



# Certificate of Analysis

Sample: M000723002-001  
Harvest/Lot ID: N/A  
Seed to Sale #N/A  
Batch Date :N/A  
Batch#: 3

Sample Size Received: 5 units  
Retail Product Size: 1  
Ordered : 07/21/20  
Sampled : 07/21/20

Completed: 07/24/20 Expires: 07/24/21  
Sampling Method: SOP Client Method

Jul 24, 2020 | Pinnacle Hemp

2900 Davis Blvd  
Joplin, MO, 64801, USA



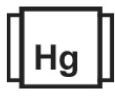
**PASSED**

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PRODUCT IMAGE SAFETY RESULTS



Pesticides  
**PASSED**



Heavy Metals  
**PASSED**



Microbials  
**PASSED**



Mycotoxins  
**PASSED**



Residuals  
Solvents  
**PASSED**



Filtration  
**PASSED**



Water Activity  
NOT TESTED



Moisture  
NOT TESTED



Terpenes  
**TESTED**

MISC.

CANNABINOID RESULTS



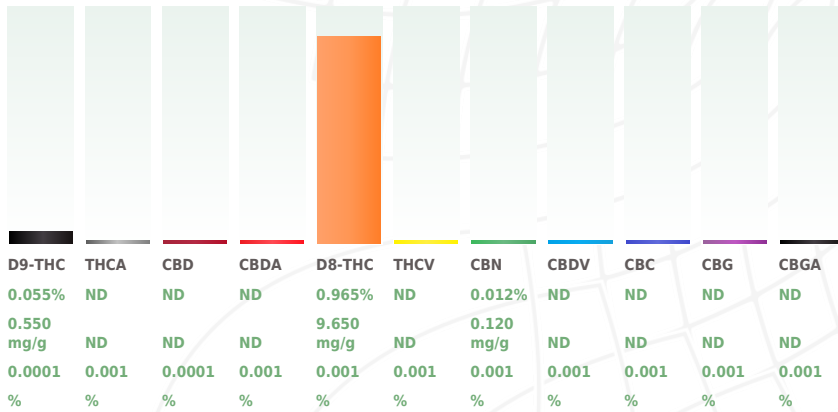
Total THC  
**0.055%**  
THC/Container :0.550 mg



Total CBD  
**0.000%**  
CBD/Container :0.000 mg



Total Cannabinoids  
**1.032%**  
Total Cannabinoids/Container :10.320 mg



**Filtration PASSED**

Analyzed By: 9  
Weight: NA  
Extraction date: NA  
LOD(ppm):  
Extracted By: NA  
Analysis Method -SOP.T.40.013  
Analytical Batch -NA  
Instrument Used :  
Batch Date :  
Reviewed On - 07/24/20 10:50:57

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. An SH-2B/T Stereo Microscope is use for inspection.

Cannabinoid Profile Test

Analyzed by: 19  
Weight: 2.7819g  
Extraction date : 07/23/20 03:07:47  
Extracted By : 19

Analysis Method -SOP.T.40.020, SOP.T.30.050  
Analytical Batch -M0000836POT  
Instrument Used : HPLC Potency Analyzer  
Reviewed On - 07/24/20 11:33:20  
Batch Date : 07/23/20 15:45:29

Reagent: 40  
Dilution:  
Consums. ID:

Full spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection (HPLC-UV). (Method: SOP.T.30.050 for sample prep and Shimadzu High Sensitivity Method SOP.T.40.020 for analysis. LOQ for all cannabinoids is 1 mg/L). Measurement of Uncertainty: 2.7%

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David Greene  
Lab Director

State License # 19-05-02P  
ISO Accreditation #  
17025:2017 #97164



Signature

07/24/2020

Signed On



# Certificate of Analysis

**PASSED**

**Pinnacle Hemp**

2900 Davis Blvd  
Joplin, MO, 64801, USA  
**Telephone:** (833) 436-7283  
**Email:** kevin@pinnacleddistro.com

**Sample : M000723002-001**  
**Harvest/LOT ID: N/A**

**Batch# : 3**  
**Sampled : 07/21/20**  
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**Sample Size Received : 5 units**  
**Completed : 07/24/20 Expires: 07/24/21**  
**Sample Method : SOP Client Method**

