.

LIMITATION OF LIABILITY AND WARRANTY

The LAB gives no warranty, express or implied, or of fitness for a particular purpose, in connection with its analytical testing or reporting. Any liability of the LAB to CUSTOMER or any third party shall be limited to the cost of analysis charged to CUSTOMER.

PAST DUE ACCOUNTS

Credit line account are payable within 30 days. Accounts that are 60 days past due will incur 1 $\frac{1}{2}$ % per month on all past due sums until paid in full and will automatically default to cash on delivery (COD). Reports will not be released unless payment on past and current invoices are received. Customer agrees to pay the interest as a service charge and all the LAB's collection costs, including reasonable attorney fees.

EXPERT TESTIMONY AND COURT APPEARANCES

In the event CUSTOMER requires the further written opinion or testimony of any employee of the LAB, including response to a subpoena issued by CUSTOMER or any third person, CUSTOMER agrees to pay such additional fees and expenses as may be reasonably assessed by the LAB.

ALTERNATIVE DISPUTE RESOLUTION (ADR)

Any disputes arising out of this Agreement or the analytical testing or reporting by the LAB shall be settled through mediation and/or arbitration rather than litigation, and the cost of the ADR shall be borne equally by both parties.

APPLICABLE LAW

Legal matters arising from work performed by the LAB for CUSTOMER will be construed and interpreted in accordance with the laws for the state of Oregon. When sending, transferring, or submitting samples, the CUSTOMER assumes full responsibility for complying with all applicable state and federal laws

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

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Page 3 of 3
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12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 20-008178/D15.R01
Report Date: 12/08/2020
ORELAP#: OR100028
Purchase Order:
Received: 08/04/20 13:54

Laboratory Quality Control Results									
EPA 5021				Batch ID: 2006438					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		1040	1,190	µg/g	87.4	70 - 130	
Isobutane	ND	< 200		1240	1,520	µg/g	81.6	70 - 130	
Butane	ND	< 200		1220	1,520	µg/g	80.3	70 - 130	
2,2-Dimethylpropane	ND	< 200		1540	1,910	µg/g	80.6	70 - 130	
Methanol	ND	< 200		2860	3,240	µg/g	88.3	70 - 130	
Ethylene Oxide	ND	< 30		94.7	117	µg/g	80.9	70 - 130	
2-Methylbutane	ND	< 200		2950	3,220	µg/g	91.6	70 - 130	
Pentane	ND	< 200		2930	3,210	µg/g	91.3	70 - 130	
Ethanol	ND	< 200		2780	3,220	µg/g	86.3	70 - 130	
Ethyl Ether	ND	< 200		2910	3,260	µg/g	89.3	70 - 130	
2,2-Dimethylbutane	ND	< 30		371	431	µg/g	86.1	70 - 130	
Acetone	ND	< 200		3020	3,210	µg/g	94.1	70 - 130	
2-Propanol	ND	< 200		2820	3,180	µg/g	88.7	70 - 130	
Acetonitrile	ND	< 100		850	983	µg/g	86.5	70 - 130	
2,3-Dimethylbutane	ND	< 30		283	373	µg/g	75.9	70 - 130	
Dichloromethane	ND	< 200		893	1,010	µg/g	88.4	70 - 130	
2-Methylpentane	ND	< 30		286	330	µg/g	86.7	70 - 130	
3-Methylpentane	ND	< 30		294	342	µg/g	86.0	70 - 130	
Hexane	ND	< 30		276	321	µg/g	86.0	70 - 130	
Ethyl acetate	ND	< 200		2920	3,260	µg/g	89.6	70 - 130	
2-Butanol	ND	< 200		2720	3,210	µg/g	84.7	70 - 130	
Tetrahydrofuran	ND	< 100		841	982	µg/g	85.6	70 - 130	
Cyclohexane	ND	< 200		2880	3,210	µg/g	89.7	70 - 130	
Benzene	ND	< 1		46.4	55.4	µg/g	83.8	70 - 130	
Isopropyl Acetate	ND	< 200		2940	3,200	µg/g	91.9	70 - 130	
Heptane	ND	< 200		2870	3,210	µg/g	89.4	70 - 130	
1,4-Dioxane	ND	< 100		827	1,010	µg/g	81.9	70 - 130	
2-Ethoxyethanol	ND	< 30		493	681	µg/g	72.4	70 - 130	
Ethylene Glycol	ND	< 200		864	1,170	µg/g	73.8	70 - 130	
Toluene	ND	< 200		875	980	µg/g	89.3	70 - 130	
Ethylbenzene	ND	< 200		1760	1,970	µg/g	89.3	70 - 130	
m,p-Xylene	ND	< 200		1750	1,950	µg/g	89.7	70 - 130	
o-Xylene	ND	< 200		1810	1,940	µg/g	93.3	70 - 130	
Cumene	ND	< 30		309	336	µg/g	92.0	70 - 130	



