



Customer: FSOil
Product identity: 1-10A-816-02030
Client/Metric ID: .
Laboratory ID: 22-003869-0001

Summary

Potency:

Analyte	Result (%)		CBD Δ9-THC CBC CBD-A CBT CBG CBE CBDV CBN
CBD	57.7		
Δ9-THC	3.00		
CBC	2.17		
CBD-A	1.75		
CBT	0.942		
CBG	0.687		
CBE	0.431		
CBDV	0.212		
CBN	0.111		

CBD-Total	59.2%
THC-Total	3.00%
(Reported in percent of total sample)	

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

All analytes passing and less than LOQ.

Microbiology:

Less than LOQ for all analytes.



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503-254-1794

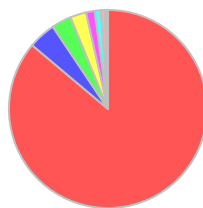


Report Number: 22-003869/D003.R000
Report Date: 04/12/2022
ORELAP#: OR100028
Purchase Order: 0066
Received: 04/06/22 09:54

Customer: FSOil
33739 S Meridian Rd
Woodburn Oregon 97071
United States of America (USA)
Product identity: 1-10A-816-02030
Client/Metric ID: .
Sample Date:
Laboratory ID: 22-003869-0001
Evidence of Cooling: No
Temp: 17.1 °C
Relinquished by: Client

Sample Results

Potency	Method J AOAC 2015 V98-6 (mod)	Units %	Batch: 2203025	Analyze: 4/7/22 11:13:00 PM
Analyte	As Received	Dry weight	LOQ	Notes
CBC	2.17		0.0741	
CBC-A	< LOQ		0.0741	
CBC-Total	2.17		0.139	
CBD	57.7		0.741	
CBD-A	1.75		0.0741	
CBD-Total	59.2		0.806	
CBDV	0.212		0.0741	
CBDV-A	< LOQ		0.0741	
CBDV-Total	0.212		0.138	
CBE	0.431		0.0741	
CBG	0.687		0.0741	
CBG-A	< LOQ		0.0741	
CBG-Total	0.687		0.138	
CBL	< LOQ		0.0741	
CBL-A	< LOQ		0.0741	
CBL-Total	< LOQ		0.139	
CBN	0.111		0.0741	
CBT	0.942		0.0741	
Δ8-THC	< LOQ		0.0741	
Δ8-THCV	< LOQ		0.0741	
Δ9-THC	3.00		0.0741	
THC-A	< LOQ		0.0741	
THC-Total	3.00		0.139	
THCV	< LOQ		0.0741	
THCV-A	< LOQ		0.0741	
THCV-Total	< LOQ		0.138	
Total Cannabinoids	67.0			



● CBD
● Δ9-THC
● CBC
● CBD-A
● CBT
● CBG
● CBE
● CBDV
● CBN



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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Status	Notes
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2202961	04/10/22	AOAC 2014.05 (RAPID)		X
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2202961	04/10/22	AOAC 2014.05 (RAPID)		X

Solvents	Method	Residual Solvents by GC/MS	Units µg/g	Batch	2203084	Analyze	04/11/22	01:31 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 (Isopentane)	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethylbutane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< 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	< 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	20.0	pass		Hexanes (sum)	< LOQ	290	150	pass	
Isopropyl acetate	< LOQ	5000	200	pass		Isopropylbenzene (Cumene)	< LOQ	70.0	30.0	pass	
m,p-Xylene	< LOQ		200			Methanol	< LOQ	3000	200	pass	
Methylene chloride	< LOQ	600	60.0	pass		Methylpropane (Isobutane)	< 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 benzene	< LOQ	2170	600	pass							



Pesticides					Method AOAC 2007.01 & EN 15662 (mod) Units mg/kg Batch 2203106					Analyze 04/12/22 08:38 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		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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These test results are representative of the individual sample selected and submitted by the client.

Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220, CCR title 16-division 42. BCC-section 5723

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

Units of Measure

cfu/g = Colony forming units per gram

µg/g = Microgram per gram

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 / Finished Products

Chain of Custody Record

Document Control ID: 2732 Revision: 1
Effective: 05/04/2021
ORELAP ID: OR100028

Company: FSOil LLC Contact: Megan Iverson Street: 33739 S. Meridian Rd City: Woodburn State: OR Zip: 97071 ☒ Email Results: See FSOil Instructions Ph: (503) 634-2463 ☐ Fx Results: () Billing (if different): FSOil LLC				Analysis Requested										PO Number: 0066 Project Number: Project Name: FSOil Custom Reporting: Report to State: ☐ METRC or ☐ Other: Turnaround time: ☒ 5 Business Day Standard Turnaround ☐ 3 Business Day Rush Turnaround* ☐ 2 Business Day Rush Turnaround* <i>*Check for availability</i> Sampled by:			
Lab ID	Client Sample Identification	Date	Time	Micro Profile G	Salmonella	Micro: Yeast and Mold	Pesticides CanAm	Residual Solvents-OR (must include EtOH)	Heavy Metals	Pesticides - OR	Water Activity	Potency	NS04 OR Cannabis Nutrition Label	Mycotoxin	Sample Type +	Weight (Units)	Comments/Metrc ID
	1-10A-816-02030	4/5/22	10:00			X		X	X	X	X				C	61.6 g	The samples in this COC are Hemp CO2 Extract and should be tested to the following specifications <u>FSOil CO2 Hemp Extract</u>
	1-10A-829-02031	4/5/22	11:45			X		X	X	X	X				C	20.6g	
Relinquished By:				Date: 4/5/22	Time: 11:45	Received By: AC				Date: 4-6	Time: 9:54	Lab Use Only: ☐ Shipped Via: _____ or ☒ Client drop Evidence of cooling: ☐ Yes ☒ No - Temp (°C): 17.1 Sample in good condition: ☐ Yes ☐ No ☐ Cash ☐ Check ☐ CC ☐ Net: Prelog storage:					

+ Sample Type Codes: Vegetation (V) ; Isolates (S) ; Extract/Concentrate (C) ; Tincture/Topical (T) ; Edible (E) ; Beverage (B)

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
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Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

JAOAC2015 08-6 Batch ID: 220302							
Laboratory Control Sample							
Analyte	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDV	0.0978	0.100	%	97.8	80.0 - 120	Acceptable	
CBD	0.107	0.100	%	107	80.0 - 120	Acceptable	
CBT	0.0950	0.100	%	95.0	80.0 - 120	Acceptable	
CBD	0.110	0.100	%	104	80.0 - 120	Acceptable	
CBG	0.0951	0.100	%	95.1	80.0 - 120	Acceptable	
CB	0.0951	0.100	%	95.7	80.0 - 120	Acceptable	
CBT	0.100	0.100	%	101	80.0 - 120	Acceptable	
THC	0.0917	0.100	%	91.7	80.0 - 120	Acceptable	
d8THC	0.0938	0.100	%	93.8	80.0 - 120	Acceptable	
THCV	0.0919	0.100	%	91.9	80.0 - 120	Acceptable	
CB	0.100	0.100	%	97.3	80.0 - 120	Acceptable	
exo-THC	0.0860	0.100	%	86.0	80.0 - 120	Acceptable	
d9THC	0.100	0.100	%	96.1	80.0 - 120	Acceptable	
d8THC	0.0889	0.100	%	88.9	80.0 - 120	Acceptable	
CBT	0.0860	0.100	%	86.0	80.0 - 120	Acceptable	
CB	0.0909	0.100	%	90.9	80.0 - 120	Acceptable	
THC	0.107	0.100	%	104	80.0 - 120	Acceptable	
CB	0.0991	0.100	%	99.1	80.0 - 120	Acceptable	
CB	0.0950	0.100	%	95.0	80.0 - 120	Acceptable	
CB	0.0742	0.100	%	74.2	80.0 - 120	Acceptable	Q6

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDV	< LOQ	0.077	%	< 0.077	Acceptable	
CBD	< LOQ	0.077	%	< 0.077	Acceptable	
CBT	< LOQ	0.077	%	< 0.077	Acceptable	
CBD	< LOQ	0.077	%	< 0.077	Acceptable	
CBG	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
CBT	< LOQ	0.077	%	< 0.077	Acceptable	
THC	< LOQ	0.077	%	< 0.077	Acceptable	
d8THC	< LOQ	0.077	%	< 0.077	Acceptable	
THCV	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
exo-THC	< LOQ	0.077	%	< 0.077	Acceptable	
d9THC	< LOQ	0.077	%	< 0.077	Acceptable	
d8THC	< LOQ	0.077	%	< 0.077	Acceptable	
CBT	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
THC	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	
CB	< LOQ	0.077	%	< 0.077	Acceptable	

