CBD FOR THE PEOPLE COMPLIANCE, PESTICIDES, SOLVENTS, MICROBES, AND CONTAMINANT TESTING FOR 2019 MASTER BATCH:



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



Job Number:	18-010557
Report Date:	11/26/2018
Report#:	18-010557-00
ORELAP#:	OR100028
Received:	11/20/18 11:01

Product identity:11-16-18-Organic Master BatchLaboratory ID:18-010557-0005

Summary
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Analyte	Result (%)			
CBD	5.03		CBD-Total	8.18%
CBD-A	3.59	CBD	L	
CBC <sup>†</sup>	0.353	CBD-A	THC-Total	0.197%
∆9-THC	0.197	CBC		
CBC-A <sup>†</sup>	0.122	<ul> <li>Δ9-THC</li> </ul>	(Reported in pe	rcent of total sample
CBG <sup>†</sup>	0.108	CBC-A		
		CBG		
		CBG		

# **Residual Solvents:**

All analytes passing and less than LOQ.	
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# **Pesticides:**

All analytes passing and less than LOQ.

# Microbiology:

Less than LOQ for all analytes.





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 18-010557

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 11/20/18 11:01

Product identity:11-16-18-Organic Master BatchClient/Metrc ID:3Sample Date:18-010557-0005Laboratory ID:18-010557-0005Relinquished by:Received By MailTemp:20.8 °CWeight Received:2 g

# **Sample Results**

Potency	Method J AOAC	C 2015 V98-	6	U	nits %	Batch 1807	402 Analyze 11/2	6/18 10:11 AM
Analyte	As	Dry LO	Q Note	es				
	Received	weight						
CBC <sup>†</sup>	0.353		0.100					CBD
CBC-A <sup>†</sup>	0.122		0.100					CBD-A
CBC-Total <sup>†</sup>	0.460		0.188					CBC
CBD	5.03		0.100					<ul> <li>Δ9-THC</li> </ul>
CBD-A	3.59		0.100					
CBD-Total	8.18		0.188					CBC-A
CBDV <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td>CBG</td></loq<>		0.100					CBG
CBDV-A <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
CBDV-Total <sup>†</sup>	<loq< td=""><td></td><td>0.187</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.187					
CBG <sup>†</sup>	0.108		0.100					
CBG-A <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
CBG-Total <sup>†</sup>	<loq< td=""><td></td><td>0.188</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.188					
CBL <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
CBN	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
$\Delta 8$ -THC <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
∆9-THC	0.197		0.100					
THC-A	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
THC-Total	0.197		0.187					
THCV <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
THCV-A <sup>†</sup>	<loq< td=""><td></td><td>0.100</td><td></td><td></td><td></td><td></td><td></td></loq<>		0.100					
THCV-Total <sup>†</sup>	< LOQ		0.187					
Microbiology								
Analyte	Resul	t Limit	s Units	LOQ	Batch	Analyze	Method	Notes
Salmonella spp.	Negat	ive	/g		1807371	11/22/18	AOAC RI 050701	
E. coli O157:H7	Negat		/g		1807382	11/21/18	AOAC RI 070801	