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



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QC - Sample Duplicate

Sample ID: 20-007988-0001

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
* Screening only
Q1 Quality Control result biased high. Only non detect samples reported.

Units of Measure:

µg/g- Microgram per gram or ppm
mg/Kg - Milligrams per Kilogram
Aw- Water Activity unit



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



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Terpenes Quality Control Results

Method Reference: EPA 5035				Batch ID: 2006439					
Method Blank				Laboratory Control Sample					
Analyte	Result	Blank	Notes	Result	LCS	Units	LCS % Rec	Limits	Notes
a-pinene	<LOQ	< 200		454	500	µg/g	91	70 - 130	
Camphene	<LOQ	< 200		355	500	µg/g	71	70 - 130	
Sabinene	<LOQ	< 200		463	500	µg/g	93	70 - 130	
b-Pinene	<LOQ	< 200		443	500	µg/g	89	70 - 130	
b-Myrcene	<LOQ	< 200		390	500	µg/g	78	70 - 130	
a-phellandrene	<LOQ	< 200		368	500	µg/g	74	70 - 130	
d-3-Carene	<LOQ	< 200		473	500	µg/g	94.6	70 - 130	
a-Terpinene	<LOQ	< 200		438	500	µg/g	88	70 - 130	
p-Cymene	<LOQ	< 200		380	500	µg/g	76	70 - 130	
D-Limonene	<LOQ	< 200		441	500	µg/g	88	70 - 130	
Eucalyptol	<LOQ	< 200		435	500	µg/g	87	70 - 130	
b-cis-Ocimene	<LOQ	< 66.7		117	167	µg/g	70.2	70 - 130	
b-trans-Ocimene	<LOQ	< 133		237	333	µg/g	71.0	70 - 130	
g-Terpinene	<LOQ	< 200		423	500	µg/g	85	70 - 130	
Sabinene_Hydrate	<LOQ	< 200		450	500	µg/g	90	70 - 130	
Terpinolene	<LOQ	< 200		419	500	µg/g	84	70 - 130	
D-Fenchone	<LOQ	< 200		477	500	µg/g	95	70 - 130	
Linalool	<LOQ	< 200		393	500	µg/g	79	70 - 130	
Fenchol	<LOQ	< 200		462	500	µg/g	92	70 - 130	
Camphor	<LOQ	< 200		429	500	µg/g	86	70 - 130	
Isopulego	<LOQ	< 200		428	500	µg/g	86	70 - 130	
Isoborneol	<LOQ	< 200		449	500	µg/g	90	70 - 130	
Borneol	<LOQ	< 200		470	500	µg/g	94	70 - 130	
DL-Menthol	<LOQ	< 200		446	500	µg/g	89	70 - 130	
Terpineol	<LOQ	< 200		444	500	µg/g	89	70 - 130	
Nerol	<LOQ	< 200		428	500	µg/g	86	70 - 130	
Pulegone	<LOQ	< 200		527	500	µg/g	105	70 - 130	
Gereniol	<LOQ	< 200		455	500	µg/g	91	70 - 130	
Geranyl_Acetate	<LOQ	< 200		420	500	µg/g	84	70 - 130	
a-Cedrene	<LOQ	< 200		458	500	µg/g	92	70 - 130	
b-Caryophyllene	<LOQ	< 200		474	500	µg/g	95	70 - 130	
a-Humulene	<LOQ	< 200		491	500	µg/g	98	70 - 130	
Valenene	<LOQ	< 200		516	500	µg/g	103	70 - 130	
cis-Nerolidol	<LOQ	< 200		531	500	µg/g	106	70 - 130	
a-Farnesene	<LOQ	< 200		401	500	µg/g	80	70 - 130	
trans-Nerolidol	<LOQ	< 200		493	500	µg/g	99	70 - 130	
Caryophyllene_Oxide	<LOQ	< 200		553	500	µg/g	111	70 - 130	
Guaiol	<LOQ	< 200		464	500	µg/g	93	70 - 130	
Cedrol	<LOQ	< 200		467	500	µg/g	93	70 - 130	
a-Bisabolol	<LOQ	< 200		467	500	µg/g	93	70 - 130	



