LIGHTSCALE LABS

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

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

428 - Agent Orange RCO 5.7.20

Farmer's Friend Extracts
6451 NE Colwood Wy
Portland, OR 97218
503-442-8653

Sample Type: Extracts
Sample Date: 5/11/2020
Analysis Date: 5/15/2020
Report Date: 5/18/2020

Metrc Batch ID:
1A4010300016315000024735
Metrc Sample ID:
1A4010300016315000024768

Harvest/Process Date: 5/7/2020
Report ID: LS-200518-3
Sample Plan ID:SP-200511-2-A
Sample Procedure: 160721_LAB-SOP_SampleCollection-v008

Potency

Potency Analysis Date: 5/15/2020
Potency Batch ID: CAN_051520D
Potency Method: JAOAC 2015.1

90.0% Total THC

<LOQ Total CBD

Samples: ZDB-ZJT-FRB, BTN-ZJT-TJB

Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	Unit: %
Δ9THC	Delta-9 Tetrahydrocannabinol	0.16	0.103	89.9	90.0	90.0	
THCA	Tetrahydrocannabinolic acid	0.16	0.00	ND	ND	ND	
CBD	Cannabidiol	0.16	0.00	ND	<LOQ	<LOQ	
CBDA	Cannabidiolic acid	0.16	0.00	ND	<LOQ	<LOQ	
Δ8THC	Delta-8 Tetrahydrocannabinol*	0.16	0.00	ND	ND	ND	
THCV	Tetrahydrocannabivarin*	0.16	14.2	0.620	0.714	0.667	
CBG	Cannabigerol*	0.16	10.9	2.54	2.83	2.69	
CBGA	Cannabigerolic acid*	0.16	0.00	ND	<LOQ	<LOQ	
CBC	Cannabichromene*	0.16	13.3	0.891	1.02	0.955	
CBCA	Cannabichromenic acid*	0.16	0.00	ND	ND	ND	
CBN	Cannabinol	0.16	50.3	0.235	0.394	0.314	
Total THC	Δ9THC + (THCA × 0.877)		0.103	89.9	90.0	90.0	
Total CBD	CBD + (CBDA × 0.877)		0.00	ND	<LOQ	<LOQ	
Total			0.278	94.2	95.0	94.6	

Compliance

Pesticides	Within limits	**Analysis Date:** 5/15/2020	Pass
Solvents	Within limits	**Analysis Date:** 5/15/2020	Pass
Potency	Within limits	**Analysis Date:** 5/15/2020	Pass

Bryce Kidd, Ph.D.
Lab Director

Aaron Troyer
Chief Science Officer

LS-200518-3

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Terpenes*
Sample Data

Terpene Analysis Date: 5/15/2020
Terpene Batch ID: TRP_051520A

Method: JAOAC 2015.1
Unit: %

Analyte	Avg.	Notes
β-Caryophyllene	0.620%	
Humulene	0.195%	
Linalool	0.125%	
Guaiol	0.0729%	
α-Bisabolol	0.0700%	
Caryophyllene Oxide	0.0388%	
α-Terpineol	0.0344%	
Selinadiene	0.0262%	
Fenchol	0.0197%	
Limonene	0.0186%	
β-Myrcene	0.0107%	
β-Farnesene 2	0.00737%	
β-Pinene	0.00496%	
Terpinolene	0.00467%	
Sabinene	0.00434%	
Borneol	0.00381%	
β-Ocimene	0.00333%	
α-Pinene	0.00232%	
Eucalyptol	0.00115%	
Fenchone	0.000959%	
α-Terpinene	0.000844%	
γ-Terpinene	0.000545%	
Camphene	0.000466%	
Δ3-Carene	0.000415%	
Azulene	ND	
Camphore	ND	
Cedrol	ND	
Cymene	ND	
Geraniol	ND	

Analyte	Avg.	Notes
Geranyl Acetate	ND	
Isoborneol	ND	
Isopulegol	ND	
Nerol	ND	
Pulegone	ND	
Sabinene Hydrate	ND	
Valencene	ND	
cis-Nerolidol	ND	
trans-Nerolidol	ND	
α-Cedrene	ND	
α-Ocimene	ND	
α-Phellandrene	ND	
β-Farnesene 1	ND	
γ-Terpineol	ND	
Total	1.27%	

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Sample Procedure: 160721_LAB-SOP_SampleCollection-v008

Pesticides
Sample Data

Pesticides Analysis Date: 5/15/2020
Pesticides Batch ID: PST_051520A

Method: EN 15662
Unit: µg/g (ppm)

