

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: 1A4010300016315000018745 Metrc Sample ID: 1A4010300016315000018791 Harvest/Process Date: 11/17/2019 Report ID:

LS-191122-31

Potency

Potency Analysis Date: 11/20/2019 Potency Batch ID: CAN_112019A Potency Method: JAOAC 2015.1

74.0%

Total THC

0.254%

Total CBD

Samples: CBM-HTD-WXS, CGW-GTB-XDB



Analyte	Description	LOQ	RPD	Min.	Max.	Avg.	
Δ9ΤΗC	Delta-9 Tetrahydrocannabinol	0.16	2.13	73.2	74.7	74.0	
THCA	Tetrahydrocannabinolic acid	0.16	0.00	ND	<l0q< td=""><td><l0q< td=""><td></td></l0q<></td></l0q<>	<l0q< td=""><td></td></l0q<>	
CBD	Cannabidiol	0.16	45.4	<l0q< td=""><td>0.254</td><td>0.254</td><td>•</td></l0q<>	0.254	0.254	•
CBDA	Cannabidiolic acid	0.16	0.00	<l0q< td=""><td><l0q< td=""><td><l0q< td=""><td></td></l0q<></td></l0q<></td></l0q<>	<l0q< td=""><td><l0q< td=""><td></td></l0q<></td></l0q<>	<l0q< td=""><td></td></l0q<>	
Δ8ΤΗC	Delta-8 Tetrahydrocannabinol*	0.16	0.00	ND	ND	ND	
THCV	Tetrahydrocannabivarin*	0.16	6.41	0.724	0.772	0.748	•
CBG	Cannabigerol*	0.16	0.829	2.01	2.02	2.01	•
CBGA	Cannabigerolic acid*	0.16	36.8	ND	0.232	0.116	•
CBC	Cannabichromene*	0.16	0.00	ND	ND	ND	
CBCA	Cannabichromenic acid*	0.16	0.00	ND	ND	ND	
CBN	Cannabinol	0.16	18.4	0.964	1.16	1.06	•
Total THC	Δ9THC + (THCA × 0.877)		2.13	73.2	74.7	74.0	
Total CBD	CBD + (CBDA × 0.877)		45.4	<l0q< td=""><td>0.254</td><td>0.254</td><td>•</td></l0q<>	0.254	0.254	•
Total			2.81	76.9	79.2	78.2	

Compliance

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

Bryce Kidd/Ph.D.
Lab Director

Aaron Troyer
Chief Science Officer





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Terpenes*
Sample Data

Analyte Avg. Notes
β-Caryophyllene 3.46%
Humulene 1.00%
β-Farnesene 2 0.719%
α-Bisabolol 0.486%
β-Myrcene 0.297%
α-Terpineol 0.229%
Limonene 0.223%
Linalool 0.217%
Selinadiene 0.197%
α-Pinene 0.146%
β-Pinene 0.109%
trans-Nerolidol 0.0734%
β-Ocimene 0.0603%
Azulene ND
Borneol ND
Camphene ND
Camphore ND
Caryophyllene Oxide ND
Cedrol ND
Cymene ND
Eucalyptol ND
Fenchol ND
Fenchone ND
Geraniol ND
Geranyl Acetate ND
Guaiol ND
Isoborneol ND
Isopulegol ND
Nerol ND

Terpene Analysis Date: 11/19/2019 Terpene Batch ID: TRP_111919A

Total

Method: JAOAC 2015.1 Unit: %

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

7.22%



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Harvest/Process Date: 11/17/2019

Pesticides
Sample Data

Pesticides Analysis Date: 11/19/2019 Pesticides Batch ID: PST_111919A Method: EN 15662 Unit: μg/g (ppm) Pass 🕢

Analyte	CGW-GTB-XDB	CBM-HTD-WXS	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	CGW-GTB-XDB	CBM-HTD-WXS	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 0.1 1.26 1.00 126 50 - 150 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 ND 0.1 0.793 79.3 50 - 150 1.00 Azoxystrobin ND 0.1 0.964 1.00 96.4 50 - 150 0.615 Bifenazate ND 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 ND 0.1 0.871 1 99 87.1 50 - 150 ND 0.1 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 1.41 141 50 - 150 ND 1.00 Clofentezine ND 1.00 50 - 150 Cyfluthrin ND 0.5 0.981 1 99 98.1 50 - 150 Cypermethrin 129 50 - 150 0.1 1.29 1.00 10 - 150 Daminozide 16.1 ND 0.5 0.161 1 99 ND 1.00 50 - 150 Dichlorvos (DDVP) 0.5 0.864 ND 1.00 86.4 50 - 150 Dimethoate ND 0.1 0.906 1.00 90.6 50 - 150 77 7 Ethoprophos ND 0.1 0.777 1.00 50 - 150 Etofenprox ND 0.1 2.13 1.00 213 50 - 150 127 Etoxazole ND 0.1 1.27 1 99 50 - 150 Fenoxycarb ND 1.34 1.00 134 50 - 150 Fenpyroximate ND 0.1 1.48 1 99 148 50 - 150 Fipronil ND 0.1 0.998 1.00 50 - 150 Flonicamid ND 0.1 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 50 - 150 1.00 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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Report ID:

Harvest/Process Date: 11/17/2019 LS-191122-31

Residual Solvents Sample Data

Solvents Analysis Date: 11/20/2019 Solvents Batch ID: RES 112019A

Method: EPA 5021A Unit: µg/g (ppm)

Pass 🕢

Analyte	CGW-GTB-XDB	CBM-HTD-WXS	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)

1,4-Dioxane ND 58.8 995 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 <loq< td=""> 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 50.0 857 1000 85.7 70 - 130 Ethyl Acetate ND 250.0 996 1000 99.6 70 - 130</loq<>	
2-Ethoxyethanol ND 50.0 954 1000 95.4 70 - 130 Acetone ND 250.0 900 1000 90.0 70 - 130 Acetonitrile <loq< th=""> 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</loq<>	
Acetone ND 250.0 900 1000 90.0 70 - 130 Acetonitrile <	
Acetonitrile <loq< th=""> 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</loq<>	
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	
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	
Cumene ND 50.0 1070 1000 107 70 - 130 Cyclohexane ND 50.0 857 1000 85.7 70 - 130	
Cyclohexane ND 50.0 857 1000 85.7 70 - 130	
Ethyl Acatata ND 258.8 006 1888 00.6 78 - 138	
Ethyl Acetate ND 230.0 990 1000 99.0 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