

1808017-ORC

Sublime Solutions
 500 S. Danebo Street
 Eugene, OR 97402
 541-484-5770

Sample Type: Extracts
 Sample Date: 8/31/2018
 Analysis Date: 9/4/2018
 Report Date: 9/6/2018

Metric Batch ID:
 1A401030000697B000003738
 Client's Batch ID:
 Harvest/Process Date:

Report ID:
ZFRD-GNPB

Potency

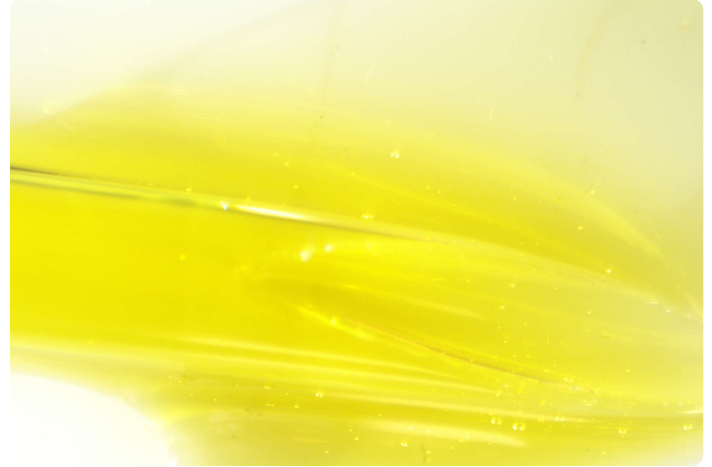
Method: EPA JAOAC 2015.1
 Potency Analysis Date: 9/5/2018
 Potency Batch ID: CAN_090518B

77.3%

Total
THC

ND



Total
CBD



Samples: TRP-NRH-MXD, DFF-CNF-FCP

Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	Unit: %
Δ9THC	Delta-9 Tetrahydrocannabinol	1.0	3.78	75.9	78.8	77.3	
THCA	Tetrahydrocannabinolic acid	1.0	0.00	ND	ND	ND	
CBD	Cannabidiol	1.0	0.00	ND	ND	ND	
CBDA	Cannabidiolic acid	1.0	0.00	ND	ND	ND	
Δ8THC	Delta-8 Tetrahydrocannabinol*	1.0	0.00	ND	ND	ND	
THCV	Tetrahydrocannabivarin*	1.0	0.00	ND	ND	ND	
CBG	Cannabigerol*	1.0	4.18	2.27	2.37	2.32	
CBGA	Cannabigerolic acid*	1.0	0.00	ND	ND	ND	
CBC	Cannabichromene*	1.0	0.00	<LOQ	<LOQ	<LOQ	
CBCA	Cannabichromenic acid*	1.0	0.00	ND	ND	ND	
CBN	Cannabinol	1.0	0.00	<LOQ	<LOQ	<LOQ	
Total THC	Δ9THC + (THCA × 0.877)		3.78	75.9	78.8	77.3	
Total CBD	CBD + (CBDA × 0.877)		0.00	ND	ND	ND	
Total			3.79	78.2	81.2	79.7	

Safety

Pesticides	Within limits	Analysis Date: 9/4/2018	Pass 
Solvents	Within limits	Analysis Date: 9/4/2018	Pass 
Potency	Within limits	Analysis Date: 9/5/2018	Pass 


 Ian Eustis
 Lab Director


 Aaron Troyer
 Chief Science Officer



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Pesticides Sample Data

Pesticides Analysis Date: 9/4/2018
 Pesticides Batch ID: PST_090418A

Method: EN 15662
 Unit: µg/g (ppm)

