

# 1811002-ORC

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

Sample Type: Extracts  
 Sample Date: 11/8/2018  
 Analysis Date: 11/9/2018  
 Report Date: 11/14/2018

Metric Batch ID:  
 1A401030000697B000004078  
 Client's Batch ID:  
 Harvest/Process Date:

Report ID:  
**LS-181114-3**

## Potency

Method: JAOAC 2015.1  
 Potency Analysis Date: 11/9/2018  
 Potency Batch ID: CAN\_110918B

# 92.6%

Total  
THC

# ND




Total  
CBD



Samples: TCX-BBS-THW, CWP-BPX-DPG

Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	Unit: %
<b>Δ9THC</b>	Delta-9 Tetrahydrocannabinol	1.0	0.828	92.2	92.9	92.6	
<b>THCA</b>	Tetrahydrocannabinolic acid	1.0	0.00	ND	ND	ND	
<b>CBD</b>	Cannabidiol	1.0	0.00	ND	ND	ND	
<b>CBDA</b>	Cannabidiolic acid	1.0	0.00	ND	ND	ND	
<b>Δ8THC</b>	Delta-8 Tetrahydrocannabinol*	1.0	0.00	ND	ND	ND	
<b>THCV</b>	Tetrahydrocannabivarin*	1.0	0.00	ND	ND	ND	
<b>CBG</b>	Cannabigerol*	1.0	0.670	2.86	2.88	2.87	
<b>CBGA</b>	Cannabigerolic acid*	1.0	0.00	ND	ND	ND	
<b>CBC</b>	Cannabichromene*	1.0	0.00	ND	ND	ND	
<b>CBCA</b>	Cannabichromenic acid*	1.0	0.00	ND	ND	ND	
<b>CBN</b>	Cannabinol	1.0	0.00	<LOQ	<LOQ	<LOQ	
<b>Total THC</b>	Δ9THC + (THCA × 0.877)		0.828	92.2	92.9	92.6	
<b>Total CBD</b>	CBD + (CBDA × 0.877)		0.00	ND	ND	ND	
<b>Total</b>			0.783	95.0	95.8	95.4	

## Safety

Pesticides	Within limits	Analysis Date: 11/12/2018	Pass 
Solvents	Within limits	Analysis Date: 11/13/2018	Pass 
Potency	Within limits	Analysis Date: 11/9/2018	Pass 

  
 Ian Eustis  
 Lab Director

  
 Aaron Troyer  
 Chief Science Officer



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Pesticides Analysis Date: 11/12/2018  
 Pesticides Batch ID: PST\_111218A

Method: EN 15662  
 Unit: µg/g (ppm)

Pass 

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



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**LS-181114-3**

## Pesticides Quality Control Data

Pesticides QC Analysis Date: 11/12/2018  
 Pesticides QC Batch ID: PST\_111218A

Method: EN 15662  
 Unit: µg/g (ppm)