Solvents	Method	EPA5021A		Units µg/g Batch 18	807417	Analyz	<b>ze</b> 11/2	21/18 02:25 PM
Analyte	Result	Limits LOG	Status Notes	Analyte	Result	Limits	LOQ	Status Notes
1,4-Dioxane	< LOQ	380 10	0 pass	2-Butanol	< LOQ	5000	200	pass
2-Ethoxyethanol	< LOQ	160 30.	0 pass	2-Methylbutane	<loq< td=""><td></td><td>200</td><td></td></loq<>		200	
2-Methylpentane	< LOQ	30.	0	2-Propanol (IPA)	<loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<>	5000	200	pass
2,2-Dimethylbutane	< LOQ	60.	0	2,2-Dimethylpropane	<loq< td=""><td></td><td>2,800</td><td></td></loq<>		2,800	
2,3-Dimethylbutane	< LOQ	60.	0	3-Methylpentane	<loq< td=""><td></td><td>30.0</td><td></td></loq<>		30.0	
Acetone	<loq< td=""><td>5000 20</td><td>0 pass</td><td>Acetonitrile</td><td><loq< td=""><td>410</td><td>100</td><td>pass</td></loq<></td></loq<>	5000 20	0 pass	Acetonitrile	<loq< td=""><td>410</td><td>100</td><td>pass</td></loq<>	410	100	pass
Benzene	<loq< td=""><td>2.00 2.0</td><td>0 pass</td><td>Butanes (sum)</td><td><loq< td=""><td>5000</td><td>4,400</td><td>pass</td></loq<></td></loq<>	2.00 2.0	0 pass	Butanes (sum)	<loq< td=""><td>5000</td><td>4,400</td><td>pass</td></loq<>	5000	4,400	pass
Cyclohexane	<loq< td=""><td>3880 20</td><td>0 pass</td><td>Ethyl acetate</td><td><loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<></td></loq<>	3880 20	0 pass	Ethyl acetate	<loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<>	5000	200	pass
Ethyl benzene	<loq< td=""><td>20</td><td>0</td><td>Ethyl ether</td><td><loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<></td></loq<>	20	0	Ethyl ether	<loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<>	5000	200	pass
Ethylene glycol	<loq< td=""><td>620 20</td><td>0 pass</td><td>Ethylene oxide</td><td><loq< td=""><td>50.0</td><td>30.0</td><td>pass</td></loq<></td></loq<>	620 20	0 pass	Ethylene oxide	<loq< td=""><td>50.0</td><td>30.0</td><td>pass</td></loq<>	50.0	30.0	pass
Hexanes (sum)	<loq< td=""><td>290 21</td><td>0 pass</td><td>Isopropyl acetate</td><td><loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<></td></loq<>	290 21	0 pass	Isopropyl acetate	<loq< td=""><td>5000</td><td>200</td><td>pass</td></loq<>	5000	200	pass
Isopropylbenzene	<loq< td=""><td>70.0 30.</td><td>0 pass</td><td>m,p-Xylene</td><td><loq< td=""><td></td><td>200</td><td></td></loq<></td></loq<>	70.0 30.	0 pass	m,p-Xylene	<loq< td=""><td></td><td>200</td><td></td></loq<>		200	
Methanol	<loq< td=""><td>3000 20</td><td>0 pass</td><td>Methylene chloride</td><td><loq< td=""><td>600</td><td>200</td><td>pass</td></loq<></td></loq<>	3000 20	0 pass	Methylene chloride	<loq< td=""><td>600</td><td>200</td><td>pass</td></loq<>	600	200	pass
Methylpropane	<loq< td=""><td>2,20</td><td>0</td><td>n-Butane</td><td><loq< td=""><td></td><td>2,200</td><td></td></loq<></td></loq<>	2,20	0	n-Butane	<loq< td=""><td></td><td>2,200</td><td></td></loq<>		2,200	
n-Heptane	<loq< td=""><td>5000 20</td><td>0 pass</td><td>n-Hexane</td><td><loq< td=""><td></td><td>30.0</td><td></td></loq<></td></loq<>	5000 20	0 pass	n-Hexane	<loq< td=""><td></td><td>30.0</td><td></td></loq<>		30.0	
n-Pentane	<loq< td=""><td>20</td><td>0</td><td>o-Xylene</td><td><loq< td=""><td></td><td>200</td><td></td></loq<></td></loq<>	20	0	o-Xylene	<loq< td=""><td></td><td>200</td><td></td></loq<>		200	
Pentanes (sum)	<loq< td=""><td>5000 3,20</td><td>0 pass</td><td>Propane</td><td><loq< td=""><td>5000</td><td>1,700</td><td>pass</td></loq<></td></loq<>	5000 3,20	0 pass	Propane	<loq< td=""><td>5000</td><td>1,700</td><td>pass</td></loq<>	5000	1,700	pass
Tetrahydrofuran	<loq< td=""><td>720 10</td><td>0 pass</td><td>Toluene</td><td><loq< td=""><td>890</td><td>100</td><td>pass</td></loq<></td></loq<>	720 10	0 pass	Toluene	<loq< td=""><td>890</td><td>100</td><td>pass</td></loq<>	890	100	pass
Total Xylenes	< LOQ	40	0	Total Xylenes and Ethyl	<loq< td=""><td>2170</td><td>600</td><td>pass</td></loq<>	2170	600	pass





