



ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

**Oregon Compliant Marijuana Potency Analysis by
 High Performance Liquid Chromatography**

Testing Accreditation #: 4092-002

Test Certificate #: 119498-001

Client Name, Sample Details
Pistil Pioneers
 Blachly, OR 97412
Sample: Grapefruit Moonshine
License: 020-10005453F9C
Type: Usable Marijuana
Method: FE04U
Metric Test Pkg#: 1A4010300009665000000442
Metric Source Pkg#: 1A4010300009665000000425
*****Water Activity:** 0.595
*****Moisture:** 13.93%

Test Conditions
Prepsheet ID#: ORP191008a
Scale: XS205-OR1
Temp: 21.2 °C
Baro PE: 1003 hPa
Analyst: HRM
Technician: EDT

Sample ID#: 119498
Lot #: manigfm_91819
Batch #: 119498
Batch Weight (g): 6810
Harvest/Process Date: 09/18/2019
Serving Size (g): 1
Date Received: 09/26/2019
Test Date: 10/08/2019



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG	CBC	THCV*	CBDV	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	1.26	23.66	N/D	0.34	0.12	0.10	N/D	N/D	N/D	25.48	22.01	0.30	22.53
Amount (mg/g)	12.63	236.56	N/D	3.41	1.19	0.98	N/D	N/D	N/D	254.77	220.09	2.99	225.25
Amount per Serving (mg)	12.63	236.56	N/D	3.41	1.19	0.98	N/D	N/D	N/D	254.77	Serving Size~ (g):		1.00
LOQ (mg/g)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05		%Decarb.	THC	CBD
±%RPD	2.03	5.15	+/-5%	3.88	66.67	+/-5%	22.22	+/-5%	+/-5%			5	0%

LOQ = Limit of Quantitation; %RPD = Relative Percent Deviation; %RSD = Relative Standard Deviation; N/D = Not Detected

*Designates values that are not currently included in the accredited scope of Iron Laboratories.

*** Designates tests that use the method FE-45.

Total THC and CBD is the calculated sum of THC or CBD and the amount of THC or CBD derived from THCA or CBDA, respectively. These values are calculated by applying a molar correction factor of 0.877 to the THCA or the CBDA value. Calc Max Total Cannabinoids is the sum of Total THC, Total CBD, CBN, CBG, CBC, THCV, and CBDV.

%Decarb. THC and CBD refers to the percentage of THC or CBD relative to THCA or CBDA, respectively.

SOP FE-01-OR9 was used in accordance with OAR 333-007 for sampling. All marijuana items are sampled and tested in accordance with OAR 333-007-0300 to 333-007-490 and OAR 333-064-0100 to 333-064-0110.

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Joseph Rutkowski, Quality Manager



Hfmashi Mead, Technical Manager

Iron Labs Oregon complies with 2009 TNI Environmental Laboratory Standards.

Tested by Iron Laboratories Oregon, 71 Centennial Loop Suite D Eugene, OR 97401



ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Oregon Compliant QC Report

Testing Accreditation #: 4092-002

Test Certificate #: 119498-001

Client Name, Sample Details
Pistil Pioneers
 Blachly, OR 97412
Sample: Grapefruit Moonshine
License: 020-10005453F9C
Type: Usable Marijuana
Method: FE04U
Metrc Test Pkg#: 1A4010300009665000000442
Metrc Source Pkg#: 1A4010300009665000000425
*****Water Activity:** 0.595
*****Moisture:** 13.93%

Test Conditions
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Batch #: 119498
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Harvest/Process Date: 09/18/2019
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Target Compound Name	Method Blank (µg/g)	LCS Spike (µg/g)	LCS Amount (µg/g)	Percent Recovery (%) LCS	LCS Duplicate Amount (µg/g)	Percent Recovery (%) LCSD	Relative Percent Difference (%)	QC Flag
Cannabidivarin (CBDV)	N.D.	N.D.	N.D.	0.00	N.D.	0.00	0.00%	
Cannabidiolic Acid (CBDA)	N.D.	1.29	1.01	78.29	1.05	81.40	3.88%	
Cannabigerol (CBG)	N.D.	0.15	0.14	93.33	0.14	93.33	0.00%	
Cannabidiol (CBD)	N.D.	N.D.	N.D.	0.00	N.D.	0.00	0.00%	
Δ9-Tetrahydrocannabivarin (THCV)	N.D.	N.D.	N.D.	0.00	N.D.	0.00	0.00%	
Cannabinol (CBN)	N.D.	0.11	0.14	127.27	0.07	63.64	66.67%	Q
Δ9-Tetrahydrocannabinol (THC)	N.D.	3.31	2.92	88.22	2.98	90.03	2.03%	
Cannabichromene (CBC)	N.D.	0.08	0.04	50.00	0.05	62.50	22.22%	
Tetrahydrocannabinolic acid (THCA)	N.D.	18.31	13.61	74.33	14.33	78.26	5.15%	

N.D. = Not Detected

LR = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) Low recovery should be scrutinized for possible fail as it could indicate more compound present than is detected.