Abbreviations

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

Units of Measure:

% - Percent



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Laboratory Quality Control Results

JAOAC2015 18-6		Batch ID: 2203021						
Sample Duplicate		Sample ID: 22-0038410001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDV	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CBD	0.447	0.441	0.077	%	1.32	< 20	Acceptable	
CB1	3.5E	3.51	0.077	%	2.34	< 20	Acceptable	
CBD	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CBG	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CBC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CB1	72.4	67.2	0.077	%	7.43	< 20	Acceptable	
THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
d8THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
THCV	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CBN	0.94E	0.92E	0.077	%	1.91	< 20	Acceptable	
exo-THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
d9THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
d8THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CB1	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CB1	2.3E	2.3E	0.077	%	1.94	< 20	Acceptable	
THC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CBC	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CB1	< LOQ	< LOQ	0.077	%	NA	< 20	Acceptable	
CB1	0.761	0.91E	0.077	%	17.8	< 20	Acceptable	

Abbreviations

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

Units of Measure:

% - Percent



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Legacy ID: Effective:

Laboratory Quality Control Results									
Batch ID: 2203084									
Residual Solvents									
Method Blank									
Laboratory Control Sample									
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		542	572	µg/g	94.8	60 - 120	
Isobutane	ND	< 200		762	731	µg/g	104.2	60 - 120	
Butane	ND	< 200		767	731	µg/g	104.9	60 - 120	
2,2-Dimethylpropane	ND	< 200		915	936	µg/g	98.2	60 - 120	
Methanol	ND	< 200		1720	1620	µg/g	106.2	60 - 120	
Ethylene Oxide	ND	< 30		59.7	56.2	µg/g	106.2	60 - 120	
2-Methylbutane	ND	< 200		1770	1620	µg/g	109.3	60 - 120	
Pentane	ND	< 200		1710	1610	µg/g	106.2	60 - 120	
Ethanol	ND	< 200		1720	1630	µg/g	105.5	60 - 120	
Ethyl Ether	ND	< 200		1630	1620	µg/g	100.6	60 - 120	
2,2-Dimethylbutane	ND	< 30		177	174	µg/g	98.9	60 - 120	
Acetone	ND	< 200		1500	1650	µg/g	90.9	60 - 120	
2-Propanol	ND	< 200		1550	1610	µg/g	96.3	60 - 120	
Ethyl Formate	ND	< 500		1430	1600	µg/g	89.4	70 - 130	
Acetonitrile	ND	< 100		523	498	µg/g	105.0	60 - 120	
Methyl Acetate	ND	< 500		1600	1610	µg/g	99.4	70 - 130	
2,3-Dimethylbutane	ND	< 30		177	176	µg/g	100.6	60 - 120	
Dichloromethane	ND	< 60		518	510	µg/g	101.6	60 - 120	
2-Methylpentane	ND	< 30		162	176	µg/g	92.0	60 - 120	
MTBE	ND	< 500		1510	1600	µg/g	94.4	70 - 130	
3-Methylpentane	ND	< 30		169	175	µg/g	96.6	60 - 120	
Hexane	ND	< 30		189	177	µg/g	106.8	60 - 120	
1-Propanol	ND	< 500		1590	1610	µg/g	98.8	70 - 130	
Methylethylketone	ND	< 500		1600	1600	µg/g	100.0	70 - 130	
Ethyl acetate	ND	< 200		1630	1630	µg/g	100.0	60 - 120	
2-Butanol	ND	< 200		1520	1620	µg/g	93.8	60 - 120	
Tetrahydrofuran	ND	< 100		464	500	µg/g	92.8	60 - 120	
Cyclohexane	ND	< 200		1460	1620	µg/g	90.1	60 - 120	
2-methyl-1-propanol	ND	< 500		1270	1620	µg/g	78.4	70 - 130	
Benzene	ND	< 1		4.69	5.32	µg/g	88.2	60 - 120	
Isopropyl Acetate	ND	< 200		1470	1620	µg/g	90.7	60 - 120	
Heptane	ND	< 200		1500	1770	µg/g	84.7	60 - 120	
1-Butanol	ND	< 500		1220	1600	µg/g	76.3	70 - 130	
Propyl Acetate	ND	< 500		1500	1600	µg/g	93.8	70 - 130	
1,4-Dioxane	ND	< 100		428	504	µg/g	84.9	60 - 120	
2-Ethoxyethanol	ND	< 30		156	181	µg/g	86.2	60 - 120	
Methylisobutylketone	ND	< 500		1350	1610	µg/g	83.9	70 - 130	
3-Methyl-1-butanol	ND	< 500		1150	1610	µg/g	71.4	70 - 130	
Ethylene Glycol	ND	< 200		385	494	µg/g	77.9	60 - 120	
Toluene	ND	< 200		425	491	µg/g	86.6	60 - 120	
Isobutyl Acetate	ND	< 500		1510	1600	µg/g	94.4	70 - 130	
1-Pentanol	ND	< 500		1430	1610	µg/g	88.8	70 - 130	
Butyl Acetate	ND	< 500		1430	1610	µg/g	88.8	70 - 130	
Ethylbenzene	ND	< 200		814	973	µg/g	83.7	60 - 120	
m,p-Xylene	ND	< 200		809	996	µg/g	81.2	60 - 120	
o-Xylene	ND	< 200		826	973	µg/g	84.9	60 - 120	
Cumene	ND	< 30		128	170	µg/g	75.3	60 - 120	
Anisole	ND	< 500		1160	1610	µg/g	72.0	70 - 130	
DMSO	ND	< 500		1960	1630	µg/g	83.4	70 - 130	
1,2-dimethoxyethane	ND	< 50		151	164	µg/g	92.1	70 - 130	
Triethylamine	ND	< 500		1220	1600	µg/g	76.3	70 - 130	
N,N-dimethylformamide	ND	< 150		390	497	µg/g	78.5	70 - 130	
N,N-dimethylacetamide	ND	< 150		459	498	µg/g	92.2	70 - 130	
Pyridine	ND	< 50		158	180	µg/g	87.8	70 - 130	
1,2-Dichloroethane	ND	< 1		0.859	1	µg/g	85.9	70 - 130	
Chloroform	ND	< 1		0.9	1	µg/g	90.0	70 - 130	
Trichloroethylene	ND	< 1		0.93	1	µg/g	93.0	70 - 130	