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 18-010557

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 11/26/2018

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 18-010557-00

 ORELAP#:
 OR100028

**Received:** 

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Pesticides	Method	AOAC	2007.01 & EN	15662 (mod)	Units mg/kg	Batch 1	807443	Analy	<b>ze</b> 11/24/18(	08:32 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	0.100 pass		Carbaryl		< LOQ	0.20	0.100 pass	
Carbofuran	< LOQ	0.20	0.100 pass		Chlorantranilip	role	< 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 (incl		< 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< td=""><td>0.40</td><td>0.200 pass</td><td></td><td>Hexythiazox</td><td></td><td>&lt; LOQ</td><td>1.0</td><td>0.400 pass</td><td></td></loq<>	0.40	0.200 pass		Hexythiazox		< LOQ	1.0	0.400 pass	
Imazalil	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Imidacloprid</td><td></td><td>&lt; LOQ</td><td>0.40</td><td>0.200 pass</td><td></td></loq<>	0.20	0.100 pass		Imidacloprid		< LOQ	0.40	0.200 pass	
Kresoxim-methyl	<loq< td=""><td>0.40</td><td>0.200 pass</td><td></td><td>Malathion</td><td></td><td>&lt; LOQ</td><td>0.20</td><td>0.100 pass</td><td></td></loq<>	0.40	0.200 pass		Malathion		< LOQ	0.20	0.100 pass	
Metalaxyl	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Methiocarb</td><td></td><td>&lt; LOQ</td><td>0.20</td><td>0.100 pass</td><td></td></loq<>	0.20	0.100 pass		Methiocarb		< LOQ	0.20	0.100 pass	
Methomyl	<loq< td=""><td>0.40</td><td>0.200 pass</td><td></td><td>MGK-264</td><td></td><td>&lt; LOQ</td><td>0.20</td><td>0.100 pass</td><td></td></loq<>	0.40	0.200 pass		MGK-264		< LOQ	0.20	0.100 pass	
Myclobutanil	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Naled</td><td></td><td>&lt; LOQ</td><td>0.50</td><td>0.250 pass</td><td></td></loq<>	0.20	0.100 pass		Naled		< LOQ	0.50	0.250 pass	
Oxamyl	<loq< td=""><td>1.0</td><td>0.500 pass</td><td></td><td>Paclobutrazole</td><td></td><td>&lt; LOQ</td><td>0.40</td><td>0.200 pass</td><td></td></loq<>	1.0	0.500 pass		Paclobutrazole		< LOQ	0.40	0.200 pass	
Parathion-Methyl	<loq< td=""><td>0.20</td><td>0.200 pass</td><td></td><td>Permethrin</td><td></td><td>&lt; LOQ</td><td>0.20</td><td>0.100 pass</td><td></td></loq<>	0.20	0.200 pass		Permethrin		< LOQ	0.20	0.100 pass	
Phosmet	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Piperonyl buto</td><td>xide</td><td>&lt; LOQ</td><td>2.0</td><td>1.00 pass</td><td></td></loq<>	0.20	0.100 pass		Piperonyl buto	xide	< LOQ	2.0	1.00 pass	
Prallethrin	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Propiconazole</td><td></td><td>&lt; LOQ</td><td>0.40</td><td>0.200 pass</td><td></td></loq<>	0.20	0.100 pass		Propiconazole		< LOQ	0.40	0.200 pass	
Propoxur	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Pyrethrins</td><td></td><td>&lt; LOQ</td><td>1.0</td><td>0.500 pass</td><td></td></loq<>	0.20	0.100 pass		Pyrethrins		< LOQ	1.0	0.500 pass	
Pyridaben	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Spinosad</td><td></td><td><loq< td=""><td>0.20</td><td>0.100 pass</td><td></td></loq<></td></loq<>	0.20	0.100 pass		Spinosad		<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td></loq<>	0.20	0.100 pass	
Spiromesifen	<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td><td>Spirotetramat</td><td></td><td><loq< td=""><td>0.20</td><td>0.100 pass</td><td></td></loq<></td></loq<>	0.20	0.100 pass		Spirotetramat		<loq< td=""><td>0.20</td><td>0.100 pass</td><td></td></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							

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Pixis 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 kept a maximum of 15 days from the report date unless prior arrangements have been made.

Testing in accordance with: OAR 333-007-0390 OAR 333-007-0400 OAR 333-007-0410 OAR 333-007-0430





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# 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.

# Units of Measure

g = Gram  $\mu$ g/g = Microgram per gram mg/kg = Milligram per kilogram /g = Per gram % = Percentage of sample % wt =  $\mu$ g/g divided by 10,000