I = indicates that an amount of an interfering compound greater than the methods limit of detection was detected in the method blank sample. May indicate contamination of analytical system or consumables.

Q = indicates that the relative percent difference of two identically prepared Matrix Spike samples for a target analyte was greater than 20%

HR = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) high recoveries should be scrutinized for passing as more compound may be detected than is actually present in the sample.

SOP FE-01-OR9 was used in accordance with OAR 333-007 for sampling. All marijuana items are sampled and tested in accordance with OAR 333-007-0300 to 333-007-490 and OAR 333-064-0100 to 333-064-0110.

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Joseph Rutkowski, Quality Manager



Hfmashi Mead, Technical Manager

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ORELAP Cert No. 4092-002
OLCC No. 1002158CD2E

Oregon Compliant Pesticide Analysis by
Mass Spectrometer

Testing Accreditation #: 4092-002

Test Certificate #: 119498-001

Client Name, Sample Details Pistil Pioneers Blachly, OR 97412 Sample: Grapefruit Moonshine License: 020-10005453F9C Type: Usable Marijuana Method: FE-52 (EN 15662 & AOAC 2007.01) Metric Test Pkg#: 1A4010300009665000000442 Metric Source Pkg#: 1A4010300009665000000425	Test Conditions Prepsheet ID#: ORPS191004a Scale: XS205-OR1 Temp: 21.9 °C Baro PE: 1009 hPa Analyst: JER Technician: JER	Sample ID#: 119498 Lot #: manigfm_91819 Batch #: 119498 Batch Weight (g): 6810 Harvest/Process Date: 09/18/2019 Serving Size (g): 1 Date Received: 09/26/2019 Test Date: 10/06/2019
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Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)	Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)
Aldicarb	0.400	0.122	Pass/<LOD	Abamectin****	0.500	0.122	Pass/<LOD
Acephate	0.400	0.122	Pass/<LOD	Acequinocyl	2.000	0.244	Pass/<LOD
Acetamiprid	0.200	0.122	Pass/<LOD	Azoxystrobin	0.200	0.122	Pass/<LOD
Bifenazate	0.200	0.122	Pass/<LOD	Bifenthrin	0.200	0.122	Pass/<LOD
Boscalid	0.400	0.122	Pass/<LOD	Carbaryl	0.200	0.122	Pass/<LOD
Carbofuran	0.200	0.122	Pass/<LOD	Chlorantraniliprole	0.200	0.122	Pass/<LOD
Chlorfenapyr	1.000	0.487	Pass/<LOD	Chlorpyrifos	0.200	0.122	Pass/<LOD
Clofentazine	0.200	0.122	Pass/<LOD	Cyfluthrin**	1.000	0.487	Pass/<LOD
Cypermethrin***	1.000	0.487	Pass/<LOD	Daminozide	1.000	0.122	Pass/<LOD
DDVP (Dichlorvos)	1.000	0.244	Pass/<LOD	Diazinon	0.200	0.122	Pass/<LOD
Dimethoate	0.200	0.122	Pass/<LOD	Ethoprophos	0.200	0.122	Pass/<LOD
Etofenprox	0.400	0.122	Pass/<LOD	Etoxazole	0.200	0.122	Pass/<LOD
Fenoxycarb	0.200	0.122	Pass/<LOD	Fenpyroximate	0.400	0.122	Pass/<LOD
Fipronil	0.400	0.122	Pass/<LOD	Flonicamid	1.000	0.122	Pass/<LOD
Fludioxonil	0.400	0.122	Pass/<LOD	Hexythiazox	1.000	0.122	Pass/<LOD
Imazalil	0.200	0.122	Pass/<LOD	Imidacloprid	0.400	0.122	Pass/<LOD
Kresoxim Methyl	0.400	0.122	Pass/<LOD	Malathion	0.200	0.122	Pass/<LOD
Metalaxyl	0.200	0.122	Pass/<LOD	Methiocarb	0.200	0.122	Pass/<LOD
Methomyl	0.400	0.122	Pass/<LOD	Methyl Parathion	0.200	0.122	Pass/<LOD
MGK-264‡	0.200	0.122	Pass/<LOD	Myclobutanil	0.000	0.122	Pass/<LOD
Naled	0.500	0.122	Pass/<LOD	Oxamyl	1.000	0.122	Pass/<LOD
Paclobutrazol	0.400	0.122	Pass/<LOD	Permethrin†	0.200	0.122	Pass/<LOD
Phosmet	0.200	0.122	Pass/<LOD	Piperonyl Butoxide	2.000	0.122	Pass/<LOD
Prallethrin	0.200	0.122	Pass/<LOD	Propiconazole	0.400	0.122	Pass/<LOD
Propoxur	0.200	0.122	Pass/<LOD	Pyrethrins*	1.000	0.122	Pass/<LOD
Pyridaben	0.200	0.122	Pass/<LOD	Spinosad*****	0.200	0.122	Pass/<LOD
Spiromesifen	0.200	0.122	Pass/<LOD	Spirotetramat	0.200	0.122	Pass/<LOD
Spiroxamine‡	0.400	0.122	Pass/<LOD	Tebuconazole	0.400	0.122	Pass/<LOD
Thiacloprid	0.200	0.122	Pass/<LOD	Thiamethoxam	0.200	0.122	Pass/<LOD
Trifloxystrobin	0.200	0.122	Pass/<LOD				