Pass 

Analyte	TRP-NRH-MXD	DFF-CNF-FCP	Limits	LOQ	Notes	Status	Analyte	TRP-NRH-MXD	DFF-CNF-FCP	Limits	LOQ	Notes	Status
Abamectin	<LQ	<LQ	0.5	0.1	-	Pass	Metalaxyl	<LQ	<LQ	0.2	0.1	-	Pass
Acephate	<LQ	<LQ	0.4	0.1	-	Pass	Methiocarb	<LQ	<LQ	0.2	0.1	-	Pass
Acequinocyl	<LQ	<LQ	2.0	1.0	-	Pass	Methomyl	<LQ	<LQ	0.4	0.1	-	Pass
Acetamiprid	<LQ	<LQ	0.2	0.1	-	Pass	Methyl Parathion	<LQ	<LQ	0.2	0.2	-	Pass
Aldicarb	<LQ	<LQ	0.4	0.1	-	Pass	MGK-264	<LQ	<LQ	0.2	0.2	-	Pass
Azoxystrobin	<LQ	<LQ	0.2	0.1	-	Pass	Myclobutanil	<LQ	<LQ	0.2	0.1	-	Pass
Bifenazate	<LQ	<LQ	0.2	0.1	-	Pass	Naled	<LQ	<LQ	0.5	0.2	-	Pass
Bifenthrin	<LQ	<LQ	0.2	0.1	-	Pass	Oxamyl	<LQ	<LQ	1.0	0.1	-	Pass
Boscalid	<LQ	<LQ	0.4	0.1	-	Pass	Paclobutrazol	<LQ	<LQ	0.4	0.1	-	Pass
Carbaryl	<LQ	<LQ	0.2	0.1	-	Pass	Permethrins	<LQ	<LQ	0.2	0.1	-	Pass
Carbofuran	<LQ	<LQ	0.2	0.1	-	Pass	Phosmet	<LQ	<LQ	0.2	0.1	-	Pass
Chlorantraniliprole	<LQ	<LQ	0.2	0.1	-	Pass	Piperonyl Butoxide	0.187	0.185	2.0	0.1	-	Pass
Chlorfenapyr	<LQ	<LQ	1.0	0.1	-	Pass	Prallethrin	<LQ	<LQ	0.2	0.1	-	Pass
Chlorpyrifos	<LQ	<LQ	0.2	0.1	-	Pass	Propiconazole	<LQ	<LQ	0.4	0.1	-	Pass
Clofentezine	<LQ	<LQ	0.2	0.1	-	Pass	Propoxur	<LQ	<LQ	0.2	0.1	-	Pass
Cyfluthrin	<LQ	<LQ	1.0	0.5	-	Pass	Pyrethrins	<LQ	<LQ	1.0	0.5	-	Pass
Cypermethrin	<LQ	<LQ	1.0	0.1	-	Pass	Pyridaben	<LQ	<LQ	0.2	0.1	-	Pass
Daminozide	<LQ	<LQ	1.0	0.5	-	Pass	Spinosad	<LQ	<LQ	0.2	0.1	-	Pass
Diazinon	<LQ	<LQ	0.2	0.1	-	Pass	Spiromesifen	<LQ	<LQ	0.2	0.1	-	Pass
Dichlorvos (DDVP)	<LQ	<LQ	1.0	0.5	-	Pass	Spirotetramat	<LQ	<LQ	0.2	0.1	-	Pass
Dimethoate	<LQ	<LQ	0.2	0.1	-	Pass	Spiroxamine	<LQ	<LQ	0.4	0.1	-	Pass
Ethoprophos	<LQ	<LQ	0.2	0.1	-	Pass	Tebuconazole	<LQ	<LQ	0.4	0.1	-	Pass
Etofenprox	<LQ	<LQ	0.4	0.1	-	Pass	Thiacloprid	<LQ	<LQ	0.2	0.1	-	Pass
Etoxazole	<LQ	<LQ	0.2	0.1	-	Pass	Thiamethoxam	<LQ	<LQ	0.2	0.1	-	Pass
Fenoxycarb	<LQ	<LQ	0.2	0.1	-	Pass	Trifloxystrobin	<LQ	<LQ	0.2	0.1	-	Pass
Fenpyroximate	<LQ	<LQ	0.4	0.1	-	Pass							
Fipronil	<LQ	<LQ	0.4	0.1	-	Pass							
Flonicamid	<LQ	<LQ	1.0	0.1	-	Pass							
Fludioxonil	<LQ	<LQ	0.4	0.1	-	Pass							
Hexythiazox	<LQ	<LQ	1.0	0.1	-	Pass							
Imazalil	<LQ	<LQ	0.2	0.1	-	Pass							
Imidacloprid	<LQ	<LQ	0.4	0.1	-	Pass							
Kresoxim-methyl	<LQ	<LQ	0.4	0.1	-	Pass							
Malathion	<LQ	<LQ	0.2	0.1	-	Pass							

