



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

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

Testing Accreditation #: 4092-004

Test Certificate #: 119742-001

**Client Name, Sample Details**  
**Pistil Pioneers**  
 Blachly, OR 97412  
**Sample:** Cannatonic  
**License:** 020-10005453F9C  
**Type:** Usable Marijuana  
**Method:** FE04U  
**Metrc Test Pkg#:** 1A4010300009665000000555  
**Metrc Source Pkg#:** 1A4010300009665000000513  
**\*\*\*Water Activity:** 0.483  
**\*\*\*Moisture:** 11.68%

**Test Conditions**  
**Prepsheet ID#:** ORP191104a  
**Scale:** XS205-OR1  
**Temp:** 21.8 °C  
**Baro PE:** 1005 hPa  
**Analyst:** HRM  
**Technician:** EDT

**Sample ID#:** 119742  
**Lot #:** HRVCT\_10819  
**Batch #:** 119742  
**Batch Weight (g):** 6810  
**Harvest/Process Date:** 10/08/2019  
**Serving Size (g):** 1  
**Date Received:** 10/30/2019  
**Test Date:** 11/04/2019



Test Compounds	THC	THCA	CBD	CBDA	CBN	CBG	CBC	THCV*	CBDV	Total Cannabinoids*	Total THC	Total CBD	Calc Max Total Cannabinoids*
Amount (%)	N/D	0.71	0.50	21.10	N/D	0.09	N/D	N/D	N/D	22.40	0.62	19.01	19.72
Amount (mg/g)	N/D	7.12	5.04	210.97	N/D	0.89	N/D	N/D	N/D	224.02	6.24	190.06	197.19
Amount per Serving (mg)	N/D	7.12	5.04	210.97	N/D	0.89	N/D	N/D	N/D	224.02	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	68.63	5.73	+/-5%	5.13	+/-5%	5.41	+/-5%	+/-5%	+/-5%			0	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 #: 119742-001

**Client Name, Sample Details**  
**Pistil Pioneers**  
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**Type:** Usable Marijuana  
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**Scale:** XS205-OR1  
**Temp:** 21.8 °C  
**Baro PE:** 1005 hPa  
**Analyst:** HRM  
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**Lot #:** HRVCT\_10819  
**Batch #:** 119742  
**Batch Weight (g):** 6810  
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**Serving Size (g):** 1  
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**Test Date:** 11/04/2019



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	1.33	103.10	1.40	108.53	5.13%	
Cannabigerol (CBG)	N.D.	0.16	0.18	112.50	0.19	118.75	5.41%	
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	3.13	94.56	6.40	193.35	68.63%	
Cannabichromene (CBC)	N.D.	0.08	0.11	137.50	0.11	137.50	0.00%	
Tetrahydrocannabinolic acid (THCA)	N.D.	18.31	16.95	92.57	17.95	98.03	5.73%	

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

**Oregon Compliant Pesticide Analysis by  
 Mass Spectrometer**

Testing Accreditation #: 4092-004

Test Certificate #: 119742-001

**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)  
**Metric Test Pkg#:** 1A4010300009665000000555  
**Metric Source Pkg#:** 1A4010300009665000000513

**Test Conditions**  
**Prepsheet ID#:** ORPS191106a  
**Scale:** Veritas-OR1  
**Temp:** 23.2 °C  
**Baro PE:** 1006 hPa  
**Analyst:** JER  
**Technician:** TMR

**Sample ID#:** 119742  
**Lot #:** HRVCT\_10819  
**Batch #:** 119742  
**Batch Weight (g):** 6810  
**Harvest/Process Date:** 10/08/2019  
**Serving Size (g):** 1  
**Date Received:** 10/30/2019  
**Test Date:** 11/08/2019



Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)	Compound	MRL (µg/g)	LOD (µg/g)	Status (µg/g)
Aldicarb	0.400	0.120	Pass/<LOD	Abamectin****	0.500	0.120	Pass/<LOD
Acephate	0.400	0.120	Pass/<LOD	Acequinocyl	2.000	0.240	Pass/<LOD
Acetamiprid	0.200	0.120	Pass/<LOD	Azoxystrobin	0.200	0.120	Pass/<LOD
Bifenazate	0.200	0.120	Pass/<LOD	Bifenthrin	0.200	0.120	Pass/<LOD
Boscalid	0.400	0.120	Pass/<LOD	Carbaryl	0.200	0.120	Pass/<LOD
Carbofuran	0.200	0.120	Pass/<LOD	Chlorantraniliprole	0.200	0.120	Pass/<LOD
Chlorfenapyr	1.000	0.481	Pass/<LOD	Chlorpyrifos	0.200	0.120	Pass/<LOD
Clofentazine	0.200	0.120	Pass/<LOD	Cyfluthrin**	1.000	0.481	Pass/<LOD
Cypermethrin***	1.000	0.481	Pass/<LOD	Daminozide	1.000	0.120	Pass/<LOD
DDVP (Dichlorvos)	1.000	0.240	Pass/<LOD	Diazinon	0.200	0.120	Pass/<LOD
Dimethoate	0.200	0.120	Pass/<LOD	Ethoprophos	0.200	0.120	Pass/<LOD
Etofenprox	0.400	0.120	Pass/<LOD	Etoxazole	0.200	0.120	Pass/<LOD
Fenoxycarb	0.200	0.120	Pass/<LOD	Fenpyroximate	0.400	0.120	Pass/<LOD
Fipronil	0.400	0.120	Pass/<LOD	Flonicamid	1.000	0.120	Pass/<LOD
Fludioxonil	0.400	0.120	Pass/<LOD	Hexythiazox	1.000	0.120	Pass/<LOD
Imazalil	0.200	0.120	Pass/<LOD	Imidacloprid	0.400	0.120	Pass/<LOD
Kresoxim Methyl	0.400	0.120	Pass/<LOD	Malathion	0.200	0.120	Pass/<LOD
Metalaxyl	0.200	0.120	Pass/<LOD	Methiocarb	0.200	0.120	Pass/<LOD
Methomyl	0.400	0.120	Pass/<LOD	Methyl Parathion	0.200	0.120	Pass/<LOD
MGK-264‡	0.200	0.120	Pass/<LOD	Myclobutanil	0.000	0.120	Pass/<LOD
Naled	0.500	0.120	Pass/<LOD	Oxamyl	1.000	0.120	Pass/<LOD
Paclobutrazol	0.400	0.120	Pass/<LOD	Permethrin†	0.200	0.120	Pass/<LOD
Phosmet	0.200	0.120	Pass/<LOD	Piperonyl Butoxide	2.000	0.120	Pass/<LOD
Prallethrin	0.200	0.120	Pass/<LOD	Propiconazole	0.400	0.120	Pass/<LOD
Propoxur	0.200	0.120	Pass/<LOD	Pyrethrins*	1.000	0.120	Pass/<LOD
Pyridaben	0.200	0.120	Pass/<LOD	Spinosad*****	0.200	0.120	Pass/<LOD
Spiromesifen	0.200	0.120	Pass/<LOD	Spirotetramat	0.200	0.120	Pass/<LOD
Spiroxamine‡	0.400	0.120	Pass/<LOD	Tebuconazole	0.400	0.120	Pass/<LOD
Thiacloprid	0.200	0.120	Pass/<LOD	Thiamethoxam	0.200	0.120	Pass/<LOD
Trifloxystrobin	0.200	0.120	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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**OLCC No. 1002158CD2E**