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## Terpenes

# TESTED

Terpenes	LOD	Units	Result (%)	Terpenes	LOD	Units	Result (%)
ALPHA-CEDRENE	0.005	%	ND	SABINENE HYDRATE	0.01	%	ND
ALPHA-HUMULENE	0.005	%	ND	TERPINEOL	0.005	%	ND
ALPHA-PINENE	0.005	%	ND	TERPINOLENE	0.005	%	ND
ALPHA-TERPINENE	0.005	%	ND	TRANS-CARYOPHYLLENE	0.005	%	ND
BETA-MYRCENE	0.005	%	ND	TRANS-NEROLIDOL	0.005	%	ND
BETA-PINENE	0.005	%	ND	VALENCENE	0.005	%	ND
BORNEOL	0.01	%	ND				
CAMPHENE	0.005	%	ND				
CAMPHOR	0.01	%	ND				
CARYOPHYLLENE OXIDE	0.005	%	ND				
CEDROL	0.005	%	ND				
ALPHA-BISABOLOL	0.005	%	ND				
ISOPULEGOL	0.01	%	ND				
CIS-NEROLIDOL	0.005	%	ND				
3-CARENE	0.005	%	ND				
FENCHYL ALCOHOL	0.005	%	ND				
HEXAHYDROTHYMOL	0.005	%	ND				
EUCALYPTOL	0.005	%	ND				
ISOBORNEOL	0.005	%	ND				
FENCHONE	0.01	%	ND				
GAMMA-TERPINENE	0.005	%	ND				
GERANIOL	0.005	%	ND				
GERANYL ACETATE	0.01	%	ND				
GUAJOL	0.005	%	ND				
LIMONENE	0.005	%	ND				
LINALOOL	0.01	%	ND				
NEROL	0.005	%	ND				
OCIMENE	0.005	%	ND				
ALPHA-PHELLANDRENE	0.005	%	ND				
PULEGONE	0.005	%	ND				
SABINENE	0.005	%	ND				
<b>Total</b>		0.000					



## Terpenes

# TESTED

**Analyzed by** 18    **Weight** 1.091g    **Extraction date** 07/24/20 10:07:36    **Extracted By** 18

**Analysis Method -SOP.T.40.090**  
**Analytical Batch -M0000842TER**    **Reviewed On - 07/24/20 12:31:32**  
**Instrument Used : GCMS8050 with Liquid Handler**  
**Batch Date : 07/24/20 10:13:19**

Reagent	Dilution	Consums. ID
Terpenoid profile screening is performed using GC-MS/MS TQ-8040 with Liquid Injection (Gas Chromatography - Mass Spectrometer Triple Quad) which can screen 37 terpenes using Method SOP.T.40.091 Terpenoid Analysis Via GC-MS/MS.		

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**David Greene**  
Lab Director

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ISO Accreditation #  
17025:2017 #97164

  
Signature

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**Telephone:** (833) 436-7283  
**Email:** kevin@pinnacleastro.com