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



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Terpenes Quality Control Results

Method Reference: EPA 5035				Batch ID: 2006439				
Sample/Sample Duplicate				Sample ID: 20-008062-0001				
Analyte	Result	Org. Result	LOQ	Units	RPD, %	LIMIT, %	Notes	
a-pinene	1300	1310	200	µg/g	0.8	< 20		
Camphene	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Sabinene	<LOQ	<LOQ	200	µg/g	0.0	< 20		
b-Pinene	1600	1650	200	µg/g	3.08	< 20		
b-Myrcene	7200	7270	200	µg/g	0.97	< 20		
a-phellandrene	999	1010	200	µg/g	1.10	< 20		
d-3-Carene	825	851	200	µg/g	3.10	< 20		
a-Terpinene	857	792	200	µg/g	7.88	< 20		
p-Cymene	<LOQ	<LOQ	200	µg/g	0.0	< 20		
D-Limonene	4180	4120	200	µg/g	1.45	< 20		
Eucalyptol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
b-cis-Ocimene	<LOQ	<LOQ	66.7	µg/g	0.0	< 20		
b-trans-Ocimene	1190	1240	133	µg/g	4.12	< 20		
g-Terpinene	472	425	200	µg/g	10.5	< 20		
Sabinene Hydrate	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Terpinolene	29600	30000	200	µg/g	1.34	< 20		
D-Fenchone	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Linalool	996	1050	200	µg/g	5.28	< 20		
Fenchol	266	273	200	µg/g	2.60	< 20		
Camphor	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Isopulego	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Isoborneol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Borneol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
DL-Menthol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Terpineol	593	604	200	µg/g	1.84	< 20		
Nerol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Pulegone	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Gereniol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
Geranyl_Acetate	<LOQ	<LOQ	200	µg/g	0.0	< 20		
a-Cedrene	<LOQ	<LOQ	200	µg/g	0.0	< 20		
b-Caryophyllene	3620	3620	200	µg/g	0.0	< 20		
a-Humulene	1230	1230	200	µg/g	0.0	< 20		
Valenene	<LOQ	<LOQ	200	µg/g	0.0	< 20		
cis-Nerolidol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
a-Farnesene	3410	3390	200	µg/g	0.59	< 20		
trans-Nerolidol	238	236	200	µg/g	0.84	< 20		
Caryophyllene_Oxide	308	324	200	µg/g	5.06	< 20		
Guaiol	1080	1080	200	µg/g	0.0	< 20		
Cedrol	<LOQ	<LOQ	200	µg/g	0.0	< 20		
a-Bisabolol	1430	1430	200	µg/g	0.0	< 20		



