

Farmer's Friend Extracts 6451 NE Colwood Wy Portland, OR 97218 503-442-8653 Sample Type: Extracts Sample Date: 11/18/2019 Analysis Date: 11/19/2019 Report Date: 11/25/2019

Metrc Batch ID: 1A4010300016315000018664 Metrc Sample ID: 1A4010300016315000018793 Harvest/Process Date: 11/14/2019 Report ID:

LS-191122-33

Potency

Potency Analysis Date: 11/21/2019 Potency Batch ID: CAN_112119B Potency Method: JAOAC 2015.1

73.6%

Total THC

0.388%

Total CBD

Samples: HPF-HPP-TTT, GNM-GFJ-FZN



Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	Unit: %
Д9ТНС	Delta-9 Tetrahydrocannabinol	0.16	0.363	73.4	73.7	73.6	
THCA	Tetrahydrocannabinolic acid	0.16	0.00	ND	ND	ND	
CBD	Cannabidiol	0.16	35.7	0.178	0.256	0.217	•
CBDA	Cannabidiolic acid	0.16	19.8	<l0q< td=""><td>0.195</td><td>0.195</td><td>•</td></l0q<>	0.195	0.195	•
∆8ТНС	Delta-8 Tetrahydrocannabinol*	0.16	0.00	ND	<l0q< td=""><td><l0q< td=""><td></td></l0q<></td></l0q<>	<l0q< td=""><td></td></l0q<>	
THCV	Tetrahydrocannabivarin*	0.16	28.2	ND	0.213	0.106	•
CBG	Cannabigerol*	0.16	9.07	2.27	2.49	2.38	•
CBGA	Cannabigerolic acid*	0.16	80.4	ND	0.375	0.188	•
CBC	Cannabichromene*	0.16	8.87	1.26	1.38	1.32	•
CBCA	Cannabichromenic acid*	0.16	0.00	ND	ND	ND	
CBN	Cannabinol	0.16	17.3	0.548	0.651	0.599	•
Total THC	Δ9THC + (THCA × 0.877)		0.363	73.4	73.7	73.6	
Total CBD	CBD + (CBDA × 0.877)		31.0	0.178	0.427	0.388	•
Total			0.0341	77.7	79.3	78.6	

Compliance

Pesticides	Within limits	Analysis Date: 11/19/2019	Pass 🕢
Solvents	Within limits	Analysis Date: 11/20/2019	Pass 🕢
Potency	Within limits	Analysis Date: 11/21/2019	Pass 🕢

Bryce Kidd, Ph.D. Lab Director Aaron Troyer
Chief Science Officer





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Terpene Analysis Date: 11/19/2019

Terpene Batch ID: TRP 111919A

Total

Harvest/Process Date: 11/14/2019

Report ID:

Unit: %

LS-191122-33

Method: JAOAC 2015.1



Analyte	Avg.	Notes
β-Caryophyllene	1.79%	
Selinadiene	1.20%	
α-Cedrene	0.763%	
Humulene	0.686%	
Linalool	0.460%	
α-Terpineol	0.410%	
β-Farnesene 2	0.390%	
α-Bisabolol	0.369%	
Limonene	0.212%	
β-Myrcene	0.150%	
β-Pinene	0.0704%	
α-Pinene	0.0668%	
Fenchone	0.0358%	
Terpinolene	0.0293%	
Azulene	ND	
Borneol	ND	
Camphene	ND	
Camphore	ND	
Caryophyllene Oxide	ND	
Cedrol	ND	
Cymene	ND	
Eucalyptol	ND	
Fenchol	ND	
Geraniol	ND	
Geranyl Acetate	ND	
Guaiol	ND ND	
Isoborneol	ND	
Isopulegol	ND	
Nerol	ND	

Analyte	Avg.	Notes
Pulegone	ND	
Sabinene	ND	
Sabinene Hydrate	ND	
Valencene	ND	
cis-Nerolidol	ND	
trans-Nerolidol	ND	
Δ3-Carene	ND	
α-Ocimene	ND	
α-Phellandrene	ND	
α-Terpinene	ND	
β-Farnesene 1	ND	
β-Ocimene	ND	
γ-Terpinene	ND	
v-Terpineol	ND	