**Sample : M000723002-001**  
**Harvest/LOT ID: N/A**

**Batch# : 3**  
**Sampled : 07/21/20**  
**Ordered : 07/21/20**

**Sample Size Received : 5 units**  
**Completed : 07/24/20 Expires: 07/24/21**  
**Sample Method : SOP Client Method**


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## Pesticides

# PASSED

Pesticides	LOD	Units	Action Level	Result	Pesticides	LOD	Units	Action Level	Result
ABAMECTIN B1A	0.020	ppm	0.5	ND	PRALLETHRIN	0.050	ppm	0.2	ND
ACEPHATE	0.010	ppm	0.5	ND	PROPICONAZOLE	0.010	ppm	0.4	ND
ACEQUINOCYL	0.02	ppm	2	ND	PROPOXUR	0.010	ppm	0.2	ND
ACETAMIPRID	0.010	ppm	0.2	ND	PYRETHRIN I	0.010	ppm	1	ND
ALDICARB	0.020	ppm	0.4	ND	PYRIDABEN	0.005	ppm	0.2	ND
AZOXYSTROBIN	0.010	ppm	0.2	ND	SPINETORAM	0.005	ppm	0.5	ND
BIFENAZATE	0.010	ppm	0.2	ND	SPINOSAD (SPINOSYN A)	0.010	ppm	0.2	ND
BIFENTHRIN	0.010	ppm	0.2	ND	SPINOSAD (SPINOSYN D)	0.010	ppm	0.2	ND
BOSCALID	0.005	ppm	0.4	ND	SPIROMESIFEN	0.010	ppm	0.2	ND
CARBARYL	0.010	ppm	0.2	ND	SPIROTETRAMAT	0.020	ppm	0.2	ND
CARBOFURAN	0.010	ppm	0.2	ND	SPIROXAMINE	0.010	ppm	0.4	ND
CHLORANTRANILIPROLE	0.010	ppm	0.2	ND	TEBUCONAZOLE	0.010	ppm	0.4	ND
CHLORPYRIFOS	0.010	ppm	0.2	ND	THIACLOPRID	0.010	ppm	0.2	ND
CLOFENTEZINE	0.010	ppm	0.2	ND	THIAMETHOXAM	0.010	ppm	0.5	ND
COUMAPHOS	0.005	ppm	0.2	ND	TRIFLOXYSTROBIN	0.010	ppm	0.2	ND
CYPERMETHRIN	0.010	ppm	1	ND					
DAMINOZIDE	0.010	ppm	1	ND					
DIAZANON	0.010	ppm	0.2	ND					
DICHLORVOS	0.050	ppm	0.1	ND					
DIMETHOATE	0.010	ppm	0.2	ND					
DIMETHOMORPH	0.005	ppm	0.1	ND					
ETHOPROPHOS	0.010	ppm	0.2	ND					
ETOFENPROX	0.010	ppm	0.4	ND					
ETOXAZOLE	0.010	ppm	0.2	ND					
FENHEXAMID	0.005	ppm	0.1	ND					
FENOXYCARB	0.010	ppm	0.2	ND					
FENPYROXIMATE	0.010	ppm	0.4	ND					
FIPRONIL	0.020	ppm	0.4	ND					
FLONICAMID	0.010	ppm	1	ND					
FLUDIOXONIL	0.010	ppm	0.4	ND					
HEXYTHIAZOX	0.010	ppm	1	ND					
IMAZALIL	0.010	ppm	0.2	ND					
IMIDACLOPRID	0.010	ppm	0.4	ND					
KRESOXIM-METHYL	0.010	ppm	0.4	ND					
MALATHION	0.010	ppm	0.2	ND					
METALAXYL	0.010	ppm	0.2	ND					
METHIOCARB	0.010	ppm	0.2	ND					
METHOMYL	0.010	ppm	0.6	ND					
MEVINPHOS	0.010	ppm	0.1	ND					
MYCLOBUTANIL	0.010	ppm	0.2	ND					
NALED	0.010	ppm	0.5	ND					
OXAMYL	0.010	ppm	1	ND					
PACLOBUTRAZOL	0.010	ppm	0.4	ND					
PERMETHRINS	0.050	ppm	1	ND					
PHOSMET	0.010	ppm	0.2	ND					
PIPERONYL BUTOXIDE	0.010	ppm	3	ND					



### Pesticides

**PASSED**

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<b>Analyzed by</b> 9	<b>Weight</b> 1g	<b>Extraction date</b> NA	<b>Extracted By</b> NA
<b>Analysis Method -</b> SOP.T.30.060, SOP.T.40.060 ,		<b>Reviewed On-</b> 07/24/20 10:50:57	
<b>Analytical Batch -</b> M0000845PES			
<b>Instrument Used :</b> LCMSMS 8060 P			
<b>Batch Date :</b> 07/24/20 14:13:56			

---

Reagent	Dilution	Consums. ID
Pesticide screen is performed using LC-MS which can screen down to below single digit ppb concentrations for regulated Pesticides. Currently we analyze for 57 Pesticides. (Method: SOP.T.30.060 Sample Preparation for Pesticides Analysis via LCMSMS and SOP.T40.060 Procedure for Pesticide Quantification Using LCMS). *		

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**David Greene**  
Lab Director  
State License # 19-05-02P  
ISO Accreditation #  
17025:2017 #97164



Signature

07/24/2020  
Signed On



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Telephone: (833) 436-7283  
Email: kevin@pinnacleastro.com

