



**ORELAP Cert No. 4092-004**  
**OLCC No. 1002158CD2E**

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

Testing Accreditation #: 4092-004

Test Certificate #: 119754-001

**Client Name, Sample Details**  
**Pistil Pioneers**  
 Blachly, OR 97412  
**Sample:** Cannatonic  
**License:** 020-10005453F9C  
**Type:** Usable Marijuana  
**Method:** FE04U  
**Metrc Test Pkg#:** 1A4010300009665000000567  
**Metrc Source Pkg#:** 1A4010300009665000000525  
**\*\*\*Water Activity:** 0.51  
**\*\*\*Moisture:** 11.75%

**Test Conditions**  
**Prepsheet ID#:** ORP191105a  
**Scale:** XS205-OR1  
**Temp:** 20.8 °C  
**Baro PE:** 1002 hPa  
**Analyst:** HRM  
**Technician:** EDT

**Sample ID#:** 119754  
**Lot #:** HRVCT\_10819  
**Batch #:** 119754  
**Batch Weight (g):** 6810  
**Harvest/Process Date:** 10/08/2019  
**Serving Size (g):** 1  
**Date Received:** 10/30/2019  
**Test Date:** 11/05/2019



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG	CBC	THCV*	CBDV	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	0.06	0.84	0.64	23.32	N/D	0.09	0.14	N/D	N/D	25.10	0.80	21.09	22.13
Amount (mg/g)	0.59	8.43	6.43	233.19	N/D	0.93	1.41	N/D	N/D	250.98	7.98	210.94	221.26
Amount per Serving (mg)	0.59	8.43	6.43	233.19	N/D	0.93	1.41	N/D	N/D	250.98	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	5.14	0.74	+/-5%	0.67	+/-5%	+/-5%	+/-5%	+/-5%	+/-5%			7	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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Himashi Mead, Technical Manager



Joseph Rutkowski, Quality 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. 4092-004**  
**OLCC No. 1002158CD2E**

**Oregon Compliant QC Report**

Testing Accreditation #: 4092-004

Test Certificate #: 119754-001

**Client Name, Sample Details**  
**Pistil Pioneers**  
 Blachly, OR 97412  
**Sample:** Cannatonic  
**License:** 020-10005453F9C  
**Type:** Usable Marijuana  
**Method:** FE04U  
**Metrc Test Pkg#:** 1A4010300009665000000567  
**Metrc Source Pkg#:** 1A4010300009665000000525  
**\*\*\*Water Activity:** 0.51  
**\*\*\*Moisture:** 11.75%

**Test Conditions**  
**Prepsheet ID#:** ORP191105a  
**Scale:** XS205-OR1  
**Temp:** 20.8 °C  
**Baro PE:** 1002 hPa  
**Analyst:** HRM  
**Technician:** EDT

**Sample ID#:** 119754  
**Lot #:** HRVCT\_10819  
**Batch #:** 119754  
**Batch Weight (g):** 6810  
**Harvest/Process Date:** 10/08/2019  
**Serving Size (g):** 1  
**Date Received:** 10/30/2019  
**Test Date:** 11/05/2019



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	1.48	114.73	1.49	115.50	0.67%	
Cannabigerol (CBG)	N.D.	0.16	0.20	125.00	0.20	125.00	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.	0.10	0.07	70.00	0.07	70.00	0.00%	
Δ9-Tetrahydrocannabinol (THC)	N.D.	3.31	3.41	103.02	3.59	108.46	5.14%	
Cannabichromene (CBC)	N.D.	0.08	0.12	150.00	0.12	150.00	0.00%	
Tetrahydrocannabinolic acid (THCA)	N.D.	18.31	19.03	103.93	18.89	103.17	0.74%	

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.

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Joseph Rutkowski, Quality Manager

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**ORELAP Cert No. 4092-004**  
**OLCC No. 1002158CD2E**