6.64%



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Pesticides Analysis Date: 11/19/2019

Pesticides Batch ID: PST 111919A

Harvest/Process Date: 11/14/2019

Pass 🕢

Report ID:

LS-191122-33

Method: EN 15662

Unit: µg/g (ppm)



Ethoprophos

Etofenprox

Etoxazole

Fenoxycarb

Fipronil

Flonicamid

Fludioxonil

Hexythiazox

Imidacloprid

Kresoxim-methyl

Imazalil

Malathion

Fenpyroximate

Analyte	HPF-HPP-TTT	GNM-GFJ-FZN	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

ND

0.2

0.4

0.2

0.2

9.4

0.4

1.0

0.4

1.0 0.1

0.2

0.4

0.4

0.2

0.1

0.1

0.1

0.1

9.1

0.1

0.1

0.1

0.1

0.1

0.1

0.1

Pass

ND

Analyte	HPF-HPP-TTT	GNM-GFJ-FZN	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
0xamy1	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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Pesticides Quality Control Data

LCS Spike LCS Rec (%) Limits (%) Analyte Blank LOQ LCS Abamectin 1.26 126 50 - 150 1.00 Acenhate ND 0.1 0.576 1 99 57.6 50 - 150 Acequinocyl ND ND 1.00 0.00 50 - 150 ND Acetamiprid ND 0.1 1.02 1 99 192 50 - 150 Aldicarb 0.1 0.793 79.3 50 - 150 1.00 Azoxystrobin ND 0.1 0.964 1.00 96.4 50 - 150 Bifenazate ND 0.615 50 - 150 Bifenthrin 0.1 1.22 122 ND 1.00 50 - 150 Boscalid 0.1 0.485 48.5 50 - 150 1.00 Carbarvl 0.1 0.871 1 99 87.1 50 - 150 ND 0.950 1.00 50 - 150 Chlorantraniliprole ND 0.1 1.22 122 50 - 150 1.00 Chlorfenapyr 0.1 0.829 1.00 50 - 150 Chlorpyrifos 0.1 1.41 50 - 150 ND 1.00 141 Clofentezine ND 1.00 50 - 150 Cyfluthrin ND 0.5 0.981 1 99 98.1 50 - 150 Cypermethrin 0.1 1.29 1.00 129 50 - 150 10 - 150 Daminozide 16.1 ND 0.5 0.161 1 99 ND 1.00 50 - 150 Dichlorvos (DDVP) ND 0.5 0.864 1.00 86.4 50 - 150 Dimethoate ND 0.1 0.906 1.00 90.6 50 - 150 Ethoprophos ND 0.1 0.777 1.00 77 7 50 - 150 Etofenprox ND 2.13 1.00 213 50 - 150 127 Etoxazole ND 0.1 1.27 1.00 50 - 150 Fenoxycarb ND 1.34 1.00 50 - 150 Fenpyroximate ND A 1 1.48 1 99 148 50 - 150 Fipronil ND 0.1 0.998 1.00 50 - 150 Flonicamid ND 1.01 1.00 101 50 - 150 Fludioxonil ND 0.1 ND 1.00 0.00 50 - 150 ND Hexythiazox ND 0.1 0.868 1.00 86.8 50 - 150 Imazalil ND 0.1 0.898 89.8 1.00 50 - 150 Imidacloprid ND 0.1 0.939 1.00 93.9 50 - 150 Kresoxim-methyl ND 0.1 1.24 1.00 124 50 - 150 Malathion ND 0.1 0.888 1.00 88.8 50 - 150

Pesticides QC Analysis Date: 11/19/2019 Pesticides QC Batch ID: PST 111919A Method: EN 15662 Unit: μg/g (ppm)