Approved Signatory

Derrick Tanner General Manager





Job Number:18-010557Report Date:11/26/2018Report#:18-010557-00ORELAP#:OR100028

**Received:** 

11/20/18 11:01

J AOAC 2015	i V98-6			Bat	ch ID: 1807402		
Laboratory C	ontrol Sample						
Analyte Result	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDV-A	0.192	0.2	%	96.0	85 - 115	Acceptable	
CBDV	0.204	0.2	%	102	85 - 115	Acceptable	
CBD-A	0.195	0.2	%	97.5	85 - 115	Acceptable	
CBG-A	0.191	0.2	%	95.5	85 - 115	Acceptable	
CBG	0.202	0.2	%	101	85 - 115	Acceptable	
CBD	0.192	0.2	%	96.0	85 - 115	Acceptable	
THCV	0.194	0.2	%	97.0	85 - 115	Acceptable	
THCVA	0.188	0.2	%	94.0	85 - 115	Acceptable	
CBN	0.203	0.2	%	102	85 - 115	Acceptable	
тнс	0.196	0.2	%	98.0	85 - 115	Acceptable	
D8THC	0.189	0.2	%	94.5	85 - 115	Acceptable	
CBL	0.183	0.2	%	91.5	85 - 115	Acceptable	
СВС	0.207	0.2	%	104	85 - 115	Acceptable	
THCA	0.187	0.2	%	93.5	85 - 115	Acceptable	
CBCA	0.183	0.2	%	91.5	85 - 115	Acceptable	

Laboratory Quality Control Results

### Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDV-A	ND	0.1	%	< 0.1	Acceptable	
CBDV	ND	0.1	%	< 0.1	Acceptable	
CBD-A	ND	0.1	%	< 0.1	Acceptable	
CBG-A	ND	0.1	%	< 0.1	Acceptable	
CBG	ND	0.1	%	< 0.1	Acceptable	
CBD	ND	0.1	%	< 0.1	Acceptable	
THCV	ND	0.1	%	< 0.1	Acceptable	
THCVA	ND	0.1	%	< 0.1	Acceptable	
CBN	ND	0.1	%	< 0.1	Acceptable	
тнс	ND	0.1	%	< 0.1	Acceptable	
D8THC	ND	0.1	%	< 0.1	Acceptable	
CBL	ND	0.1	%	< 0.1	Acceptable	
CBC	ND	0.1	%	< 0.1	Acceptable	
THCA	ND	0.1	%	< 0.1	Acceptable	
CBCA	ND	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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**Received:** 

11/20/18 11:01

<b>JAOAC 2015</b>	V98-6				2			
Sample Dupli	icate				Samp	ole ID: 18-0105	527-0001	
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV-A	ND	ND	0.1	%	0	< 20	Acceptable	
CBDV	ND	ND	0.1	%	0	< 20	Acceptable	
CBD-A	0.174	0.181	0.1	%	3.94	< 20	Acceptable	
CBG-A	1.12	1.09	0.1	%	2.71	< 20	Acceptable	
CBG	0.337	0.363	0.1	%	7.43	< 20	Acceptable	
CBD	ND	ND	0.1	%	0	< 20	Acceptable	
THCV	ND	0.108	0.1	%	N/A	< 20	Acceptable	R2
THCVA	0.258	0.249	0.1	%	3.55	< 20	Acceptable	
CBN	ND	ND	0.1	%	0	< 20	Acceptable	
тнс	23.0	25.3	0.1	%	9.52	< 20	Acceptable	
D8THC	ND	ND	0.1	%	0	< 20	Acceptable	
CBL	ND	ND	0.1	%	0	< 20	Acceptable	
CBC	0.211	0.223	0.1	%	5.53	< 20	Acceptable	
THCA	51.5	49.3	0.1	%	4.37	< 20	Acceptable	
CBCA	0.567	0.572	0.1	%	0.878	< 20	Acceptable	

#### Abbreviations

R2 - Sample replicates RPD non-calculable, as only one replicate is within analytical range.