Pass

Analyte	ZDB-ZJT-FRB	BTN-ZJT-TJB	Limits	LOQ	Notes	Status
Abamectin	ND	ND	0.5	0.1		Pass
Acephate	ND	ND	0.4	0.1		Pass
Acequinocyl	ND	ND	2.0	1.5		Pass
Acetamiprid	ND	ND	0.2	0.1		Pass
Aldicarb	ND	ND	0.4	0.1		Pass
Azoxystrobin	ND	ND	0.2	0.1		Pass
Bifenazate	ND	ND	0.2	0.1		Pass
Bifenthrin	ND	ND	0.2	0.1		Pass
Boscalid	ND	ND	0.4	0.1		Pass
Carbaryl	ND	ND	0.2	0.1		Pass
Carbofuran	ND	ND	0.2	0.1		Pass
Chlorantraniliprole	ND	ND	0.2	0.1		Pass
Chlorfenapyr	ND	ND	1.0	0.1		Pass
Chlorpyrifos	ND	ND	0.2	0.1		Pass
Clofentezine	ND	ND	0.2	0.1		Pass
Cyfluthrin	ND	ND	1.0	0.5		Pass
Cypermethrin	ND	ND	1.0	0.1		Pass
Daminozide	ND	ND	1.0	0.5		Pass
Diazinon	ND	ND	0.2	0.1		Pass
Dichlorvos (DDVP)	ND	ND	1.0	0.5		Pass
Dimethoate	ND	ND	0.2	0.1		Pass
Ethoprophos	ND	ND	0.2	0.1		Pass
Etofenprox	ND	ND	0.4	0.1		Pass
Etoxazole	ND	ND	0.2	0.1		Pass
Fenoxycarb	ND	ND	0.2	0.1		Pass
Fenpyroximate	ND	ND	0.4	0.1		Pass
Fipronil	ND	ND	0.4	0.1		Pass
Flonicamid	ND	ND	1.0	0.1		Pass
Fludioxonil	ND	ND	0.4	0.1		Pass
Hexythiazox	ND	ND	1.0	0.1		Pass
Imazalil	ND	ND	0.2	0.1		Pass
Imidacloprid	ND	ND	0.4	0.1		Pass
Kresoxim-methyl	ND	ND	0.4	0.1		Pass
Malathion	ND	ND	0.2	0.1		Pass

Analyte	ZDB-ZJT-FRB	BTN-ZJT-TJB	Limits	LOQ	Notes	Status
Metalaxyl	ND	ND	0.2	0.1		Pass
Methiocarb	ND	ND	0.2	0.1		Pass
Methomyl	ND	ND	0.4	0.1		Pass
Methyl Parathion	ND	ND	0.2	0.2		Pass
MGK-264	ND	ND	0.2	0.2		Pass
Myclobutanil	ND	ND	0.2	0.1		Pass
Naled	ND	ND	0.5	0.2		Pass
Oxamyl	ND	ND	1.0	0.1		Pass
Paclobutrazol	ND	ND	0.4	0.1		Pass
Permethrins	ND	ND	0.2	0.1		Pass
Phosmet	ND	ND	0.2	0.1		Pass
Piperonyl Butoxide	ND	ND	2.0	0.1		Pass
Prallethrin	ND	ND	0.2	0.1		Pass
Propiconazole	ND	ND	0.4	0.1		Pass
Propoxur	ND	ND	0.2	0.1		Pass
Pyrethrins	ND	ND	1.0	0.5		Pass
Pyridaben	ND	ND	0.2	0.1		Pass
Spinosad	ND	ND	0.2	0.1		Pass
Spiromesifen	ND	ND	0.2	0.1		Pass
Spirotetramat	ND	ND	0.2	0.1		Pass
Spiroxamine	ND	ND	0.4	0.1		Pass
Tebuconazole	ND	ND	0.4	0.1		Pass
Thiacloprid	ND	ND	0.2	0.1		Pass
Thiamethoxam	ND	ND	0.2	0.1		Pass
Trifloxystrobin	ND	ND	0.2	0.1		Pass

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Harvest/Process Date: 5/7/2020
Report ID: LS-200518-3
Sample Plan ID:SP-200511-2-A
Sample Procedure: 160721_LAB-SOP_SampleCollection-v008

Pesticides
Quality Control Data

Pesticides QC Analysis Date: 5/15/2020
Pesticides QC Batch ID: PST_051520A

Method: EN 15662
Unit: µg/g (ppm)