**Oregon Compliant Pesticide QC Report**

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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	1.07	1.11	107.00	111.00	3.67	
Acequinocyl	N.D.	1	0.852	0.804	85.20	80.40	5.80	
Acetamiprid	N.D.	1	1.08	1.16	108.00	116.00	7.14	
Aldicarb	N.D.	1	1.05	1.06	105.00	106.00	0.95	
Avermectin B1a	N.D.	0.97	1.17	1.23	120.62	126.80	5.00	
Azoxystrobin	N.D.	1	0.996	1.08	99.60	108.00	8.09	
Bifenazate	N.D.	1	0.954	0.952	95.40	95.20	0.21	
Bifenthrin	N.D.	1	1.14	1.21	114.00	121.00	5.96	
Boscalid	N.D.	1	0.941	0.929	94.10	92.90	1.28	
Carbaryl	N.D.	1	1.03	1.1	103.00	110.00	6.57	
Carbofuran	N.D.	1	1.23	1.27	123.00	127.00	3.20	
Chlorantraniliprole	N.D.	1	1.05	1.06	105.00	106.00	0.95	
Chlorfenapyr	N.D.	1	0.707	0.724	70.70	72.40	2.38	
Chlorpyrifos	N.D.	1	0.941	0.98	94.10	98.00	4.06	
Clofentezine	N.D.	1	0.888	0.921	88.80	92.10	3.65	
Cyfluthrin	N.D.	1	1.2	1.19	120.00	119.00	0.84	
Cypermethrin	N.D.	1	1.22	1.21	122.00	121.00	0.82	
Daminoside	N.D.	1	1.1	1.14	110.00	114.00	3.57	
Diazanone	N.D.	1	1.02	1.08	102.00	108.00	5.71	
Dichlorvos	N.D.	1	1.09	1.16	109.00	116.00	6.22	
Dimethoate	N.D.	1	1.11	1.16	111.00	116.00	4.41	
Ethoprophos	N.D.	1	0.926	0.981	92.60	98.10	5.77	
Etofenprox	N.D.	1	1.05	1.11	105.00	111.00	5.56	
Etoxazole	N.D.	1	1.12	1.15	112.00	115.00	2.64	
Fenoxycarb	N.D.	1	0.968	0.953	96.80	95.30	1.56	
Fenpyroximate	N.D.	1	1.21	1.19	121.00	119.00	1.67	
Fipronil	N.D.	1	1.05	1.07	105.00	107.00	1.89	
Flonicamid	N.D.	1	1.14	1.15	114.00	115.00	0.87	
Fludioxonil	N.D.	1	1.14	1.09	114.00	109.00	4.48	
Hexythiazox	N.D.	1	0.893	0.932	89.30	93.20	4.27	
Imazalil	N.D.	1	1.11	1.1	111.00	110.00	0.90	
Imidacloprid	N.D.	1	1.13	1.18	113.00	118.00	4.33	
Kresoxim-methyl	N.D.	1	0.944	0.98	94.40	98.00	3.74	
Malathion	N.D.	1	0.952	0.982	95.20	98.20	3.10	
Metalaxyl	N.D.	1	1.07	1.08	107.00	108.00	0.93	
Methiocarb	N.D.	1	1.05	1.04	105.00	104.00	0.96	
Methomyl	N.D.	1	1.06	1.11	106.00	111.00	4.61	
MGK-264	N.D.	1	1	1.03	100.00	103.00	2.96	
Myclobutanil	N.D.	1	1.13	1.17	113.00	117.00	3.48	
Naled (dibrom)	N.D.	1	0.938	0.941	93.80	94.10	0.32	

Oxamyl	N.D.	1	1.18	1.22	118.00	122.00	3.33	
Paclobutrazol	N.D.	1	1.11	1.15	111.00	115.00	3.54	
Parathion-methyl	N.D.	1	1.11	1.04	111.00	104.00	6.51	
Permethrins	N.D.	1	1.2	1.16	120.00	116.00	3.39	
Phosmet	N.D.	1	0.976	0.987	97.60	98.70	1.12	
Piperonyl butoxide	N.D.	1	1.04	1.08	104.00	108.00	3.77	
Prallethrin	N.D.	1	0.962	0.982	96.20	98.20	2.06	
Propiconazole	N.D.	1	0.826	0.825	82.60	82.50	0.12	
Propoxur	N.D.	1	1.08	1.18	108.00	118.00	8.85	
Pyrethrin	N.D.	0.65	0.635	0.615	97.69	94.62	3.20	
Pyridaben	N.D.	1	1	1.02	100.00	102.00	1.98	
SpinosynA	N.D.	0.84	0.619	0.665	73.69	79.17	7.17	
SpinosynD	N.D.	0.16	0.144	0.142	90.00	88.75	1.40	
Spiromesifen	N.D.	1	1.02	1.02	102.00	102.00	0.00	
Spirotetramat	N.D.	1	0.966	0.969	96.60	96.90	0.31	
Spiroxamine	N.D.	1	1.07	1.11	107.00	111.00	3.67	
Tebuconazole	N.D.	1	0.948	0.97	94.80	97.00	2.29	
Thiacloprid	N.D.	1	1.1	1.17	110.00	117.00	6.17	
Thiamethoxam	N.D.	1	1.13	1.18	113.00	118.00	4.33	
Trifloxystrobin	N.D.	1	1.02	1.03	102.00	103.00	0.98	

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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