ND - None Detected at or above MRL

RPD - Relative Percent Difference

LOQ - Limit of Quantitation

#### Units of Measure:

% - Percent





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**Received:** 

11/20/18 11:01

EPA 5021						Bat	ch ID:	180741	17			
Method Blank					Laborator	ple						
Analyte	Result			Notes	Result	Spike Units		% Rec		imit	ts	Notes
Propane	ND	<	1700		1530	1940	Hg/g	78.9	70	-	130	
Isobutane	ND	<	2200		2020	2510	HR/R	80.5	70		130	
n-Butane	ND	<	2200		1980	2510	Hg/g	78.9	70	-	130	
neo-pentane	ND	<	2800		2470	3190	HR/R	77.4	70	-	130	
Methanol	ND	<	200		1860	2090	Hg/g	89.0	70		130	
Ethylene Oxide	ND	<	30		140	192	HR/R	72.9	70		130	
Isopentane	ND	<	200		1880	2090	H8/8	90.0	70		130	
Pentane	ND	<	200		1830	2080	Hg/g	88.0	70	-	130	
Ethyl Ether	ND	<	200		1830	2070	µg/g	88.4	70		130	
2,2-Dimethylbutane	ND	<	60		509	591	µg/g	86.1	70	-	130	
Acetone	ND	<	200		1840	1990	Hg/g	92.5	70	-	130	
2-Propanol	ND	<	200		1960	2200	HB/B	89.1	70	-	130	
Acetonitrile	ND	<	100		702	841	µg/g	83.5	70	-	130	
2,3-Dimethylbutane	ND	<	60		472	545	µg/g	86.6	70	-	130	
Dichloromethane	ND	<	200		1250	1410	HB/B	88.7	70	-	130	
2-methylpentane	ND	<	30		232	261	Hg/g	88.9	70	-	130	
3-methylpentane	ND	<	30		243	264	H8/8	92.0	70	-	130	
Hexane	ND	<	30		242	273	µg/g	88.6	70	-	130	
Ethyl Acetate	ND	<	200		1840	2090	µg/g	88.0	70	-	130	
2-Butanol	ND	<	200		1860	2100	µg/g	88.6	70	-	130	
Tetrahydrofuran	ND	<	100		734	822	HB/B	89.3	70	-	130	
Cyclohexane	ND	<	200		1880	2060	H8/g	91.3	70	•	130	
Benzene	ND	<	2		36.7	35.6	µg/g	103.1	70		130	
Isopropyl acetate	ND	<	200		1850	2080	Hg/g	88.9	70	-	130	
Heptane	ND	<	200		1820	2090	HB/B	87.1	70		130	
1,4-Dioxane	ND	<	100		733	830	Hg/g	88.3	70		130	
2-Ethoxyethanol	ND	<	30		254	264	µg/g	96.2	70		130	
Toluene	ND	<	100		699	839	µg/g	83.3	70	-	130	
Ethylene glycol	ND	<	200		1590	2090	Hg/g	76.1	70		130	
Ethylbenzene	ND	<	200		1720	2080	Hg/g	82.7	70	-	130	
m,p-Xylene	ND	<	200		1390	1700	HB/B	81.8	70		130	
o-Xylene	ND	<	200		1370	1660	HB/B	82.5	70	-	130	
Cumene	ND	<	30		208	262	µg/g	79.4	70	-	130	





Job Number:18-010557Report Date:11/26/2018Report#:18-010557-00ORELAP#:OR100028

**Received:** 

11/20/18 11:01

QC - Sample Duplicate Sample ID: 18-0100591-0001								
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Accept/Fail	Notes
Propane	ND	ND	1700.0	µg/g	0.0	< 20.0	Acceptable	
Isobutane	ND	ND	2200.0	µg/g	0.0	< 20.0	Acceptable	
n-Butane	ND	ND	2200.0	µg/g	0.0	< 20.0	Acceptable	
neo-pentane	ND	ND	2800.0	µg/g	0.0	< 20.0	Acceptable	
Methanol	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Ethylene Oxide	ND	ND	30.0	µg/g	0.0	< 20.0	Acceptable	
Isopentane	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Pentane	ND	ND	200.0	Hg/g	0.0	< 20.0	Acceptable	
Ethyl Ether	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
2,2-Dimethylbutane	ND	ND	60.0	µg/g	0.0	< 20.0	Acceptable	
Acetone	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
2-Propanol	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Acetonitrile	ND	ND	100.0	µg/g	0.0	< 20.0	Acceptable	
2,3-Dimethylbutane	ND	ND	60.0	µg/g	0.0	< 20.0	Acceptable	
Dichloromethane	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
2-methylpentane	ND	ND	30.0	µg/g	0.0	< 20.0	Acceptable	
3-methylpentane	ND	ND	30.0	µg/g	0.0	< 20.0	Acceptable	
Hexane	ND	ND	30.0	µg/g	0.0	< 20.0	Acceptable	
Ethyl Acetate	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
2-Butanol	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Tetrahydrofuran	ND	ND	100.0	µg/g	0.0	< 20.0	Acceptable	
Cyclohexane	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Benzene	ND	ND	2.0	µg/g	0.0	< 20.0	Acceptable	
Isopropyl acetate	ND	ND	200.0	Hg/g	0.0	< 20.0	Acceptable	
Heptane	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
1,4-Dioxane	ND	ND	100.0	µg/g	0.0	< 20.0	Acceptable	
2-Ethoxyethanol	ND	ND	30.0	µg/g	0.0	< 20.0	Acceptable	
Toluene	ND	ND	100.0	µg/g	0.0	< 20.0	Acceptable	
Ethylene glycol	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Ethylbenzene	ND	ND	200.0	Hg/g	0.0	< 20.0	Acceptable	
m,p-Xylene	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
o-Xylene	ND	ND	200.0	µg/g	0.0	< 20.0	Acceptable	
Cumene	ND	ND	30.0	µg/g	0.0	< 20.0	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





