LIGHTSCALE LABS

2535 N Ross Ave
Portland, OR 97227
(503) 493-2535

info@lightscale.com
ORELAP #4112
OLCC #010-1003340D344

180801-ORC

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

Sample Type: Extracts
Sample Date: 8/6/2018
Analysis Date: 8/6/2018
Report Date: 8/8/2018

Metrc Batch ID:
1A4010300006978000003561
Client's Batch ID:
Harvest/Process Date:

Report ID:
XBRC-HJPN

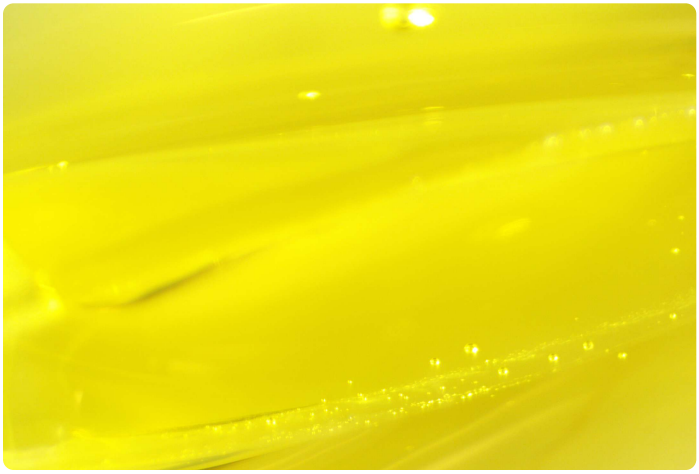
Potency

Method: EPA JAOAC 2015.1
Potency Analysis Date: 8/6/2018
Potency Batch ID: CAN_080618C

69.5% Total THC

<LOQ Total CBD

Samples: MHB-ZMJ-DBZ, ZTC-RNB-NMS



Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	Unit: %
Δ9THC	Delta-9 Tetrahydrocannabinol	1.0	7.92	66.8	72.3	69.5	
THCA	Tetrahydrocannabinolic acid	1.0	0.00	ND	ND	ND	
CBD	Cannabidiol	1.0	0.00	<LOQ	<LOQ	<LOQ	
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	7.45	4.00	4.31	4.15	
CBGA	Cannabigerolic acid*	1.0	0.00	ND	ND	ND	
CBC	Cannabichromene*	1.0	5.86	1.19	1.27	1.23	
CBCA	Cannabichromenic acid*	1.0	0.00	ND	ND	ND	
CBN	Cannabinol	1.0	6.32	1.12	1.19	1.16	
Total THC	Δ9THC + (THCA × 0.877)		7.92	66.8	72.3	69.5	
Total CBD	CBD + (CBDA × 0.877)		0.00	<LOQ	<LOQ	<LOQ	
Total			7.84	73.1	79.0	76.1	

Safety

Pesticides	Within limits	**Analysis Date:** 8/6/2018	Pass
Solvents	Within limits	**Analysis Date:** 8/7/2018	Pass
Potency	Within limits	**Analysis Date:** 8/6/2018	Pass

Ian Eustis
Lab Director

Aaron Troyer
Chief Science Officer

XBRC-HJPN

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Report ID:
XBRC-HJPN

Pesticides
Sample Data

Pesticides Analysis Date: 8/6/2018
Pesticides Batch ID: PST_080618A

Method: EN 15662
Unit: µg/g (ppm)