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



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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: 2006529				
Method Blank		Laboratory Control Sample						
Analyte	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS % Rec	Limits	Notes
Accephate	0.033	< 0.200		0.932	1.000	93.2	69.6 - 125	
Acequinocyl	0.313	< 1.000		3.183	4.000	79.6	78.7 - 123	
Acetamiprid	0.000	< 0.100		0.378	0.400	94.6	83.5 - 116	
Aldicarb	0.032	< 0.200		0.761	0.800	95.1	77.5 - 122	
Abamectin	0.000	< 0.288		0.920	1.000	92.0	70.6 - 131	
Azoxystrobin	0.021	< 0.100		0.372	0.400	93.0	71.5 - 130	
Bifenazate	0.010	< 0.100		0.377	0.400	94.3	75.8 - 121	
Bifenthrin	0.071	< 0.100		0.379	0.400	94.7	78.0 - 125	
Boscalid	0.000	< 0.100		0.699	0.800	87.4	70.5 - 127	
Carbaryl	0.010	< 0.100		0.382	0.400	95.4	78.5 - 121	
Carbofuran	0.018	< 0.100		0.372	0.400	93.1	81.2 - 119	
Chlorantraniliprol	0.009	< 0.100		0.381	0.400	95.3	71.5 - 133	
Chlorfenapyr	0.000	< 1.000		1.873	2.000	93.6	69.2 - 128	
Chlorpyrifos	0.012	< 0.100		0.422	0.400	105.5	72.3 - 118	
Clofentezine	0.019	< 0.100		0.335	0.400	83.8	68.3 - 127	
Cyfluthrin	0.003	< 1.000		1.831	2.000	91.6	72.7 - 134	
Cypermethrin	0.017	< 1.000		1.863	2.000	93.1	80.0 - 123	
Daminozide	0.094	< 1.000		1.784	2.000	89.2	75.9 - 119	
Diazinon	0.010	< 0.100		0.370	0.400	92.4	77.7 - 120	
Dichlorvos	0.045	< 0.500		1.966	2.000	98.3	77.2 - 119	
Dimethoat	0.017	< 0.100		0.374	0.400	93.5	80.3 - 118	
Ethoprophos	0.029	< 0.100		0.367	0.400	91.6	79.4 - 120	
Etofenprox	0.030	< 0.100		0.748	0.800	93.5	82.0 - 116	
Etoxazol	0.018	< 0.100		0.385	0.400	96.3	76.1 - 122	
Fenoxycarb	0.018	< 0.100		0.370	0.400	92.6	80.7 - 119	
Fenpyroximat	0.048	< 0.100		0.773	0.800	96.6	83.8 - 118	
Fipronil	0.051	< 0.100		0.815	0.800	101.8	79.4 - 123	
Flonicamid	0.000	< 0.400		0.936	1.000	93.6	78.5 - 121	
Fludioxonil	0.002	< 0.100		0.781	0.800	97.7	71.5 - 133	
Hexythiazox	0.038	< 0.400		1.000	1.000	100.0	83.3 - 119	
Imazalil	0.007	< 0.100		0.396	0.400	99.1	75.1 - 130	
Imidacloprid	0.044	< 0.200		0.748	0.800	93.5	74.9 - 122	
Kresoxim-Methyl	0.019	< 0.100		0.790	0.800	98.8	75.1 - 127	
Malathion	0.014	< 0.100		0.388	0.400	96.9	75.2 - 123	
Metaxalyl	0.013	< 0.100		0.369	0.400	92.1	73.4 - 125	
Methiocarb	0.007	< 0.100		0.366	0.400	91.4	76.5 - 124	
Methomyl	0.032	< 0.200		0.732	0.800	91.5	75.4 - 122	
MGK 264	0.000	< 0.100		0.374	0.400	93.5	80.7 - 122	
Myclobutanil	0.006	< 0.100		0.378	0.400	94.5	74.2 - 125	
Naled	0.044	< 0.200		0.923	1.000	92.3	72.4 - 127	
Oxamyl	0.157	< 0.400		1.780	2.000	89.0	75.1 - 123	
Paclobutrazol	0.000	< 0.200		0.712	0.800	89.0	76.5 - 121	
Parathion Methyl	0.159	< 0.200		0.890	0.800	111.2	69.5 - 129	
Permethrin	0.008	< 0.100		0.367	0.400	91.8	79.1 - 120	
Phosmet	0.011	< 0.100		0.379	0.400	94.9	76.1 - 123	
Piperonyl butoxide	0.037	< 1.000		1.927	2.000	96.3	84.0 - 122	
Prallethrin	0.042	< 0.200		0.405	0.400	101.3	71.2 - 132	
Propiconazole	0.045	< 0.200		0.781	0.800	97.6	79.8 - 119	
Propoxur	0.018	< 0.100		0.365	0.400	91.2	80.6 - 116	
Pyrethrins	0.139	< 0.500		0.400	0.413	96.8	80.7 - 150	
Pyridaben	0.000	< 0.100		0.405	0.400	101.2	78.7 - 133	
Spinosad	0.000	< 0.100		0.432	0.388	111.4	76.3 - 138	
Spiromesifen	0.000	< 0.100		0.359	0.400	89.7	76.2 - 122	
Spirotetramat	0.022	< 0.100		0.374	0.400	93.6	79.0 - 121	
Spiroxamine	0.024	< 0.100		0.773	0.800	96.6	75.3 - 124	
Tebuconazol	0.023	< 0.200		0.733	0.800	91.6	77.7 - 122	
Thiacloprid	0.016	< 0.100		0.363	0.400	90.8	76.8 - 121	
Thiamethoxam	0.031	< 0.100		0.356	0.400	89.1	70.0 - 129	
Trifloxystrobin	0.021	< 0.100		0.376	0.400	94.1	81.2 - 118	