Revision: Document ID:
Legacy ID: Effective:

QC - Sample Duplicate

Sample ID: 22-003899-0001

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	
Ethyl Formate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Acetonitrile	ND	ND	100	µg/g	0.0	< 20	Acceptable	
Methyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
2,3-Dimethylbutane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Dichloromethane	ND	ND	60	µg/g	0.0	< 20	Acceptable	
2-Methylpentane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
MTBE	ND	ND	500	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	
1-Propanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Methyl ethyl ketone	ND	ND	500	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	
2-methyl-1-propanol	ND	ND	500	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-Butanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Propyl Acetate	ND	ND	500	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	
Methylisobutylketone	ND	ND	500	µg/g	0.0	< 20	Acceptable	
3-Methyl-1-butanol	ND	ND	500	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	
Isobutyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
1-Pentanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Butyl Acetate	ND	ND	500	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	
Anisole	ND	ND	500	µg/g	0.0	< 20	Acceptable	
DMSO	ND	ND	500	µg/g	0.0	< 20	Acceptable	
1,2-dimethoxyethane	ND	ND	50	µg/g	0.0	< 20	Acceptable	
Triethylamine	ND	ND	500	µg/g	0.0	< 20	Acceptable	
N,N-dimethylformamide	ND	ND	150	µg/g	0.0	< 20	Acceptable	
N,N-dimethylacetamide	ND	ND	150	µg/g	0.0	< 20	Acceptable	
Pyridine	ND	ND	30	µg/g	0.0	< 20	Acceptable	
1,2-Dichloroethane	ND	ND	1	µg/g	0.0	< 20	Acceptable	
Chloroform	ND	ND	1	µg/g	0.0	< 20	Acceptable	
Trichloroethylene	ND	ND	1	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



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



Report Number: 22-003869/D003.R000
Report Date: 04/12/2022
ORELAP#: OR100028
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Received: 04/06/22 09:54

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Legacy ID: CFL-C21 Worksheet Validated 10/30/2020