Analyte	Blank	LOQ	LCS	LCS Spike	LCS Rec (%)	Limits (%)	Notes
Metalaxyl	ND	0.1	1.10	1.00	110	50 - 150	
Methiocarb	ND	0.1	1.18	1.00	118	50 - 150	
Methomyl	ND	0.1	0.747	1.00	74.7	50 - 150	
Methyl Parathion	ND	0.2	0.505	1.00	50.5	30 - 150	
MGK-264	ND	0.2	0.391	0.600	65.1	50 - 150	
Myclobutanil	ND	0.1	0.901	1.00	90.1	50 - 150	
Naled	ND	0.2	1.01	1.00	101	50 - 150	
0xamy1	ND	0.1	0.761	1.00	76.1	50 - 150	
Paclobutrazol	ND	0.1	0.575	1.00	57.5	50 - 150	
Permethrins	ND	0.1	1.25	1.00	125	50 - 150	
Phosmet	ND	0.1	0.793	1.00	79.3	50 - 150	
Piperonyl Butoxide	ND	0.1	1.02	1.00	102	50 - 150	
Prallethrin	ND	0.1	1.41	1.00	141	50 - 150	
Propiconazole	ND	0.1	1.36	1.00	136	50 - 150	
Propoxur	ND	0.1	0.887	1.00	88.7	50 - 150	
Pyrethrins	ND	0.5	ND	1.00	0.00	50 - 150	ND
Pyridaben	ND	0.1	1.12	1.00	112	50 - 150	
Spinosad	ND	0.1	2.39	1.00	239	50 - 150	НВ
Spiromesifen	ND	0.1	1.37	1.00	137	50 - 150	
Spirotetramat	ND	0.1	0.965	1.00	96.5	50 - 150	
Spiroxamine	ND	0.1	0.665	1.00	66.5	50 - 150	
Tebuconazole	ND	0.1	1.23	1.00	123	50 - 150	
Thiacloprid	ND	0.1	1.08	1.00	108	50 - 150	
Thiamethoxam	ND	0.1	1.01	1.00	101	50 - 150	
Trifloxystrobin	ND	0.1	1.19	1.00	119	50 - 150	



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	Residual Solvents
9	Residual Solvents Sample Data

Solvents Analysis Date: 11/20/2019 Solvents Batch ID: RES 112019A Method: EPA 5021A Unit: μg/g (ppm) Pass 🕢

Analyte	HPF-HPP-TTT	GNM-GFJ-FZN	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: 11/20/2019 Solvents QC Batch ID: RES 112019A Method: EPA 5021A Unit: μg/g (ppm)

Analyte	Blank	LOQ	LCS	LCS Spike	LCS Rec (%)	Limits (%)	Notes
1,4-Dioxane	ND	50.0	995	1000	99.5	70 - 130	
2-Butanol	ND	250.0	1050	1000	105	70 - 130	
2-Ethoxyethanol	ND	50.0	954	1000	95.4	70 - 130	
Acetone	ND	250.0	900	1000	90.0	70 - 130	
Acetonitrile	<l0q< th=""><th>50.0</th><th>1140</th><th>1000</th><th>114</th><th>70 - 130</th><th></th></l0q<>	50.0	1140	1000	114	70 - 130	
Benzene	ND	2.0	18.3	20.0	91.6	70 - 130	
Butanes	ND	250.0	1940	2000	96.8	70 - 130	
Cumene	ND	50.0	1070	1000	107	70 - 130	
Cyclohexane	ND	50.0	857	1000	85.7	70 - 130	
Ethyl Acetate	ND	250.0	996	1000	99.6	70 - 130	
Ethyl Ether	ND	250.0	776	1000	77.6	70 - 130	
Ethylene Glycol	ND	250.0	889	1000	88.9	70 - 130	
Ethylene Oxide	ND	50.0	899	1000	89.9	70 - 130	
Heptane	ND	250.0	957	1000	95.7	70 - 130	
Hexanes	ND	50.0	4660	5000	93.2	70 - 130	
Isopropanol (2-Propanol)	ND	50.0	1020	1000	102	70 - 130	
Isopropyl Acetate	ND	250.0	1050	1000	105	70 - 130	
Methanol	ND	250.0	860	1000	86.0	70 - 130	
Dichloromethane	ND	50.0	889	1000	88.9	70 - 130	
Pentanes	ND	250.0	2810	3000	93.5	70 - 130	
Propane	ND	250.0	723	1000	72.3	70 - 130	
Tetrahydrofuran	ND	50.0	1060	1000	106	70 - 130	
Toluene	ND	50.0	1010	1000	101	70 - 130	
Xylenes	ND	50.0	4710	4000	118	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
В	Analyte found in sample and associated blank
С	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
М	Manual integration
PS	Peaks split
НВ	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