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Laboratory Pesticide Quality Control Results

AOAC 2007.1 & EN 15662				Units: mg/Kg				Batch ID: 2006529					
Matrix Spike/Matrix Spike Duplicate Recoveries										Sample ID: 20-008192-0002			
Analyte	Result	MS Res	MSD Res	Spike	RPD%	Limit	MS % Rec	MSD % Rec	Limits	Notes			
Acephate	0.017	0.922	0.991	1.000	7.3	< 30	90.5	97.4	50 - 150	R			
Acequinocyl	0.130	3.923	5.709	4.000	37.1	< 30	94.8	139.5	50 - 150				
Acetamiprid	0.019	0.364	0.379	0.400	4.1	< 30	86.2	90.0	50 - 150				
Aldicarb	0.000	0.720	0.748	0.800	3.7	< 30	90.0	93.4	50 - 150	Q1			
Abamectin	0.000	1.214	1.178	1.000	3.0	< 30	121.4	117.8	50 - 150				
Azoxystrobin	0.017	0.400	0.421	0.400	5.3	< 30	95.6	101.0	50 - 150				
Bifenazate	0.008	0.370	0.390	0.400	5.3	< 30	90.4	95.4	50 - 150	Q1			
Bifenthrin	0.019	0.616	0.680	0.400	9.9	< 30	149.4	165.4	50 - 150				
Boscalid	0.000	0.683	0.768	0.800	11.7	< 30	85.4	96.0	50 - 150				
Carbaryl	0.009	0.369	0.384	0.400	4.0	< 30	90.0	93.7	50 - 150	Q			
Carbofuran	0.015	0.360	0.380	0.400	5.4	< 30	86.2	91.3	50 - 150				
Chlorantraniliprol	0.008	0.324	0.380	0.400	15.9	< 30	79.1	93.0	50 - 150				
Chlorfenapyr	0.000	2.041	1.722	2.000	17.0	< 30	102.0	86.1	50 - 150	Q			
Chlorpyrifos	0.000	0.142	0.145	0.400	1.7	< 30	35.5	36.1	50 - 150				
Clofentezine	0.019	0.374	0.393	0.400	4.9	< 30	88.8	93.5	50 - 150				
Cyfluthrin	0.020	1.876	1.904	2.000	1.5	< 30	92.8	94.2	30 - 150				
Cypermethrin	0.008	2.069	2.190	2.000	5.7	< 30	103.0	109.1	50 - 150				
Daminozide	0.081	1.736	1.888	2.000	8.3	< 30	82.8	90.3	30 - 150				
Diazinon	0.009	0.364	0.383	0.400	5.1	< 30	88.8	93.6	50 - 150				
Dichlorvos	0.046	1.883	1.917	2.000	1.8	< 30	91.9	93.6	50 - 150				
Dimethoat	0.015	0.361	0.382	0.400	5.9	< 30	86.3	91.7	50 - 150				
Ethoprophos	0.025	0.329	0.338	0.400	2.9	< 30	76.0	78.5	50 - 150				
Etofenprox	0.028	0.817	0.911	0.800	10.8	< 30	98.6	110.3	50 - 150				
Etoxazol	0.008	0.405	0.423	0.400	4.4	< 30	99.1	103.6	50 - 150				
Fenoxycarb	0.017	0.362	0.384	0.400	5.8	< 30	86.3	91.7	50 - 150				
Fenpyroximat	0.000	0.773	0.798	0.800	3.1	< 30	96.7	99.7	50 - 150				
Fipronil	0.040	0.824	0.816	0.800	0.9	< 30	98.0	97.1	50 - 150				