Laboratory Pesticide Quality Control Results

AQAC2007.1 & EN 15662			Units: mg/Kg	Batch ID 2203106				
Method Blank		Laboratory Control Sample						
Analyte	Blank Result	Blank Limits	Notes	LCS Result	LCS Spike	LCS% Re	Limits	Notes
Abamectin	0.000	< 0.250		1.838	1.000	183.8	50.0 150	Q1
Acephate	0.000	< 0.250		1.047	1.000	104.7	60.0 120	
Acequinocyl	0.000	< 1.000		4.069	4.000	101.7	40.0 160	
Acetamiprid	0.000	< 0.100		0.386	0.400	96.6	60.0 120	
Aldicarb	0.000	< 0.200		0.770	0.800	96.2	60.0 120	
Azoxystrobin	0.000	< 0.100		0.381	0.400	95.1	60.0 120	
Bifenazate	0.000	< 0.100		0.474	0.400	118.6	60.0 120	
Bifenthrin	0.000	< 0.100		0.390	0.400	97.4	50.0 150	
Boscalid	0.000	< 0.200		0.828	0.800	103.5	60.0 120	
Carbaryl	0.000	< 0.100		0.372	0.400	93.1	60.0 120	
Carbofuran	0.000	< 0.100		0.373	0.400	93.3	60.0 120	
Chlorantraniliprole	0.000	< 0.100		0.397	0.400	99.2	60.0 120	
Chlorfenapyr	0.000	< 0.500		1.836	2.000	91.8	60.0 120	
Chlorpyrifos	0.000	< 0.100		0.361	0.400	90.3	60.0 120	
Clofentazine	0.000	< 0.100		0.402	0.400	100.4	60.0 120	
Cyfluthrin	0.000	< 0.500		1.913	2.000	95.7	50.0 150	
Cypermethrin	0.000	< 0.500		1.993	2.000	99.7	50.0 150	
Daminozide	0.382	< 0.500		2.386	2.000	119.3	60.0 120	
Diazinon	0.000	< 0.100		0.402	0.400	100.6	60.0 120	
Dichlorvos	0.000	< 0.500		1.892	2.000	94.6	60.0 120	
Dimethoate	0.000	< 0.100		0.387	0.400	96.7	60.0 120	
Ethoprophos	0.000	< 0.100		0.374	0.400	93.5	60.0 120	
Etofenprox	0.000	< 0.200		0.735	0.800	91.8	50.0 150	
Etoxazole	0.000	< 0.100		0.412	0.400	102.9	60.0 120	
Fenoxycarb	0.000	< 0.100		0.392	0.400	98.0	60.0 120	
Fenpyroximate	0.000	< 0.200		0.760	0.800	95.0	60.0 120	
Fipronil	0.000	< 0.200		0.799	0.800	99.8	60.0 120	
Flonicamid	0.000	< 0.250		0.942	1.000	94.2	60.0 120	
Fludioxonil	0.000	< 0.200		0.797	0.800	99.7	50.0 150	
Hexythiazox	0.000	< 0.250		1.012	1.000	101.2	60.0 120	
Imazalil	0.000	< 0.100		0.400	0.400	100.1	60.0 120	
Imidacloprid	0.000	< 0.200		0.782	0.800	97.8	60.0 120	
Kresoxim-methyl	0.000	< 0.200		0.774	0.800	96.8	60.0 120	
Malathion	0.000	< 0.100		0.395	0.400	98.8	60.0 120	
Metaxyl	0.000	< 0.100		0.378	0.400	94.6	60.0 120	
Methiocarb	0.000	< 0.100		0.379	0.400	94.7	60.0 120	
Methomyl	0.000	< 0.200		0.751	0.800	93.9	60.0 120	
MGK-264	0.000	< 0.100		0.381	0.400	95.3	50.0 150	
Myclobutanil	0.000	< 0.100		0.365	0.400	91.2	60.0 120	
Naled	0.000	< 0.250		0.953	1.000	95.3	50.0 150	
Oxamyl	0.000	< 0.500		1.864	2.000	93.2	60.0 120	
Paclobutrazole	0.000	< 0.200		0.790	0.800	98.8	60.0 120	
Parathion-Methyl	0.000	< 0.200		0.720	0.800	89.9	50.0 150	
Permethrin	0.000	< 0.100		0.387	0.400	96.8	50.0 150	
Phosmet	0.000	< 0.100		0.395	0.400	98.8	50.0 150	
Piperonyl butoxide	0.000	< 0.500		2.302	2.000	115.1	60.0 120	
Prallethrin	0.000	< 0.100		0.413	0.400	103.2	60.0 120	
Propiconazole	0.000	< 0.200		0.805	0.800	100.6	60.0 120	
Propoxur	0.000	< 0.100		0.365	0.400	91.3	60.0 120	
Pyrethrin (Summe)	0.000	< 0.100		0.416	0.413	100.7	60.0 120	
Pyridaben	0.000	< 0.100		0.417	0.400	104.3	50.0 150	
Spinosad	0.000	< 0.100		0.388	0.388	100.0	50.0 150	
Spiromesifen	0.000	< 0.100		0.413	0.400	103.2	60.0 120	
Spirotetramat	0.000	< 0.100		0.408	0.400	102.1	60.0 120	
Spiroxamine	0.000	< 0.200		0.813	0.800	101.6	60.0 120	
Tebuconazole	0.000	< 0.200		0.796	0.800	99.5	60.0 120	
Thiacloprid	0.000	< 0.100		0.388	0.400	96.9	60.0 120	
Thiamethoxam	0.000	< 0.100		0.378	0.400	94.6	60.0 120	
Trifloxystrobin	0.000	< 0.100		0.391	0.400	97.7	60.0 120	