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 Client's Batch ID:
 Harvest/Process Date:

Report ID:
ZFRD-GNPB



Pesticides QC Analysis Date: 9/4/2018
 Pesticides QC Batch ID: PST_090418A

Method: EN 15662
 Unit: µg/g (ppm)

Laboratory Pesticides Quality Control Results

Method: EN 15662				Units: ppm (µg/g)				Analysis date: 9/4/18				Batch ID: PST_090418A					
Pesticide	Blank			LCS	LCS	LCS%	Limits	Notes	Pesticide	Blank			LCS	LCS	LCS%	Limits	Notes
	Result	LOQ	Notes	Result	Spike	Rec				Result	Spike	Rec					
Abamectin	nd	0.1		0.8	1.0	78	50 - 150		Imazalil	nd	0.1		0.8	1.0	84	50 - 150	
Acephate	nd	0.1		1.2	1.0	124	50 - 150		Imidacloprid	nd	0.1		0.7	1.0	72	50 - 150	
Acequinocyl	nd	1.0		0.6	1.0	57	50 - 150		Kresoxim-methyl	nd	0.1		1.1	1.0	109	50 - 150	
Acetamiprid	nd	0.1		1.1	1.0	110	50 - 150		Malathion	nd	0.1		1.2	1.0	119	50 - 150	
Aldicarb	nd	0.1		0.9	1.0	95	50 - 150		Metalaxyl	nd	0.1		1.1	1.0	110	50 - 150	
Azoxystrobin	nd	0.1		1.1	1.0	113	50 - 150		Methiocarb	nd	0.1		1.2	1.0	125	50 - 150	
Bifenthrin	nd	0.1		0.9	1.0	87	50 - 150		Methomyl	nd	0.1		0.9	1.0	87	50 - 150	
Bifenazate	nd	0.1		0.8	1.0	83	50 - 150		Methyl Parathion	nd	0.1		0.5	1.0	55	30 - 150	
Boscalid	nd	0.1		1.2	1.0	117	50 - 150		MGK-264	nd	0.2		1.3	1.0	133	50 - 150	
Carbaryl	nd	0.1		1.2	1.0	124	50 - 150		Myclobutanil	nd	0.1		1.0	1.0	104	50 - 150	
Carbofuran	nd	0.1		1.0	1.0	100	50 - 150		Naled	nd	0.1		1.1	1.0	108	50 - 150	
Chlorantraniliprole	nd	0.1		1.5	1.0	145	50 - 150		Oxamyl	nd	0.1		1.0	1.0	96	50 - 150	
Chlorfenapyr	nd	0.1		0.9	1.0	87	50 - 150		Paclobutrazol	nd	0.1		1.0	1.0	95	50 - 150	
Chlorpyrifos	nd	0.1		1.1	1.0	107	50 - 150		Permethrin	nd	0.1		1.2	1.0	116	50 - 150	
Clofentezine	nd	0.1		0.9	1.0	86	50 - 150		Phosmet	nd	0.1		1.4	1.0	136	50 - 150	
Cyfluthrin	nd	0.5		0.8	1.0	84	50 - 150		Piperonyl Butoxide	nd	0.1		1.2	1.0	121	50 - 150	
Cypermethrin	nd	0.1		0.8	1.0	79	50 - 150		Prallethrin	nd	0.1		1.1	1.0	109	50 - 150	
Daminozide	nd	0.5		nd	1.0		10 - 150	LR	Propiconazole	nd	0.1		0.8	1.0	75	50 - 150	
Diazinon	nd	0.1		1.2	1.0	121	50 - 150		Propoxur	nd	0.1		1.0	1.0	98	50 - 150	
Dichlorvos	nd	0.5		1.2	1.0	119	50 - 150		Pyrethrins	nd	0.2		0.9	1.0	87	50 - 150	
Dimethoate	nd	0.1		1.1	1.0	107	50 - 150		Pyridaben	nd	0.1		1.2	1.0	122	50 - 150	
Ethoprophos	nd	0.1		1.1	1.0	108	50 - 150		Spinosad A kps	nd	0.1		0.6	1.0	57	50 - 150	
Etofenprox	nd	0.1		1.0	1.0	104	50 - 150		Spinosad D kps	nd	0.1		0.8	1.0	80	50 - 150	
Etoxazole	nd	0.1		1.1	1.0	112	50 - 150		Spiromesifen	nd	0.1		0.9	1.0	86	50 - 150	
Fenoxycarb	nd	0.1		1.1	1.0	111	50 - 150		Spirotetramat	nd	0.1		1.6	1.0	161	50 - 150	ME
Fenpyroximate	nd	0.1		1.1	1.0	111	50 - 150		Spiroxamine	nd	0.1		0.8	1.0	81	50 - 150	
Fipronil	nd	0.1		0.5	1.0	53	50 - 150		Tebuconazole	nd	0.1		0.8	1.0	84	50 - 150	
Flonicamid	nd	0.1		1.0	1.0	101	50 - 150		Thiacloprid	nd	0.1		1.2	1.0	119	50 - 150	
Fludioxonil	nd	0.1		1.1	1.0	108	50 - 150		Thiamethoxam	nd	0.1		1.2	1.0	118	50 - 150	
Hexythiazox	nd	0.1		1.0	1.0	105	50 - 150		Trifloxystrobin	nd	0.1		1.0	1.0	101	50 - 150	