Job Number:18-010557Report Date:11/26/2018Report#:18-010557-00ORELAP#:OR100028

**Received:** 

11/20/18 11:01

AOAC 2007.1 & EN	15062	Unit	Units: mg/Kg					143
Method Blank				Laboratory Co	ole			
Analyte	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS % Rec	Limits	Notes
Acephate	ND	< 0.200		1.040	1.000	104.0	70 - 130	
Acequinocyl	ND	< 1.000		3.130	4.000	78.3	70 - 130	
Acetamiprid	ND	< 0.100		0.407	0.400	101.8	70 - 130	
Aldicarb	ND	< 0.200		0.770	0.800	96.3	70 - 130	
Abamectin	ND	< 0.288		0.856	1.000	85.6	70 - 130	I
Azoxystrobin	ND	< 0.100		0.421	0.400	105.3	70 - 130	
Bifenazate	ND	< 0.100		0.384	0.400	96.0	70 - 130	
Bifenthrin	ND	< 0.100		0.352	0.400	88.0	70 - 130	
Boscalid	ND	< 0.100		0.794	0.800	99.3	70 - 130	
Carbaryl	ND	< 0.100		0.409	0.400	102.3	70 - 130	
Carbofuran	ND	< 0.100		0.450	0.400	112.5	70 - 130	
Chlorantraniliprol	ND	< 0.100		0.402	0.400	100.5	70 - 130	
Chlorfenapyr	ND	< 1.000		1.570	2.000	78.5	70 - 130	1
Chlorpyrifos	ND	< 0.100		0.280	0.400	70.0	70 - 130	1
Clofentezine	ND	< 0.100		0.382	0.400	95.5	70 - 130	
Cyfluthrin	ND	< 1.000		1.690	2.000	84.5	30 - 150	
Cypermethrin	ND	< 1.000		1.570	2.000	78.5	70 - 130	
Daminozide	ND	< 1.000		2.000	2.000	100.0	30 - 150	
Diazinon	ND	< 0.100	1	0.389	0.400	97.3	70 - 130	
Dichlorvos	ND	< 0.500		1.900	2.000	95.0	70 - 130	1
Dimethoat	ND	< 0.100		0.403	0.400	100.8	70 - 130	
Ethoprophos	ND	< 0.100		0.417	0.400	104.3	70 - 130	
Etofenprox	ND	< 0.100		0.716	0.800	89.5	70 - 130	
Etoxazol	ND	< 0.100	1	0.380	0.400	95.0	70 - 130	
enoxycarb	ND	< 0.100	1	0.408	0.400	102.0	70 - 130	
enpyroximat	ND	< 0.100	1	0.771	0.800	96.4	70 - 130	
ipronil	ND	< 0.100		0.792	0.800	99.0	70 - 130	
Ionicamid	ND	< 0.400		1.030	0.800	128.8	70 - 130	1
ludioxonil	ND	< 0.100	1	0.733	0.800	91.6	70 - 130	
Hexythiazox	ND	< 0.400	1	0.737	1.000	73.7	70 - 130	
mazalil	ND	< 0.100	-	0.389	0.400	97.3	70 - 130	
midacloprid	ND	< 0.200	1	0.807	0.800	100.9	70 - 130	
Kresoxim-Methyl	ND	< 0.100	1	0.747	0.800	93.4	70 - 130	
Malathion	ND	< 0.100		0.412	0.400	103.0	70 - 130	
Metalaxyl	ND	< 0.100		0.417	0.400	104.3	70 - 130	
Methiocarb	ND	< 0.100	-	0.389	0.400	97.3	70 - 130	
Methomyl	ND	< 0.200		0.618	0.800	77.3	70 - 130	
VIGK 264	ND	< 0.100		0.372	0.400	93.0	70 - 130	
Vyclobutanil	ND	< 0.100		0.312	0.400	78.0	70 - 130	<u> </u>
Valed	ND	< 0.200	-	0.981	1.000	98.1	70 - 130	
Dxamyl	ND	< 0.400	+	2.070	2.000	103.5	70 - 130	
Paclobutrazol	ND	< 0.200		0.860	0.800	107.5	70 - 130	
Parathion Methyl	ND	< 0.200	1	0.803	0.800	100.4	30 - 150	
Permethrin	ND	< 0.100	1	0.354	0.400	88.5	70 - 130	
hosmet	ND	< 0.100	-	0.411	0.400	102.8	70 - 130	
Piperonyl butoxide	ND	< 1.000	1	1.690	2.000	84.5	70 - 130	-
Prallethrin	ND	< 0.200	1	0.362	0.400	90.5	70 - 130	
Propiconazole	ND	< 0.200	-	0.767	0.800	95.9	70 - 130	
Propoxur	ND	< 0.100	+	0.421	0.400	105.3	70 - 130	
Pyrethrins	ND	< 0.500	-	0.421	0.375	59.2	70 - 130	06
Pyridaben	ND	< 0.100	-	0.240	0.400	60.0	70 - 130	Q6
pinosad	ND	< 0.100	-	0.376	0.388	96.9	70 - 130	- 45
piromesifen	ND	< 0.100		0.346	0.400	86.5	70 - 130	——
Spirotetramat	ND	< 0.100	-	0.398	0.400	99.5	70 - 130	
spiroxamine	ND	< 0.100	-	0.916	0.400	114.5	70 - 130	
ebuconazol	ND	< 0.200		0.778	0.800	97.3	70 - 130	
hiacloprid	ND	< 0.100		0.421	0.400	105.3	70 - 130	
Thiamethoxam	ND	< 0.100		0.421	0.400	105.3	70 - 130	
	7285.05		-			100000000000000000000000000000000000000		
Frifloxystrobin	ND	< 0.100	1	0.398	0.400	99.5	70 - 130	