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Revision: 3 Document ID: 3120
Legacy ID: CFL-C21 Worksheet Validated 10/30/2020

Laboratory Pesticide Quality Control Results

AOAC2007.1 & EN 15662										
Units: mg/Kg										
Batch ID 2203106										
Matrix Spike/Matrix Spike Duplicate Recoveries										
Sample ID: 220038410001										
Analyte	Result	MS Res	MSD Res	Spike	RPD%	Limit	MS% Re	MSD% Re	Limits	Notes
Abamectin	0.000	1.891	2.005	1.000	5.9%	< 30	189.1%	200.5%	50 - 150	Q
Acephate	0.000	0.975	0.936	1.000	4.1%	< 30	97.5%	93.6%	50 - 150	
Acequinocyl	0.000	2.964	3.031	4.000	2.2%	< 30	74.1%	75.8%	50 - 150	
Acetamiprid	0.000	0.338	0.340	0.400	0.4%	< 30	84.5%	84.9%	50 - 150	
Aldicarb	0.000	0.726	0.736	0.800	1.5%	< 30	90.7%	92.1%	50 - 150	
Azoxystrobin	0.000	0.249	0.248	0.400	0.3%	< 30	62.2%	62.0%	50 - 150	
Bifenazate	0.000	0.525	0.502	0.400	4.5%	< 30	131.2%	125.4%	50 - 150	
Bifenthrin	0.044	0.246	0.240	0.400	2.8%	< 30	50.5%	49.1%	50 - 150	Q
Boscalid	0.000	0.677	0.663	0.800	2.1%	< 30	84.6%	82.9%	50 - 150	
Carbaryl	0.000	0.279	0.283	0.400	1.4%	< 30	69.8%	70.8%	50 - 150	
Carbofuran	0.000	0.301	0.307	0.400	1.9%	< 30	75.3%	76.8%	50 - 150	
Chlorantraniliprole	0.000	0.420	0.426	0.400	1.4%	< 30	105.0%	106.4%	50 - 150	
Chlorfenvapir	0.000	0.800	0.989	2.000	21.1%	< 30	40.0%	49.4%	50 - 150	Q
Chlorpyrifos	0.000	0.372	0.379	0.400	1.8%	< 30	93.0%	94.7%	50 - 150	
Clofentazine	0.000	0.315	0.310	0.400	1.6%	< 30	78.6%	77.4%	50 - 150	
Cyfluthrin	0.066	1.010	1.090	2.000	8.1%	< 30	47.2%	51.2%	30 - 150	
Cypermethrin	0.000	0.892	0.886	2.000	0.7%	< 30	44.6%	44.3%	50 - 150	Q
Daminozide	0.341	2.543	2.486	2.000	2.6%	< 30	110.1%	107.3%	30 - 150	
Diazinon	0.000	0.321	0.317	0.400	1.3%	< 30	80.3%	79.3%	50 - 150	
Dichlorvos	0.000	1.615	1.537	2.000	5.0%	< 30	80.8%	76.8%	50 - 150	
Dimethoate	0.000	0.362	0.364	0.400	0.7%	< 30	90.4%	91.1%	50 - 150	
Ethoprophos	0.000	0.316	0.314	0.400	0.6%	< 30	78.9%	78.4%	50 - 150	
Etofenprox	0.000	0.258	0.314	0.800	19.7%	< 30	32.3%	39.3%	50 - 150	Q
Etoxazole	0.000	0.368	0.291	0.400	23.4%	< 30	92.1%	72.8%	50 - 150	
Fenoxycarb	0.000	0.350	0.333	0.400	4.9%	< 30	87.4%	83.2%	50 - 150	
Fenpyroximate	0.000	0.361	0.352	0.800	2.5%	< 30	45.1%	44.0%	50 - 150	Q
Fipronil	0.000	0.486	0.505	0.800	3.8%	< 30	60.8%	63.1%	50 - 150	