* Pyrethrins are reported as the sum of Jasmolin I, Cinerin I, and Pyrethrin I
 ** Cyfluthrins are reported as the sum of isomers Cyfluthrin I, II, III, and IV
 *** Cypermethrins are reported as the sum of isomers Cypermethrin I, II, III, and IV
 **** Abamectin is reported as the sum of Avermectin B1a and Avermectin B1b
 ***** Spinosad is reported as the sum of Spinosyn A and Spinosyn D
 † Permethrin and Prallethrin are reported as the sum of cis and trans isomers
 ‡ MGK-264 and Spiroximine are reported as the sum of isomers I and II
 MRL - Maximum Residue Limit; LOD - Limit of Detection

SOP FE-01-OR9 was used in accordance with OAR 333-007 for sampling. All marijuana items are sampled and tested in accordance with OAR 333-007-0300 to 333-007-490 and OAR 333-064-0100 to 333-064-0110.

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ORELAP Cert No. 4092-002
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Oregon Compliant Pesticide QC Report

Testing Accreditation #: 4092-002

Test Certificate #: 119498-001

Client Name, Sample Details
Pistil Pioneers
 Blachly, OR 97412
Sample: Grapefruit Moonshine
License: 020-10005453F9C
Type: Usable Marijuana
Method: FE-52 (EN 15662 & AOAC 2007.01)
Metrc Test Pkg#: 1A4010300009665000000442
Metrc Source Pkg#: 1A4010300009665000000425

Test Conditions
Prepsheet ID#: ORPS191004a
Scale: XS205-OR1
Temp: 21.9 °C
Baro PE: 1009 hPa
Analyst: JER
Technician: JER

Sample ID#: 119498
Lot #: manigfm_91819
Batch #: 119498
Batch Weight (g): 6810
Harvest/Process Date: 09/18/2019
Serving Size (g): 1
Date Received: 09/26/2019
Test Date: 10/06/2019