**Oregon Compliant Pesticide Analysis by  
 Mass Spectrometer**

Testing Accreditation #: 4092-004

Test Certificate #: 119754-001

<b>Client Name, Sample Details</b> <b>Pistil Pioneers</b> Blachly, OR 97412 <b>Sample:</b> Cannatonic <b>License:</b> 020-10005453F9C <b>Type:</b> Usable Marijuana <b>Method:</b> FE-52 (EN 15662 & AOAC 2007.01) <b>Metric Test Pkg#:</b> 1A4010300009665000000567 <b>Metric Source Pkg#:</b> 1A4010300009665000000525	<b>Test Conditions</b> <b>Prepsheet ID#:</b> ORPS191106b <b>Scale:</b> Veritas-OR1 <b>Temp:</b> 23.2 °C <b>Baro PE:</b> 1006 hPa <b>Analyst:</b> JER <b>Technician:</b> TMR	<b>Sample ID#:</b> 119754 <b>Lot #:</b> HRVCT_10819 <b>Batch #:</b> 119754 <b>Batch Weight (g):</b> 6810 <b>Harvest/Process Date:</b> 10/08/2019 <b>Serving Size (g):</b> 1 <b>Date Received:</b> 10/30/2019 <b>Test Date:</b> 11/09/2019
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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	0.117	Pass/<LOD	Abamectin****	0.500	0.117	Pass/<LOD
Acephate	0.400	0.117	Pass/<LOD	Acequinocyl	2.000	0.234	Pass/<LOD
Acetamiprid	0.200	0.117	Pass/<LOD	Azoxystrobin	0.200	0.117	Pass/<LOD
Bifenazate	0.200	0.117	Pass/<LOD	Bifenthrin	0.200	0.117	Pass/<LOD
Boscalid	0.400	0.117	Pass/<LOD	Carbaryl	0.200	0.117	Pass/<LOD
Carbofuran	0.200	0.117	Pass/<LOD	Chlorantraniliprole	0.200	0.117	Pass/<LOD
Chlorfenapyr	1.000	0.468	Pass/<LOD	Chlorpyrifos	0.200	0.117	Pass/<LOD
Clofentazine	0.200	0.117	Pass/<LOD	Cyfluthrin**	1.000	0.468	Pass/<LOD
Cypermethrin***	1.000	0.468	Pass/<LOD	Daminozide	1.000	0.117	Pass/<LOD
DDVP (Dichlorvos)	1.000	0.234	Pass/<LOD	Diazinon	0.200	0.117	Pass/<LOD
Dimethoate	0.200	0.117	Pass/<LOD	Ethoprophos	0.200	0.117	Pass/<LOD
Etofenprox	0.400	0.117	Pass/<LOD	Etoazole	0.200	0.117	Pass/<LOD
Fenoxycarb	0.200	0.117	Pass/<LOD	Fenpyroximate	0.400	0.117	Pass/<LOD
Fipronil	0.400	0.117	Pass/<LOD	Flonicamid	1.000	0.117	Pass/<LOD
Fludioxonil	0.400	0.117	Pass/<LOD	Hexythiazox	1.000	0.117	Pass/<LOD
Imazalil	0.200	0.117	Pass/<LOD	Imidacloprid	0.400	0.117	Pass/<LOD
Kresoxim Methyl	0.400	0.117	Pass/<LOD	Malathion	0.200	0.117	Pass/<LOD
Metalaxyl	0.200	0.117	Pass/<LOD	Methiocarb	0.200	0.117	Pass/<LOD
Methomyl	0.400	0.117	Pass/<LOD	Methyl Parathion	0.200	0.117	Pass/<LOD
MGK-264‡	0.200	0.117	Pass/<LOD	Myclobutanil	0.000	0.117	Pass/<LOD
Naled	0.500	0.117	Pass/<LOD	Oxamyl	1.000	0.117	Pass/<LOD
Paclobutrazol	0.400	0.117	Pass/<LOD	Permethrin†	0.200	0.117	Pass/<LOD
Phosmet	0.200	0.117	Pass/<LOD	Piperonyl Butoxide	2.000	0.117	Pass/<LOD
Prallethrin	0.200	0.117	Pass/<LOD	Propiconazole	0.400	0.117	Pass/<LOD
Propoxur	0.200	0.117	Pass/<LOD	Pyrethrins*	1.000	0.117	Pass/<LOD
Pyridaben	0.200	0.117	Pass/<LOD	Spinosad*****	0.200	0.117	Pass/<LOD
Spiromesifen	0.200	0.117	Pass/<LOD	Spirotetramat	0.200	0.117	Pass/<LOD
Spiroxamine‡	0.400	0.117	Pass/<LOD	Tebuconazole	0.400	0.117	Pass/<LOD
Thiacloprid	0.200	0.117	Pass/<LOD	Thiamethoxam	0.200	0.117	Pass/<LOD
Trifloxystrobin	0.200	0.117	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. 4092-004**  
**OLCC No. 1002158CD2E**

**Oregon Compliant Pesticide QC Report**

Testing Accreditation #: 4092-004

Test Certificate #: 119754-001

**Client Name, Sample Details**  
**Pistil Pioneers**  
 Blachly, OR 97412  
**Sample:** Cannatonic  
**License:** 020-10005453F9C  
**Type:** Usable Marijuana  
**Method:** FE-52 (EN 15662 & AOAC 2007.01)  
**Metrc Test Pkg#:** 1A4010300009665000000567  
**Metrc Source Pkg#:** 1A4010300009665000000525

**Test Conditions**  
**Prepsheet ID#:** ORPS191106b  
**Scale:** Veritas-OR1  
**Temp:** 23.2 °C  
**Baro PE:** 1006 hPa  
**Analyst:** JER  
**Technician:** TMR