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Residual Solvents Sample Data

Solvents Analysis Date: 9/4/2018
 Solvents Batch ID: RES_090418A

Method: EPA 5021A
 Unit: µg/g (ppm)

Pass 

Analyte	TRP-NRH-MXD	DFF-CNF-FCP	RPD (%)	Limits	LOQ	Notes	Status
1,4-Dioxane	<LOQ	<LOQ	0.00	300.0	50.0	-	Pass
2-Butanol	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
2-Ethoxyethanol	<LOQ	<LOQ	0.00	160.0	50.0	-	Pass
Acetone	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Acetonitrile	<LOQ	<LOQ	0.00	410.0	50.0	-	Pass
Benzene	<LOQ	<LOQ	0.00	2.0	2.0	-	Pass
Butanes	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Cumene	<LOQ	<LOQ	0.00	70.0	50.0	-	Pass
Cyclohexane	<LOQ	<LOQ	0.00	3880.0	50.0	-	Pass
Ethyl Acetate	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Ethyl Ether	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Ethylene Glycol	<LOQ	<LOQ	0.00	620.0	250.0	-	Pass
Ethylene Oxide	<LOQ	<LOQ	0.00	50.0	50.0	-	Pass
Heptane	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Hexanes	<LOQ	<LOQ	0.00	290.0	50.0	-	Pass
Isopropanol (2-Propanol)	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Isopropyl Acetate	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Methanol	<LOQ	<LOQ	0.00	3000.0	50.0	-	Pass
Dichloromethane	<LOQ	<LOQ	0.00	600.0	50.0	-	Pass
Pentanes	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Propane	<LOQ	<LOQ	0.00	5000.0	50.0	-	Pass
Tetrahydrofuran	<LOQ	<LOQ	0.00	720.0	50.0	-	Pass
Toluene	<LOQ	<LOQ	0.00	890.0	50.0	-	Pass
Xylenes	<LOQ	<LOQ	0.00	2170.0	50.0	-	Pass

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Residual Solvents Quality Control Data

Solvents QC Analysis Date: 9/4/2018
 Solvents QC Batch ID: RES_090418A

Method: EPA 5021A
 Unit: µg/g (ppm)