Target Compound Name	Method Blank (µg/g)	QC Spike (µg/g)	Matrix Spike (µg/g)	Matrix Spike Duplicate (µg/g)	MS recovery%	MSD recovery%	Relative Percent Difference (%)	QC Flag
Acephate	N.D.	1	1.14	1.12	114.00	112.00	1.77	
Acequinocyl	N.D.	1	0.814	0.731	81.40	73.10	10.74	
Acetamiprid	N.D.	1	1.32	1.24	132.00	124.00	6.25	HR
Aldicarb	N.D.	1	1.15	1.14	115.00	114.00	0.87	
Avermectin B1a	N.D.	0.97	1.3	1.31	134.02	135.05	0.77	HR
Azoxystrobin	N.D.	1	1.29	1.32	129.00	132.00	2.30	HR
Bifenazate	N.D.	1	0.867	0.833	86.70	83.30	4.00	
Bifenthrin	N.D.	1	1.38	1.37	138.00	137.00	0.73	
Boscalid	N.D.	1	1.03	1.02	103.00	102.00	0.98	
Carbaryl	N.D.	1	1.18	1.18	118.00	118.00	0.00	
Carbofuran	N.D.	1	1.31	1.35	131.00	135.00	3.01	HR
Chlorantraniliprole	N.D.	1	1.12	1.18	112.00	118.00	5.22	
Chlorfenapyr	N.D.	1	0.757	1.09	75.70	109.00	36.06	Q
Chlorpyrifos	N.D.	1	1.04	1.07	104.00	107.00	2.84	
Clofentezine	N.D.	1	1.03	1.09	103.00	109.00	5.66	
Cyfluthrin	N.D.	1	1.5	1.54	150.00	154.00	2.63	HR
Cypermethrin	N.D.	1	1.46	1.45	146.00	145.00	0.69	HR
Daminozide	N.D.	1	0.51	0.482	51.00	48.20	5.65	LR
Diazanone	N.D.	1	3.56	3.56	356.00	356.00	0.00	HR
Dichlorvos	N.D.	1	1.3	1.29	130.00	129.00	0.77	
Dimethoate	N.D.	1	1.32	1.35	132.00	135.00	2.25	HR
Ethoprophos	N.D.	1	1.25	1.25	125.00	125.00	0.00	
Etofenprox	N.D.	1	1.21	1.22	121.00	122.00	0.82	
Etoxazole	N.D.	1	1.31	1.18	131.00	118.00	10.44	HR
Fenoxycarb	N.D.	1	1.18	1.15	118.00	115.00	2.58	
Fenpyroximate	N.D.	1	1.52	1.49	152.00	149.00	1.99	HR
Fipronil	N.D.	1	1.19	1.26	119.00	126.00	5.71	
Flonicamid	N.D.	1	1.27	1.33	127.00	133.00	4.62	HR
Fludioxonil	N.D.	1	1.26	1.21	126.00	121.00	4.05	
Hexythiazox	N.D.	1	0.943	1.05	94.30	105.00	10.74	
Imazalil	N.D.	1	1.14	1.18	114.00	118.00	3.45	
Imidacloprid	N.D.	1	1.41	1.32	141.00	132.00	6.59	HR
Kresoxim-methyl	N.D.	1	1.13	1.11	113.00	111.00	1.79	
Malathion	N.D.	1	1.16	1.08	116.00	108.00	7.14	
Metalaxyl	N.D.	1	1.26	1.35	126.00	135.00	6.90	HR
Methiocarb	N.D.	1	1.26	1.22	126.00	122.00	3.23	
Methomyl	N.D.	1	1.17	1.16	117.00	116.00	0.86	
MGK-264	N.D.	1	1.1	1.24	110.00	124.00	11.97	
Myclobutanil	N.D.	1	1.27	1.25	127.00	125.00	1.59	
Naled (dibrom)	N.D.	1	0.378	0.429	37.80	42.90	12.64	LR

Oxamyl	N.D.	1	1.44	1.48	144.00	148.00	2.74	
Paclobutrazol	N.D.	1	1.27	1.27	127.00	127.00	0.00	
Parathion-methyl	N.D.	1	1.16	1.15	116.00	115.00	0.87	
Permethrins	N.D.	1	1.29	1.3	129.00	130.00	0.77	
Phosmet	N.D.	1	1.11	1.13	111.00	113.00	1.79	
Piperonyl butoxide	N.D.	1	1.18	1.15	118.00	115.00	2.58	
Prallethrin	N.D.	1	1.16	1.14	116.00	114.00	1.74	
Propiconazole	N.D.	1	1.04	0.995	104.00	99.50	4.42	
Propoxur	N.D.	1	1.13	1.16	113.00	116.00	2.62	
Pyrethrin	N.D.	0.65	0.74	0.681	113.85	104.77	8.30	
Pyridaben	N.D.	1	1.07	1.1	107.00	110.00	2.76	
SpinosynA	N.D.	0.84	0.676	0.836	80.48	99.52	21.16	Q
SpinosynD	N.D.	0.16	0.137	0.178	85.63	111.25	26.03	Q
Spiromesifen	N.D.	1	0.212	0.232	21.20	23.20	9.01	LR
Spirotetramat	N.D.	1	0.92	0.894	92.00	89.40	2.87	
Spiroxamine	N.D.	1	1.19	1.25	119.00	125.00	4.92	
Tebuconazole	N.D.	1	1.09	1.09	109.00	109.00	0.00	
Thiacloprid	N.D.	1	1.37	1.41	137.00	141.00	2.88	HR
Thiamethoxam	N.D.	1	1.25	1.31	125.00	131.00	4.69	HR
Trifloxystrobin	N.D.	1	1.21	1.27	121.00	127.00	4.84	

N.D. = Not Detected

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R = indicates compound recovery of matrix spike was outside the methods acceptable limits. (70-130%) Low recovery could indicate there is actually more compound present than detected; while high recoveries should be scrutinized for possible fails as more compound may be detected than is actually residual on the sample.

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