## Laboratory Pesticide Quality Control Results



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



Job Number:18-010557Report Date:11/26/2018Report#:18-010557-00ORELAP#:OR100028

**Received:** 

11/20/18 11:01

AOAC 2007.1 & EN 15662 Units: m Matrix Spike/Matrix Spike Duplicate Recoveries								Batch	Batch ID: 1807443		
						S	ample ID:	18-010527-0001			
Analyte	Result	MS Res	MSD Res	Spike	RF	PD%	MS % Rec		Limits	Notes	
Acephate	0.000	0.822	0.882	1.000	7.0	< 30	82.2	88.2	50 - 150		
Acequinocyl	0.000	6.700	7.630	4.000	13.0	< 30	167.5	190.8	50 - 150	Q1	
Acetamiprid	0.000	0.374	0.395	0.400	5.5	< 30	93.5	98.8	50 - 150		
Aldicarb	0.000	0.710	0.762	0.800	7.1	< 30	88.8	95.3	50 - 150		
Abamectin	0.000	0.985	1.130	1.000	13.7	< 30	98.5	113.0	50 - 150		
Azoxystrobin	0.000	0.380	0.411	0.400	7.8	< 30	95.0	102.8	50 - 150		
Bifenazate	0.000	0.371	0.394	0.400	6.0	< 30	92.8	98.5	50 - 150		
Bifenthrin	0.000	0.912	0.958	0.400	4.9	< 30	228.0	239.5	50 - 150	Q	
Boscalid	0.003	0.831	0.867	0.800	4.2	< 30	103.5	108.0	50 - 150		
Carbaryl	0.000	0.372	0.383	0.400	2.9	< 30	93.0	95.8	50 - 150		
Carbofuran	0.000	0.407	0.435	0.400	6.7	< 30	101.8	108.8	50 - 150		
Chlorantraniliprol	0.000	0.368	0.387	0.400	5.0	< 30	92.0	96.8	50 - 150		
Chlorfenapyr	0.000	3.820	4.250	2.000	10.7	< 30	191.0	212.5	50 - 150	Q1	
Chlorpyrifos	0.025	0.599	0.615	0.400	2.6	< 30	143.4	147.3	50 - 150		
Clofentezine	0.000	0.400	0.435	0.400	8.4	< 30	100.0	108.8	50 - 150		
Cyfluthrin	0.000	2.960	3.260	2.000	9.6	< 30	148.0	163.0	30 - 150	Q1	
Cypermethrin	0.057	2.090	2.190	2.000	4.7	< 30	101.7	106.7	50 - 150		
Daminozide	0.000	1.390	1.520	2.000	8.9	< 30	69.5	76.0	30 - 150		
Diazinon	0.000	0.382	0.409	0.400	6.8	< 30	95.5	102.3	50 - 150		
Dichlorvos	0.000	1.610	1.730	2.000	7.2	< 30	80.5	86.5	50 - 150		
Dimethoat	0.000	0.371	0.392	0.400	5.5	< 30	92.8	98.0	50 - 150		
Ethoprophos	0.000	0.390	0.417	0.400	6.7	< 30	97.5	104.3	50 - 150		
Etofenprox	0.000	0.922	0.981	0.800	6.2	< 30	115.3	122.6	50 - 150		
Etoxazol	0.000	0.536	0.564	0.400	5.1	< 30	134.0	141.0	50 - 150		
Fenoxycarb	0.000	0.387	0.411	0.400	6.0	< 30	96.8	102.8	50 - 150		
Fenpyroximat	0.000	0.977	1.050	0.800	7.2	< 30	122.1	131.3	50 - 150		
Fipronil	0.000	0.756	0.807	0.800	6.5	< 30	94.5	100.9	50 - 150		
Flonicamid	0.000	0.900	0.991	0.800	9.6	< 30	112.5	123.9	50 - 150		
Fludioxonil	0.000	0.676	0.737	0.800	8.6	< 30	84.5	92.1	50 - 150		
Hexythiazox	0.000	1.560	1.640	1.000	5.0	< 30	156.0	164.0	50 - 150	Q1	