Analyte	Blank	LOQ	LCS	LCS Spike	LCS Rec (%)	Limits (%)	Notes
Abamectin	ND	0.1	0.860	1.00	86.0	50 - 150	
Acephate	ND	0.1	0.724	1.00	72.4	50 - 150	
Acequinocyl	ND	1.5	1.56	1.00	***156***	50 - 150	ME
Acetamiprid	ND	0.1	0.986	1.00	98.6	50 - 150	
Aldicarb	ND	0.1	1.04	1.00	104	50 - 150	
Azoxystrobin	ND	0.1	0.974	1.00	97.4	50 - 150	
Bifenazate	ND	0.1	1.14	1.00	114	50 - 150	
Bifenthrin	ND	0.1	1.42	1.00	142	50 - 150	
Boscalid	ND	0.1	0.902	1.00	90.2	50 - 150	
Carbaryl	ND	0.1	1.04	1.00	104	50 - 150	
Carbofuran	ND	0.1	1.04	1.00	104	50 - 150	
Chlorantraniliprole	ND	0.1	0.925	1.00	92.5	50 - 150	
Chlorfenapyr	ND	0.1	1.04	1.00	104	50 - 150	
Chlorpyrifos	ND	0.1	0.980	1.00	98.0	50 - 150	
Clofentezine	ND	0.1	1.19	1.00	119	50 - 150	
Cyfluthrin	ND	0.5	0.548	1.00	54.8	50 - 150	
Cypermethrin	ND	0.1	1.01	1.00	101	50 - 150	
Daminozide	ND	0.5	2.94	1.00	***294***	10 - 150	HB
Diazinon	ND	0.1	0.949	1.00	94.9	50 - 150	
Dichlorvos (DDVP)	ND	0.5	1.18	1.00	118	50 - 150	
Dimethoate	ND	0.1	0.998	1.00	99.8	50 - 150	
Ethoprophos	ND	0.1	1.01	1.00	101	50 - 150	
Etofenprox	ND	0.1	1.17	1.00	117	50 - 150	
Etoxazole	ND	0.1	1.24	1.00	124	50 - 150	
Fenoxycarb	ND	0.1	0.986	1.00	98.6	50 - 150	
Fenpyroximate	ND	0.1	0.850	1.00	85.0	50 - 150	
Fipronil	ND	0.1	1.10	1.00	110	50 - 150	
Flonicamid	ND	0.1	1.15	1.00	115	50 - 150	
Fludioxonil	ND	0.1	1.05	1.00	105	50 - 150	
Hexythiazox	ND	0.1	0.854	1.00	85.4	50 - 150	
Imazalil	ND	0.1	1.01	1.00	101	50 - 150	
Imidacloprid	ND	0.1	1.02	1.00	102	50 - 150	
Kresoxim-methyl	ND	0.1	0.958	1.00	95.8	50 - 150	
Malathion	ND	0.1	1.02	1.00	102	50 - 150	

Analyte	Blank	LOQ	LCS	LCS Spike	LCS Rec (%)	Limits (%)	Notes
Metalaxyl	ND	0.1	1.00	1.00	100	50 - 150	
Methiocarb	ND	0.1	1.01	1.00	101	50 - 150	
Methomyl	ND	0.1	1.07	1.00	107	50 - 150	
Methyl Parathion	ND	0.2	0.781	1.00	78.1	30 - 150	
MGK-264	ND	0.2	0.743	0.600	124	50 - 150	
Myclobutanil	ND	0.1	0.975	1.00	97.5	50 - 150	
Naled	ND	0.2	1.02	1.00	102	50 - 150	
Oxamyl	ND	0.1	1.12	1.00	112	50 - 150	
Paclobutrazol	ND	0.1	0.572	1.00	57.2	50 - 150	
Permethrins	ND	0.1	0.823	1.00	82.3	50 - 150	
Phosmet	ND	0.1	1.02	1.00	102	50 - 150	
Piperonyl Butoxide	ND	0.1	1.19	1.00	119	50 - 150	
Prallethrin	ND	0.1	0.981	1.00	98.1	50 - 150	
Propiconazole	ND	0.1	0.752	1.00	75.2	50 - 150	
Propoxur	ND	0.1	1.02	1.00	102	50 - 150	
Pyrethrins	ND	0.5	0.459	1.00	***45.9***	50 - 150	ME
Pyridaben	ND	0.1	1.02	1.00	102	50 - 150	
Spinosad	ND	0.1	1.07	1.00	107	50 - 150	
Spiromesifen	ND	0.1	0.990	1.00	99.0	50 - 150	
Spirotetramat	ND	0.1	0.977	1.00	97.7	50 - 150	
Spiroxamine	ND	0.1	1.03	1.00	103	50 - 150	
Tebuconazole	ND	0.1	0.835	1.00	83.5	50 - 150	
Thiacloprid	ND	0.1	0.863	1.00	86.3	50 - 150	
Thiamethoxam	ND	0.1	1.01	1.00	101	50 - 150	
Trifloxystrobin	ND	0.1	0.940	1.00	94.0	50 - 150	