Laboratory Residual Solvent Quality Control Results

Method: EPA 5021A

Units: µg/mL

Batch ID: RES_090418A

Matrix Blank / LCS Results

Analyte	Blank Result	Blank Limit	Notes	LCS Result	LCS Spike	LCS% Rec	Limits	Notes
1,4-Dioxane	< LOQ	50		1207	1000	121	70 - 130	
2-Butanol	< LOQ	50		1161	1000	116	70 - 130	
2-Ethoxyethanol	< LOQ	50		1391	1000	139	70 - 130	ME
Acetone	< LOQ	50		1077	1000	108	70 - 130	
Acetonitrile	< LOQ	50		1156	1000	116	70 - 130	
Benzene	< LOQ	2		1124	1000	112	70 - 130	
Butanes								
<i>Butane</i>	< LOQ	50		987	1000	99	70 - 130	
<i>Isobutane</i>	< LOQ	50		1012	1000	101	70 - 130	
Cyclohexane	< LOQ	50		1085	1000	109	70 - 130	
Ethyl acetate	< LOQ	50		1102	1000	110	70 - 130	
Ethyl ether	< LOQ	50		1146	1000	115	70 - 130	
Ethylbenzene	< LOQ	50		1221	1000	122	70 - 130	
Ethylene glycol	< LOQ	250		2024	1000	202	70 - 130	ME
Ethylene oxide	< LOQ	50		988	1000	99	70 - 130	
Heptane	< LOQ	50		1010	1000	101	70 - 130	
Hexanes								
<i>n-Hexane</i>	< LOQ	50		1013	1000	101	70 - 130	
<i>2-Methylpentane</i>	< LOQ	50		1050	1000	105	70 - 130	
<i>3-Methylpentane</i>	< LOQ	50		1049	1000	105	70 - 130	
<i>2,2-Dimethylbutane</i>	< LOQ	50		1083	1000	108	70 - 130	
<i>2,3-Dimethylbutane</i>	< LOQ	50		1047	1000	105	70 - 130	
Isopropanol	< LOQ	50		1167	1000	117	70 - 130	
Isopropyl acetate	< LOQ	50		1131	1000	113	70 - 130	
Cumene	< LOQ	50		1239	1000	124	70 - 130	
Methanol	< LOQ	50		1234	1000	123	70 - 130	
Dichloromethane	< LOQ	50		1107	1000	111	70 - 130	
Pentanes								
<i>Pentane</i>	< LOQ	50		982	1000	98	70 - 130	
<i>Isopentane</i>	< LOQ	50		1013	1000	101	70 - 130	
<i>Neopentane</i>	< LOQ	50		1092	1000	109	70 - 130	
Propane	< LOQ	50		1035	1000	104	70 - 130	
Tetrahydrofuran	< LOQ	50		1098	1000	110	70 - 130	
Toluene	< LOQ	50		1172	1000	117	70 - 130	
Xylenes								
<i>m-Xylene</i>	< LOQ	50		1275	1000	128	70 - 130	
<i>o/p-Xylene</i>	< LOQ	50		1201	1000	120	70 - 130	

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Qualifier Flag Descriptions

J	Reported result is an estimate - the value is less than the minimum calibration level but greater than the estimated detection limit (EDL)
U	The analyte was not detected in the sample at the estimated detection limit (EDL)
E	Exceeds calibration range
D	Dilution data - result was obtained from the analysis of a dilution
B	Analyte found in sample and associated blank
C	Co-eluting compound
R	Relative Percent Difference (RPD) outside control limits
NR	Analyte not reported because of problems in sample preparation or analysis
ND	Non-Detect
X	Results from reinjection/repeat/re-column data
EMC	Estimated maximum possible concentration - indicates that a peak is detected but did not meet the method required criteria
M	Manual integration
PS	Peaks split
HB	Control acceptance criteria are exceeded high and the associated sample is below the detection limit
LB	Control acceptance criteria are exceeded low and the associated sample exceeds the regulatory limit
ME	Marginal Exceedance
LR	Low Recovery Analyte
LOQ	Limit of Quantitation