Pass

Analyte	MHB-ZMJ-DBZ	ZTC-RNB-NMS	Limits	LOQ	Notes	Status
Abamectin	<LOQ	<LOQ	0.5	0.1	-	Pass
Acephate	<LOQ	<LOQ	0.4	0.1	-	Pass
Acequinocyl	<LOQ	<LOQ	2.0	1.0	-	Pass
Acetamiprid	<LOQ	<LOQ	0.2	0.1	-	Pass
Aldicarb	<LOQ	<LOQ	0.4	0.1	-	Pass
Azoxystrobin	<LOQ	<LOQ	0.2	0.1	-	Pass
Bifenazate	<LOQ	<LOQ	0.2	0.1	-	Pass
Bifenthrin	<LOQ	<LOQ	0.2	0.1	-	Pass
Boscalid	<LOQ	<LOQ	0.4	0.1	-	Pass
Carbaryl	<LOQ	<LOQ	0.2	0.1	-	Pass
Carbofuran	<LOQ	<LOQ	0.2	0.1	-	Pass
Chlorantraniliprole	<LOQ	<LOQ	0.2	0.1	-	Pass
Chlorfenapyr	<LOQ	<LOQ	1.0	0.1	-	Pass
Chlorpyrifos	<LOQ	<LOQ	0.2	0.1	-	Pass
Clofentezine	<LOQ	<LOQ	0.2	0.1	-	Pass
Cyfluthrin	<LOQ	<LOQ	1.0	0.5	-	Pass
Cypermethrin	<LOQ	<LOQ	1.0	0.1	-	Pass
Daminozide	<LOQ	<LOQ	1.0	0.5	-	Pass
Diazinon	<LOQ	<LOQ	0.2	0.1	-	Pass
Dichlorvos (DDVP)	<LOQ	<LOQ	1.0	0.5	-	Pass
Dimethoate	<LOQ	<LOQ	0.2	0.1	-	Pass
Ethoprophos	<LOQ	<LOQ	0.2	0.1	-	Pass
Etofenprox	<LOQ	<LOQ	0.4	0.1	-	Pass
Etoxazole	<LOQ	<LOQ	0.2	0.1	-	Pass
Fenoxycarb	<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

Analyte	MHB-ZMJ-DBZ	ZTC-RNB-NMS	Limits	LOQ	Notes	Status
Metalaxyl	<LOQ	<LOQ	0.2	0.1	-	Pass
Methiocarb	<LOQ	<LOQ	0.2	0.1	-	Pass
Methomyl	<LOQ	<LOQ	0.4	0.1	-	Pass
Methyl Parathion	<LOQ	<LOQ	0.2	0.2	-	Pass
MGK-264	<LOQ	<LOQ	0.2	0.2	-	Pass
Myclobutanil	<LOQ	<LOQ	0.2	0.1	-	Pass
Naled	<LOQ	<LOQ	0.5	0.2	-	Pass
Oxamyl	<LOQ	<LOQ	1.0	0.1	-	Pass
Paclobutrazol	<LOQ	<LOQ	0.4	0.1	-	Pass
Permethrins	<LOQ	<LOQ	0.2	0.1	-	Pass
Phosmet	<LOQ	<LOQ	0.2	0.1	-	Pass
Piperonyl Butoxide	<LOQ	<LOQ	2.0	0.1	-	Pass
Prallethrin	<LOQ	<LOQ	0.2	0.1	-	Pass
Propiconazole	<LOQ	<LOQ	0.4	0.1	-	Pass
Propoxur	<LOQ	<LOQ	0.2	0.1	-	Pass
Pyrethrins	<LOQ	<LOQ	1.0	0.5	-	Pass
Pyridaben	<LOQ	<LOQ	0.2	0.1	-	Pass
Spinosad	<LOQ	<LOQ	0.2	0.1	-	Pass
Spiromesifen	<LOQ	<LOQ	0.2	0.1	-	Pass
Spirotetramat	<LOQ	<LOQ	0.2	0.1	-	Pass
Spiroxamine	<LOQ	<LOQ	0.4	0.1	-	Pass
Tebuconazole	<LOQ	<LOQ	0.4	0.1	-	Pass
Thiacloprid	<LOQ	<LOQ	0.2	0.1	-	Pass
Thiamethoxam	<LOQ	<LOQ	0.2	0.1	-	Pass
Trifloxystrobin	<LOQ	<LOQ	0.2	0.1	-	Pass

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Client's Batch ID:
Harvest/Process Date:

Report ID:
XBRC-HJPN

Pesticides Quality Control Data

Pesticides QC Analysis Date: 8/6/2018
Pesticides QC Batch ID: PST_080618A

Method: EN 15662
Unit: µg/g (ppm)

Laboratory Pesticides Quality Control Results

Method: **EN 15662** | Units: ppm (µg/g) | Analysis date: 8/6/18 | Batch ID: PST_080618A