### Laboratory Pesticides Quality Control Results

Method: EN 15662				Units: ppm (µg/g)				Analysis date: 11/12/18				Batch ID: PST_111218A					
Pesticide	Blank			LCS Result	LCS Spike	LCS% Rec	Limits	Notes	Pesticide	Blank			LCS Result	LCS Spike	LCS% Rec	Limits	Notes
	Result	LOQ	Notes							Result	LOQ	Notes					
Abamectin	nd	0.1		1.0	1.0	96	50 - 150		Imazalil	nd	0.1		0.9	1.0	88	50 - 150	
Acephate	nd	0.1		1.1	1.0	108	50 - 150		Imidacloprid	nd	0.1		1.0	1.0	104	50 - 150	
Acequinocyl	nd	1.0		0.9	1.0	91	50 - 150		Kresoxim-methyl	nd	0.1		1.0	1.0	104	50 - 150	
Acetamiprid	nd	0.1		1.0	1.0	104	50 - 150		Malathion	nd	0.1		0.8	1.0	79	50 - 150	
Aldicarb	nd	0.1		1.2	1.0	116	50 - 150		Metalaxyl	nd	0.1		1.1	1.0	108	50 - 150	
Azoxystrobin	nd	0.1		0.9	1.0	92	50 - 150		Methiocarb	nd	0.1		1.0	1.0	102	50 - 150	
Bifenthrin	nd	0.1		1.0	1.0	100	50 - 150		Methomyl	nd	0.1		1.1	1.0	112	50 - 150	
Bifenazate	nd	0.1		0.9	1.0	86	50 - 150		Methyl Parathion	nd	0.1		0.6	1.0	59	30 - 150	
Boscalid	nd	0.1		1.3	1.0	131	50 - 150		MGK-264	nd	0.2		2.0	1.0	<b>201</b>	50 - 150	HB
Carbaryl	nd	0.1		0.9	1.0	95	50 - 150		Myclobutanil	nd	0.1		1.0	1.0	105	50 - 150	
Carbofuran	nd	0.1		1.0	1.0	104	50 - 150		Naled	nd	0.1		0.6	1.0	62	50 - 150	
Chlorantraniliprole	nd	0.1		0.8	1.0	83	50 - 150		Oxamyl	nd	0.1		1.1	1.0	114	50 - 150	
Chlorfenapyr	nd	0.1		1.0	1.0	99	50 - 150		Paclobutrazol	nd	0.1		0.9	1.0	86	50 - 150	
Chlorpyrifos	nd	0.1		1.1	1.0	114	50 - 150		Permethrin	nd	0.1		1.1	1.0	112	50 - 150	
Clofentezine	nd	0.1		0.9	1.0	86	50 - 150		Phosmet	nd	0.1		1.1	1.0	106	50 - 150	
Cyfluthrin	nd	0.5		1.2	1.0	122	50 - 150		Piperonyl Butoxide	nd	0.1		1.0	1.0	98	50 - 150	
Cypermethrin	nd	0.1		1.1	1.0	105	50 - 150		Prallethrin	nd	0.1		1.0	1.0	103	50 - 150	
Daminozide	nd	0.5		nd	1.0		10 - 150	LR	Propiconazole	nd	0.1		1.1	1.0	108	50 - 150	
Diazinon	nd	0.1		1.0	1.0	95	50 - 150		Propoxur	nd	0.1		0.9	1.0	94	50 - 150	
Dichlorvos	nd	0.5		1.4	1.0	143	50 - 150		Pyrethrins	nd	0.2		1.0	1.0	103	50 - 150	
Dimethoate	nd	0.1		1.2	1.0	121	50 - 150		Pyridaben	nd	0.1		0.9	1.0	88	50 - 150	
Ethoprophos	nd	0.1		1.1	1.0	110	50 - 150		Spinosad A kps	nd	0.1		0.8	1.0	82	50 - 150	
Etofenprox	nd	0.1		1.0	1.0	97	50 - 150		Spinosad D kps	nd	0.1		0.7	1.0	74	50 - 150	
Etoxazole	nd	0.1		1.0	1.0	104	50 - 150		Spiromesifen	nd	0.1		1.2	1.0	119	50 - 150	
Fenoxycarb	nd	0.1		1.0	1.0	96	50 - 150		Spirotetramat	nd	0.1		0.9	1.0	87	50 - 150	
Fenpyroximate	nd	0.1		0.9	1.0	92	50 - 150		Spiroxamine	nd	0.1		0.8	1.0	77	50 - 150	
Fipronil	nd	0.1		0.9	1.0	85	50 - 150		Tebuconazole	nd	0.1		0.8	1.0	84	50 - 150	
Flonicamid	nd	0.1		1.4	1.0	141	50 - 150		Thiacloprid	nd	0.1		0.9	1.0	88	50 - 150	
Fludioxonil	nd	0.1		1.3	1.0	133	50 - 150		Thiamethoxam	nd	0.1		1.0	1.0	98	50 - 150	
Hexythiazox	nd	0.1		1.0	1.0	97	50 - 150		Trifloxystrobin	nd	0.1		1.0	1.0	95	50 - 150	