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Sample Plan ID:SP-200511-2-A
Sample Procedure: 160721_LAB-SOP_SampleCollection-v008

Residual Solvents
Sample Data

Solvents Analysis Date: 5/15/2020
Solvents Batch ID: RES_051520A

Method: EPA 5021A
Unit: µg/g (ppm)

Pass

Analyte	ZDB-ZJT-FRB	BTN-ZJT-TJB	RPD (%)	Limits	LOQ	Notes	Status
1,4-Dioxane	ND	ND	0.00	380.0	50.0		Pass
2-Butanol	ND	ND	0.00	5000.0	250.0		Pass
2-Ethoxyethanol	ND	ND	0.00	160.0	50.0		Pass
Acetone	ND	ND	0.00	5000.0	250.0		Pass
Acetonitrile	ND	ND	0.00	410.0	50.0		Pass
Benzene	ND	ND	0.00	2.0	2.0		Pass
Butanes	ND	ND	0.00	5000.0	250.0		Pass
Cumene	ND	ND	0.00	70.0	50.0		Pass
Cyclohexane	ND	ND	0.00	3880.0	50.0		Pass
Ethyl Acetate	ND	ND	0.00	5000.0	250.0		Pass
Ethyl Ether	ND	ND	0.00	5000.0	250.0		Pass
Ethylene Glycol	ND	ND	0.00	620.0	250.0		Pass
Ethylene Oxide	ND	ND	0.00	50.0	50.0		Pass
Heptane	ND	ND	0.00	5000.0	250.0		Pass
Hexanes	ND	ND	0.00	290.0	50.0		Pass
Isopropanol (2-Propanol)	ND	ND	0.00	5000.0	50.0		Pass
Isopropyl Acetate	ND	ND	0.00	5000.0	250.0		Pass
Methanol	ND	ND	0.00	3000.0	250.0		Pass
Dichloromethane	ND	ND	0.00	600.0	50.0		Pass
Pentanes	ND	ND	0.00	5000.0	250.0		Pass
Propane	ND	ND	0.00	5000.0	250.0		Pass
Tetrahydrofuran	ND	ND	0.00	720.0	50.0		Pass
Toluene	ND	ND	0.00	890.0	50.0		Pass
Xylenes	ND	ND	0.00	2170.0	50.0		Pass

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Residual Solvents Quality Control Data

Solvents QC Analysis Date: 5/15/2020
Solvents QC Batch ID: RES_051520A

Method: EPA 5021A
Unit: µg/g (ppm)

Analyte	Blank	LOQ	LCS	LCS Spike	LCS Rec (%)	Limits (%)	Notes
1,4-Dioxane	ND	50.0	853	1000	85.3	70 - 130	
2-Butanol	ND	250.0	911	1000	91.1	70 - 130	
2-Ethoxyethanol	ND	50.0	817	1000	81.7	70 - 130	
Acetone	ND	250.0	816	1000	81.6	70 - 130	
Acetonitrile	ND	50.0	900	1000	90.0	70 - 130	
Benzene	ND	2.0	21.4	20.0	107	70 - 130	
Butanes	ND	250.0	1840	2000	92.2	70 - 130	
Cumene	ND	50.0	846	1000	84.6	70 - 130	
Cyclohexane	ND	50.0	836	1000	83.6	70 - 130	
Ethyl Acetate	ND	250.0	898	1000	89.8	70 - 130	
Ethyl Ether	ND	250.0	818	1000	81.8	70 - 130	
Ethylene Glycol	ND	250.0	884	1000	88.4	70 - 130	
Ethylene Oxide	ND	50.0	878	1000	87.8	70 - 130	
Heptane	ND	250.0	863	1000	86.3	70 - 130	
Hexanes	ND	50.0	4390	5000	87.9	70 - 130	
Isopropanol (2-Propanol)	ND	50.0	908	1000	90.8	70 - 130	
Isopropyl Acetate	ND	250.0	909	1000	90.9	70 - 130	
Methanol	ND	250.0	794	1000	79.4	70 - 130	
Dichloromethane	ND	50.0	858	1000	85.8	70 - 130	
Pentanes	ND	250.0	2690	3000	89.8	70 - 130	
Propane	ND	250.0	866	1000	86.6	70 - 130	
Tetrahydrofuran	ND	50.0	897	1000	89.7	70 - 130	
Toluene	ND	50.0	833	1000	83.3	70 - 130	
Xylenes	ND	50.0	3440	4000	86.1	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 exceeds the detection limit
LB	Control acceptance criteria are exceeded low and the associated sample is below the regulatory limit
ME	Marginal Exceedance
LR	Low Recovery Analyte
LOQ	Limit of Quantitation