Imazalil	0.009	0.413	0.431	0.400	4.3	< 30	101.0	105.5	50 - 150		
Imidacloprid	0.000	0.849	0.905	0.800	6.4	< 30	106.1	113.1	50 - 150		
Kresoxim-Methyl	0.000	1.140	1.180	0.800	3.4	< 30	142.5	147.5	50 - 150		
Malathion	0.000	0.387	0.401	0.400	3.6	< 30	96.8	100.3	50 - 150		
Metalaxyl	0.000	0.372	0.418	0.400	11.6	< 30	93.0	104.5	50 - 150		
Methiocarb	0.000	0.376	0.393	0.400	4.4	< 30	94.0	98.3	50 - 150		
Methomyl	0.000	0.738	0.721	0.800	2.3	< 30	92.3	90.1	50 - 150		
MGK 264	0.000	0.441	0.472	0.400	6.8	< 30	110.3	118.0	50 - 150		
Myclobutanil	0.000	0.280	0.332	0.400	17.0	< 30	70.0	83.0	50 - 150		
Naled	0.000	0.923	0.976	1.000	5.6	< 30	92.3	97.6	50 - 150		
Oxamyl	0.000	1.830	1.830	2.000	0.0	< 30	91.5	91.5	50 - 150		
Paclobutrazol	0.000	0.803	0.894	0.800	10.7	< 30	100.4	111.8	50 - 150		
Parathion Methyl	0.000	0.787	0.846	0.800	7.2	< 30	98.4	105.8	30 - 150		
Permethrin	0.037	0.519	0.556	0.400	6.9	< 30	120.6	129.9	50 - 150	-	
Phosmet	0.000	0.381	0.414	0.400	8.3	< 30	95.3	103.5	50 - 150		
Piperonyl butoxide	0.000	3.900	4.180	2.000	6.9	< 30	195.0	209.0	50 - 150	Q1	
Prallethrin	0.000	0.440	0.488	0.400	10.3	< 30	110.0	122.0	50 - 150		
Propiconazole	0.000	0.806	0.838	0.800	3.9	< 30	100.8	104.8	50 - 150		
Propoxur	0.000	0.381	0.413	0.400	8.1	< 30	95.3	103.3	50 - 150		
Pyrethrins	0,000	0.328	0.350	0.375	6.5	< 30	87.4	93.3	50 - 150		
Pyridaben	0.000	0.168	0.176	0.400	4.7	< 30	42.0	44.0	50 - 150	Q	
Spinosad	0.000	0.429	0.458	0.388	6.5	< 30	110.6	118.0	50 - 150		
Spiromesifen	0.000	0.440	0.475	0.400	7.7	< 30	110.0	118.8	50 - 150		
Spirotetramat	0.000	0.381	0.475	0.400	9.5	< 30	95.3	104.8	50 - 150		
Spiroxamine	0.000	0.840	0.413	0.400	7.7	< 30	105.0	113.4	50 - 150		
Tebuconazol	0.000	0.840	0.918	0.800	8.8	< 30	105.0	113.4	50 - 150		
Thiacloprid	0.000	0.377	0.318	0.400	10.3	< 30	94.3	104.5	50 - 150	-	
Thiamethoxam	0.000	0.390	0.418	0.400	1.3	< 30	94.5	98.8	50 - 150		
Trifloxystrobin	0.000	0.390	0.393	0.400	3.6	< 30	104.0	109.8	50 - 150		
THORYSCIODIII	0.000	0.410	0.439	0.400	5.0	1 20	104.0	0.601	30 - 130		

### Laboratory Pesticide Quality Control Results





 Job Number:
 18-010557

 Report Date:
 11/26/2018

 Report#:
 18-010557-00

 ORELAP#:
 OR100028

Received:

11/20/18 11:01

### 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	Quantitaion level raised due to matrix interference.					
В	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.					