Pesticide	Blank Result	LOQ	Notes	LCS Result	LCS Spike	LCS% Rec	Limits	Notes
Abamectin	nd	0.1		0.9	1.0	85	50 - 150	
Acephate	nd	0.1		1.2	1.0	122	50 - 150	
Acequinocyl	nd	1.0		0.7	1.0	71	50 - 150	
Acetamiprid	nd	0.1		1.0	1.0	101	50 - 150	
Aldicarb	nd	0.1		1.0	1.0	96	50 - 150	
Azoxystrobin	nd	0.1		1.2	1.0	119	50 - 150	
Bifenthrin	nd	0.1		1.0	1.0	100	50 - 150	
Bifenazate	nd	0.1		0.7	1.0	66	50 - 150	
Boscalid	nd	0.1		0.6	1.0	59	50 - 150	
Carbaryl	nd	0.1		1.1	1.0	106	50 - 150	
Carbofuran	nd	0.1		1.0	1.0	101	50 - 150	
Chlorantraniliprole	nd	0.1		1.0	1.0	104	50 - 150	
Chlorfenapyr	nd	0.1		0.9	1.0	94	50 - 150	
Chlorpyrifos	nd	0.1		1.1	1.0	113	50 - 150	
Clofentezine	nd	0.1		0.9	1.0	89	50 - 150	
Cyfluthrin	nd	0.5		1.1	1.0	114	50 - 150	
Cypermethrin	nd	0.1		1.1	1.0	106	50 - 150	
Daminozide	nd	0.5		0.1	1.0	6	10 - 150	
Diazinon	nd	0.1		1.2	1.0	120	50 - 150	
Dichlorvos	nd	0.5		1.1	1.0	111	50 - 150	
Dimethoate	nd	0.1		1.0	1.0	99	50 - 150	
Ethoprophos	nd	0.1		0.7	1.0	73	50 - 150	
Etofenprox	nd	0.1		1.1	1.0	107	50 - 150	
Etoxazole	nd	0.1		1.0	1.0	105	50 - 150	
Fenoxycarb	nd	0.1		1.1	1.0	108	50 - 150	
Fenpyroximate	nd	0.1		1.0	1.0	101	50 - 150	
Fipronil	nd	0.1		0.8	1.0	78	50 - 150	
Flonicamid	nd	0.1		0.9	1.0	94	50 - 150	
Fludioxonil	nd	0.1		0.9	1.0	93	50 - 150	
Hexythiazox	nd	0.1		1.0	1.0	99	50 - 150	
Imazalil	nd	0.1		1.0	1.0	99	50 - 150	
Imidacloprid	nd	0.1		0.9	1.0	90	50 - 150	
Kresoxim-methyl	nd	0.1		1.2	1.0	117	50 - 150	
Malathion	nd	0.1		1.2	1.0	121	50 - 150	
Metalaxyl	nd	0.1		1.1	1.0	114	50 - 150	
Methiocarb	nd	0.1		1.1	1.0	112	50 - 150	
Methomyl	nd	0.1		0.9	1.0	90	50 - 150	
Methyl Parathion	nd	0.1		1.0	1.0	97	30 - 150	
MGK-264	nd	0.2		1.3	1.0	125	50 - 150	
Myclobutanil	nd	0.1		1.1	1.0	107	50 - 150	
Naled	nd	0.1		0.9	1.0	94	50 - 150	
Oxamyl	nd	0.1		0.9	1.0	92	50 - 150	
Paclobutrazol	nd	0.1		0.6	1.0	55	50 - 150	
Permethrin	nd	0.1		1.0	1.0	100	50 - 150	
Phosmet	nd	0.1		1.1	1.0	108	50 - 150	
Piperonyl Butoxide	nd	0.1		1.1	1.0	112	50 - 150	
Prallethrin	nd	0.1		1.0	1.0	103	50 - 150	
Propiconazole	nd	0.1		1.1	1.0	108	50 - 150	
Propoxur	nd	0.1		1.0	1.0	97	50 - 150	
Pyrethrins	nd	0.2		0.9	1.0	87	50 - 150	
Pyridaben	nd	0.1		1.0	1.0	103	50 - 150	
Spinosad A kps	nd	0.1		0.7	1.0	65	50 - 150	
Spinosad D kps	nd	0.1		0.6	1.0	62	50 - 150	
Spiromesifen	nd	0.1		1.0	1.0	97	50 - 150	
Spirotetramat	nd	0.1		1.2	1.0	121	50 - 150	
Spiroxamine	nd	0.1		0.6	1.0	64	50 - 150	
Tebuconazole	nd	0.1		1.1	1.0	112	50 - 150	
Thiacloprid	nd	0.1		1.1	1.0	111	50 - 150	
Thiamethoxam	nd	0.1		0.9	1.0	89	50 - 150	
Trifloxystrobin	nd	0.1		1.1	1.0	105	50 - 150	