Flonicamid	0.063	0.947	0.963	1.000	1.7	< 30	88.4	90.0	50 - 150				
Fludioxonil	0.000	0.683	0.755	0.800	10.1	< 30	85.3	94.4	50 - 150				
Hexythiazox	0.034	1.224	1.294	1.000	5.6	< 30	119.0	126.0	50 - 150				
Imazalil	0.007	0.367	0.374	0.400	2.1	< 30	90.0	91.9	50 - 150				
Imidacloprid	0.070	0.743	0.808	0.800	8.3	< 30	84.2	92.3	50 - 150				
Kresoxim-Methyl	0.018	0.756	0.755	0.800	0.0	< 30	92.2	92.2	50 - 150				
Malathion	0.013	0.390	0.408	0.400	4.5	< 30	94.1	98.6	50 - 150				
Metaxalyl	0.014	0.361	0.377	0.400	4.5	< 30	86.6	90.7	50 - 150				
Methiocarb	0.007	0.340	0.383	0.400	12.0	< 30	83.1	94.0	50 - 150				
Methomyl	0.028	0.695	0.741	0.800	6.4	< 30	83.3	89.1	50 - 150				
MGK 264	0.015	0.251	0.270	0.400	7.4	< 30	59.1	63.9	50 - 150				
Myclobutanil	0.006	0.345	0.368	0.400	6.5	< 30	84.8	90.6	50 - 150				
Naled	0.040	0.859	0.974	1.000	12.5	< 30	81.9	93.3	50 - 150				
Oxamyl	0.000	1.694	1.914	2.000	12.2	< 30	84.7	95.7	50 - 150				
Paclobutrazol	0.000	0.687	0.739	0.800	7.2	< 30	85.9	92.4	50 - 150				
Parathion Methyl	0.000	0.921	0.891	0.800	3.3	< 30	115.2	111.4	30 - 150				
Permethrin	0.022	0.502	0.520	0.400	3.6	< 30	119.9	124.4	50 - 150				
Phosmet	0.010	0.365	0.369	0.400	1.1	< 30	88.9	89.8	50 - 150				
Piperonyl butoxide	0.050	2.020	2.133	2.000	5.4	< 30	98.5	104.1	50 - 150				
Prallethrin	0.076	0.305	0.302	0.400	1.1	< 30	57.2	56.4	50 - 150				
Propiconazole	0.035	0.769	0.829	0.800	7.6	< 30	91.7	99.3	50 - 150				
Propoxur	0.015	0.347	0.374	0.400	7.4	< 30	83.2	89.8	50 - 150				
Pyrethrins	0.041	0.441	0.465	0.413	5.3	< 30	96.9	102.7	50 - 150				
Pyridaben	0.020	0.440	0.455	0.400	3.6	< 30	104.8	108.8	50 - 150				
Spinosad	0.000	0.407	0.426	0.388	4.6	< 30	104.9	109.9	50 - 150				
Spiromesifen	0.039	0.411	0.438	0.400	6.3	< 30	93.0	99.7	50 - 150				
Spirotetramat	0.020	0.356	0.372	0.400	4.2	< 30	84.1	87.9	50 - 150				
Spiroxamine	0.022	0.705	0.748	0.800	5.8	< 30	85.5	90.7	50 - 150				
Tebuconazol	0.020	0.683	0.740	0.800	8.0	< 30	82.9	90.0	50 - 150				
Thiacloprid	0.000	0.357	0.374	0.400	4.4	< 30	89.3	93.4	50 - 150				
Thiamethoxam	0.000	0.376	0.396	0.400	5.2	< 30	94.0	99.1	50 - 150				
Trifloxystrobin	0.019	0.366	0.383	0.400	3.2	< 30	86.6	90.8	50 - 150				