Flonicamid	0.000	0.847	0.943	1.000	10.7%	< 30	84.7%	94.3%	50 - 150	
Fludioxonil	0.000	0.744	0.718	0.800	3.5%	< 30	93.0%	89.7%	50 - 150	
Hexythiazox	0.000	0.636	0.600	1.000	6.0%	< 30	63.6%	60.0%	50 - 150	
Imazalil	0.000	0.353	0.324	0.400	8.5%	< 30	88.2%	81.0%	50 - 150	
Imidacloprid	0.000	0.792	0.772	0.800	2.5%	< 30	99.0%	96.5%	50 - 150	
Kresoxim-methyl	0.000	0.664	0.624	0.800	6.3%	< 30	83.0%	78.0%	50 - 150	
Malathion	0.009	0.309	0.287	0.400	7.6%	< 30	74.8%	69.3%	50 - 150	
Metaxyl	0.151	0.562	0.522	0.400	10.5%	< 30	103.0%	92.8%	50 - 150	
Methiocarb	0.000	0.318	0.307	0.400	3.6%	< 30	79.6%	76.8%	50 - 150	
Methomyl	0.000	0.663	0.711	0.800	7.1%	< 30	82.8%	88.9%	50 - 150	
MGK-264	0.000	0.175	0.176	0.400	0.2%	< 30	43.8%	43.9%	50 - 150	Q
Myclobutanil	0.000	0.328	0.319	0.400	2.8%	< 30	82.1%	79.9%	50 - 150	
Naled	0.000	0.709	0.716	1.000	1.0%	< 30	70.9%	71.6%	50 - 150	
Oxamyl	0.000	2.070	1.940	2.000	6.5%	< 30	103.5%	97.0%	50 - 150	
Paclobutrazole	0.000	0.676	0.618	0.800	8.9%	< 30	84.5%	77.3%	50 - 150	
Parathion-Methyl	0.000	0.347	0.369	0.800	6.0%	< 30	43.4%	46.1%	30 - 150	
Permethrin	0.000	0.186	0.175	0.400	5.8%	< 30	46.4%	43.8%	50 - 150	Q
Phosmet	0.000	0.334	0.313	0.400	6.2%	< 30	83.4%	78.4%	50 - 150	
Piperonyl butoxide	0.000	1.752	1.624	2.000	7.6%	< 30	87.6%	81.2%	50 - 150	
Prallethrin	0.557	1.105	1.147	0.400	7.4%	< 30	137.0%	147.5%	50 - 150	
Propiconazole	0.000	0.706	0.673	0.800	4.7%	< 30	88.2%	84.1%	50 - 150	
Propoxur	0.006	0.315	0.316	0.400	0.5%	< 30	77.3%	77.7%	50 - 150	
Pyrethrin (Summe)	2.726	3.343	3.388	0.413	7.0%	< 30	149.4%	160.2%	50 - 150	Q
Pyridaben	0.000	0.273	0.261	0.400	4.5%	< 30	68.2%	65.2%	50 - 150	
Spinosad	0.000	0.356	0.365	0.388	2.5%	< 30	91.8%	94.1%	50 - 150	
Spiromesifen	0.000	0.212	0.188	0.400	12.0%	< 30	53.1%	47.1%	50 - 150	Q
Spirotetramat	0.000	0.392	0.345	0.400	12.8%	< 30	98.1%	86.3%	50 - 150	
Spiroxamine	0.000	0.807	0.758	0.800	6.2%	< 30	100.8%	94.7%	50 - 150	
Tebuconazole	0.000	0.683	0.689	0.800	0.9%	< 30	85.3%	86.1%	50 - 150	
Thiacloprid	0.000	0.361	0.358	0.400	1.0%	< 30	90.4%	89.5%	50 - 150	
Thiamethoxam	0.000	0.391	0.381	0.400	2.6%	< 30	97.8%	95.3%	50 - 150	
Trifloxystrobin	0.000	0.311	0.305	0.400	2.0%	< 30	77.8%	76.2%	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.