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1A4010300006978000003561
Client's Batch ID:
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Report ID:
XBRC-HJPN

Residual Solvents
Sample Data

Solvents Analysis Date: 8/7/2018
Solvents Batch ID: RES_080718A

Method: EPA 5021A
Unit: µg/g (ppm)

Pass

Analyte	MHB-ZMJ-DBZ	ZTC-RNB-NMS	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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XBRC-HJPN

Residual Solvents Quality Control Data

Solvents QC Analysis Date: 8/7/2018
Solvents QC Batch ID: RES_080718A

Method: EPA 5021A
Unit: µg/g (ppm)

Laboratory Residual Solvent Quality Control Results

Method: **EPA 5021A** | Units: **ug/mL** | Batch ID: RES_080718A

Matrix Blank / LCS Results

Analyte	Blank Result	Blank Limit	Notes	LCS Result	LCS Spike	LCS% Rec	Limits	Notes
1,4-Dioxane	< LOQ	50		930	1000	93	70 - 130	
2-Butanol	< LOQ	50		894	1000	89	70 - 130	
2-Ethoxyethanol	< LOQ	50		1021	1000	102	70 - 130	
Acetone	< LOQ	50		849	1000	85	70 - 130	
Acetonitrile	< LOQ	50		869	1000	87	70 - 130	
Benzene	< LOQ	2		17	20	85	70 - 130	
Butanes								
Butane	< LOQ	50		816	1000	82	70 - 130	
Isobutane	< LOQ	50		834	1000	83	70 - 130	
Cyclohexane	< LOQ	50		872	1000	87	70 - 130	
Ethyl acetate	< LOQ	50		857	1000	86	70 - 130	
Ethyl ether	< LOQ	50		898	1000	90	70 - 130	
Ethylbenzene	< LOQ	50		950	1000	95	70 - 130	
Ethylene glycol	< LOQ	250		1257	1000	126	70 - 130	
Ethylene oxide	< LOQ	50		807	1000	81	70 - 130	
Heptane	< LOQ	50		841	1000	84	70 - 130	
Hexanes								
n-Hexane	< LOQ	50		854	1000	85	70 - 130	
2-Methylpentane	< LOQ	50		894	1000	89	70 - 130	
3-Methylpentane	< LOQ	50		873	1000	87	70 - 130	
2,2-Dimethylbutane	< LOQ	50		866	1000	87	70 - 130	
2,3-Dimethylbutane	< LOQ	50		944	1000	94	70 - 130	
Isopropanol	< LOQ	50		902	1000	90	70 - 130	
Isopropyl acetate	< LOQ	50		880	1000	88	70 - 130	
Cumene	< LOQ	50		935	1000	94	70 - 130	
Methanol	< LOQ	50		927	1000	93	70 - 130	
Dichloromethane	< LOQ	50		870	1000	87	70 - 130	
Pentanes								
Pentane	< LOQ	50		831	1000	83	70 - 130	
Isopentane	< LOQ	50		827	1000	83	70 - 130	
Neopentane	< LOQ	50		877	1000	88	70 - 130	
Propane	< LOQ	50		845	1000	84	70 - 130	
Tetrahydrofuran	< LOQ	50		852	1000	85	70 - 130	
Toluene	< LOQ	50		920	1000	92	70 - 130	
Xylenes								
m-Xylene	< LOQ	50		991	1000	99	70 - 130	
o/p-Xylene	< LOQ	50		947	1000	95	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