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Report Number: 20-008178/D15.R01
Report Date: 12/08/2020
ORELAP#: OR100028
Purchase Order:
Received: 08/04/20 13:54

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: 2006532										
Laboratory Control Sample										
Analyte	Result		Spike	Units	% Rec	Limits			Evaluation	Notes
CBDV-A	0.202		0.2	%	101	85.0 - 115			Acceptable	
CBDV	0.206		0.2	%	103	85.0 - 115			Acceptable	
CBD-A	0.206		0.2	%	103	85.0 - 115			Acceptable	
CBG-A	0.197		0.2	%	98.6	85.0 - 115			Acceptable	
CBG	0.205		0.2	%	102	85.0 - 115			Acceptable	
CBD	0.210		0.2	%	105	85.0 - 115			Acceptable	
THCV	0.200		0.2	%	100	85.0 - 115			Acceptable	
THCVA	0.186		0.2	%	93.1	85.0 - 115			Acceptable	
CBN	0.207		0.2	%	104	85.0 - 115			Acceptable	
THC	0.199		0.2	%	99.4	85.0 - 115			Acceptable	
D8THC	0.198		0.2	%	98.9	85.0 - 115			Acceptable	
CBL	0.183		0.2	%	91.6	85.0 - 115			Acceptable	
CBC	0.203		0.2	%	102	85.0 - 115			Acceptable	
THCA	0.183		0.2	%	91.3	85.0 - 115			Acceptable	
CBCA	0.183		0.2	%	91.7	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



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Laboratory Quality Control Results

J AOAC 2015 V98-6					Batch ID: 2006532			
Sample Duplicate			Sample ID: 20-008163-0001					
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBDV	1.08	1.04	0.1	%	3.28	< 20	Acceptable	
CBD-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBG-A	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBG	2.45	2.47	0.1	%	0.744	< 20	Acceptable	
CBD	48.5	47.8	0.1	%	1.43	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBN	2.07	2.05	0.1	%	0.895	< 20	Acceptable	
THC	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
D8THC	<LOQ	<LOQ	0.1	%	NA	< 20	Acceptable	
CBL	0.487	0.479	0.1	%	1.67	< 20	Acceptable	
CBC	4.81	4.77	0.1	%	0.891	< 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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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.