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Report ID:  
**LS-181114-3**

## Residual Solvents Sample Data

Solvents Analysis Date: 11/13/2018  
 Solvents Batch ID: RES\_111218A

Method: EPA 5021A  
 Unit: µg/g (ppm)

Pass 

Analyte	TCX-BBS-THW	CWP-BPX-DPG	RPD (%)	Limits	LOQ	Notes	Status
1,4-Dioxane	<LOQ	<LOQ	0.00	380.0	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: 11/13/2018  
 Solvents QC Batch ID: RES\_111218A

Method: EPA 5021A  
 Unit: µg/g (ppm)

### Laboratory Residual Solvent Quality Control Results

Method: EPA 5021A Units: µg/mL Batch ID: RES\_111218A

#### Matrix Blank / LCS Results

Analyte	Blank Result	Blank Limit	Notes	LCS Result	LCS Spike	LCS% Rec	Limits	Notes
1,4-Dioxane	< LOQ	50		1096	1000	110	70 - 130	
2-Butanol	< LOQ	50		1042	1000	104	70 - 130	
2-Ethoxyethanol	< LOQ	50		1234	1000	123	70 - 130	
Acetone	< LOQ	50		970	1000	97	70 - 130	
Acetonitrile	< LOQ	50		1068	1000	107	70 - 130	
Benzene	< LOQ	2		19	20	95	70 - 130	
Butanes								
<i>Butane</i>	< LOQ	50		754	1000	75	70 - 130	
<i>Isobutane</i>	< LOQ	50		762	1000	76	70 - 130	
Cyclohexane	< LOQ	50		946	1000	95	70 - 130	
Ethyl acetate	< LOQ	50		1000	1000	100	70 - 130	
Ethyl ether	< LOQ	50		993	1000	99	70 - 130	
Ethylbenzene	< LOQ	50		1093	1000	109	70 - 130	
Ethylene glycol	< LOQ	250		1588	1000	<b>159</b>	70 - 130	HB
Ethylene oxide	< LOQ	50		875	1000	87	70 - 130	
Heptane	< LOQ	50		894	1000	89	70 - 130	
Hexanes								
<i>n-Hexane</i>	< LOQ	50		897	1000	90	70 - 130	
<i>2-Methylpentane</i>	< LOQ	50		887	1000	89	70 - 130	
<i>3-Methylpentane</i>	< LOQ	50		914	1000	91	70 - 130	
<i>2,2-Dimethylbutane</i>	< LOQ	50		935	1000	94	70 - 130	
<i>2,3-Dimethylbutane</i>	< LOQ	50		937	1000	94	70 - 130	
Isopropanol	< LOQ	50		1066	1000	107	70 - 130	
Isopropyl acetate	< LOQ	50		1032	1000	103	70 - 130	
Cumene	< LOQ	50		1070	1000	107	70 - 130	
Methanol	< LOQ	50		1136	1000	114	70 - 130	
Dichloromethane	< LOQ	50		1016	1000	102	70 - 130	
Pentanes								
<i>Pentane</i>	< LOQ	50		839	1000	84	70 - 130	
<i>Isopentane</i>	< LOQ	50		846	1000	85	70 - 130	
<i>Neopentane</i>	< LOQ	50		832	1000	83	70 - 130	
Propane	< LOQ	50		728	1000	73	70 - 130	
Tetrahydrofuran	< LOQ	50		976	1000	98	70 - 130	
Toluene	< LOQ	50		1055	1000	105	70 - 130	
Xylenes								
<i>m-Xylene</i>	< LOQ	50		1119	1000	112	70 - 130	
<i>o/p-Xylene</i>	< LOQ	50		1103	1000	110	70 - 130	

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## Qualifier Flag Descriptions

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