**Sample ID#:** 119754  
**Lot #:** HRVCT\_10819  
**Batch #:** 119754  
**Batch Weight (g):** 6810  
**Harvest/Process Date:** 10/08/2019  
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**Date Received:** 10/30/2019  
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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	1.11	1.05	111.00	105.00	5.56	
Acequinocyl	N.D.	1	0.993	0.839	99.30	83.90	16.81	
Acetamiprid	N.D.	1	1.18	1.12	118.00	112.00	5.22	
Aldicarb	N.D.	1	1.1	1.08	110.00	108.00	1.83	
Avermectin B1a	N.D.	0.97	1.19	1.24	122.68	127.84	4.12	
Azoxystrobin	N.D.	1	1.15	1.12	115.00	112.00	2.64	
Bifenazate	N.D.	1	0.953	0.976	95.30	97.60	2.38	
Bifenthrin	N.D.	1	1.18	1.12	118.00	112.00	5.22	
Boscalid	N.D.	1	0.957	0.901	95.70	90.10	6.03	
Carbaryl	N.D.	1	1.11	1.11	111.00	111.00	0.00	
Carbofuran	N.D.	1	1.29	1.31	129.00	131.00	1.54	
Chlorantraniliprole	N.D.	1	1.1	1.05	110.00	105.00	4.65	
Chlorfenapyr	N.D.	1	0.846	0.759	84.60	75.90	10.84	
Chlorpyrifos	N.D.	1	1.02	0.989	102.00	98.90	3.09	
Clofentezine	N.D.	1	0.929	0.955	92.90	95.50	2.76	
Cyfluthrin	N.D.	1	1.21	1.12	121.00	112.00	7.73	
Cypermethrin	N.D.	1	1.24	1.24	124.00	124.00	0.00	
Daminoside	N.D.	1	1.04	1.08	104.00	108.00	3.77	
Diazanone	N.D.	1	1.05	1.1	105.00	110.00	4.65	
Dichlorvos	N.D.	1	1.1	1.09	110.00	109.00	0.91	
Dimethoate	N.D.	1	1.21	1.17	121.00	117.00	3.36	
Ethoprophos	N.D.	1	0.985	0.968	98.50	96.80	1.74	
Etofenprox	N.D.	1	1.17	1.16	117.00	116.00	0.86	
Etoxazole	N.D.	1	1.11	1.18	111.00	118.00	6.11	
Fenoxycarb	N.D.	1	0.962	1.01	96.20	101.00	4.87	
Fenpyroximate	N.D.	1	1.32	1.29	132.00	129.00	2.30	
Fipronil	N.D.	1	1.05	1.04	105.00	104.00	0.96	
Flonicamid	N.D.	1	1.23	1.23	123.00	123.00	0.00	
Fludioxonil	N.D.	1	1.06	1.08	106.00	108.00	1.87	
Hexythiazox	N.D.	1	0.996	0.919	99.60	91.90	8.04	
Imazalil	N.D.	1	1.12	1.17	112.00	117.00	4.37	
Imidacloprid	N.D.	1	1.17	1.18	117.00	118.00	0.85	
Kresoxim-methyl	N.D.	1	0.95	0.931	95.00	93.10	2.02	
Malathion	N.D.	1	0.995	1.07	99.50	107.00	7.26	
Metalaxyl	N.D.	1	1.08	1.15	108.00	115.00	6.28	
Methiocarb	N.D.	1	1.1	1.1	110.00	110.00	0.00	
Methomyl	N.D.	1	1.11	1.17	111.00	117.00	5.26	
MGK-264	N.D.	1	1.1	1.01	110.00	101.00	8.53	
Myclobutanil	N.D.	1	1.07	1.14	107.00	114.00	6.33	
Naled (dibrom)	N.D.	1	1.01	0.863	101.00	86.30	15.70	

Oxamyl	N.D.	1	1.25	1.22	125.00	122.00	2.43	
Paclobutrazol	N.D.	1	1.11	1.14	111.00	114.00	2.67	
Parathion-methyl	N.D.	1	0.984	1.1	98.40	110.00	11.13	
Permethrins	N.D.	1	1.29	1.14	129.00	114.00	12.35	
Phosmet	N.D.	1	1.01	1.01	101.00	101.00	0.00	
Piperonyl butoxide	N.D.	1	1.07	1.08	107.00	108.00	0.93	
Prallethrin	N.D.	1	0.979	1.03	97.90	103.00	5.08	
Propiconazole	N.D.	1	0.815	0.842	81.50	84.20	3.26	
Propoxur	N.D.	1	1.12	1.03	112.00	103.00	8.37	
Pyrethrin	N.D.	0.65	0.612	0.629	94.15	96.77	2.74	
Pyridaben	N.D.	1	1.06	1.01	106.00	101.00	4.83	
SpinosynA	N.D.	0.84	0.898	0.666	106.90	79.29	29.67	Q
SpinosynD	N.D.	0.16	0.173	0.155	108.13	96.88	10.98	
Spiromesifen	N.D.	1	1.04	1.15	104.00	115.00	10.05	
Spirotetramat	N.D.	1	1.03	0.999	103.00	99.90	3.06	
Spiroxamine	N.D.	1	1.09	1.08	109.00	108.00	0.92	
Tebuconazole	N.D.	1	0.964	0.976	96.40	97.60	1.24	
Thiacloprid	N.D.	1	1.13	1.15	113.00	115.00	1.75	
Thiamethoxam	N.D.	1	1.18	1.16	118.00	116.00	1.71	
Trifloxystrobin	N.D.	1	1.04	1.05	104.00	105.00	0.96	

N.D. = Not 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%

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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