Sample : M000723002-001  
Harvest/LOT ID: N/A

Batch# : 3  
Sampled : 07/21/20  
Ordered : 07/21/20

Sample Size Received : 5 units  
Completed : 07/24/20 Expires: 07/24/21  
Sample Method : SOP Client Method

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## Residual Solvents

PASSED



## Residual Solvents

PASSED

Solvent	LOD	Units	Action Level (PPM)	Pass/Fail	Result
TRICHLOROETHENE	3	ppm	80	PASS	ND
CHLOROFORM	0.24	ppm	60	PASS	ND
1,2-DICHLOROETHENE	0.24	ppm	1870	PASS	ND
1,1-DICHLOROETHENE	2	ppm	8	PASS	ND
PENTANES	90	ppm	2500	PASS	ND
BUTANES (N-BUTANE)	50	ppm	5000	PASS	ND
ACETONITRILE	7.2	ppm	410	PASS	ND
ACETONE	90	ppm	5000	PASS	ND
2-PROPANOL	60	ppm	5000	PASS	ND
HEXANES	6	ppm	290	PASS	ND
XYLENES	18	ppm	2170	PASS	ND
TOLUENE	18	ppm	1068	PASS	ND
PROPANE	80	ppm	5000	PASS	ND
METHANOL	30	ppm	3000	PASS	ND
XYLENES-P (1,4-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
HEPTANE	60	ppm	5000	PASS	ND
XYLENES-M (1,3-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
ETHYLENE OXIDE	0.6	ppm	50	PASS	ND
XYLENES-O (1,2-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
ETHYL ETHER	60	ppm	5000	PASS	ND
ETHYL ACETATE	48	ppm	5000	PASS	ND
DICHLOROMETHANE	15	ppm	600	PASS	ND
ETHANOL	120	ppm	5000	PASS	639.000

Analyzed by 18      Weight 0.030g      Extraction date 07/24/20 10:07:35      Extracted By 18

Analysis Method -SOP.T.40.032  
Analytical Batch -MO000840SOL      Reviewed On - 07/24/20 10:31:05  
Instrument Used : GCMS2010  
Batch Date : 07/24/20 10:12:18

Reagent	Dilution	Consums. ID
Residual solvents screening is performed using GC-MS which can detect below single digit ppm concentrations. Currently we analyze for 33 Residual solvents. (Method: SOP.T.30.042 Residual Solvents Analysis via GC-MS).		

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**David Greene**  
Lab Director

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07/24/2020

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2900 Davis Blvd  
Joplin, MO, 64801, USA  
**Telephone:** (833) 436-7283  
**Email:** kevin@pinnacleastro.com

**Sample : M000723002-001**  
**Harvest/LOT ID: N/A**

**Batch# : 3**  
**Sampled : 07/21/20**  
**Ordered : 07/21/20**

**Sample Size Received : 5 units**  
**Completed : 07/24/20 Expires: 07/24/21**  
**Sample Method : SOP Client Method**

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**Microbials**

PASSED



**Mycotoxins**

PASSED

**Analyte**

ASPERGILLUS\_TERREUS\_1J2  
ASPERGILLUS\_NIGER  
ASPERGILLUS\_FUMIGATUS  
ASPERGILLUS\_FLAVUS  
SALMONELLA\_SPECIFIC\_GENE  
ESCHERICHIA\_COLI\_SHIGELLA\_SPP

**Result Analyte**

not present in 1 gram.  
not present in 1 gram.  
not present in 1 gram.  
not present in 1 gram.  
not present in 1 gram.  
not present in 1 gram.

**LOD**

**0.001**  
**0.001**  
**0.001**  
**0.001**  
**0.001**  
**0.001**

**Units**

**ppm**  
**ppm**  
**ppm**  
**ppm**  
**ppm**  
**ppm**

**Result**

ND  
ND  
ND  
ND  
ND  
ND

**Action Level (PPM)**

0.02  
0.02  
0.02  
0.02  
0.02  
0.02

**Analysis Method -SOP.T.40.043**  
**Analytical Batch -NA Batch Date :**  
**Instrument Used :**

**Analysis Method -SOP.T.30.060, SOP.T.40.060**  
**Analytical Batch - | Reviewed On - 07/24/20 16:23:38**  
**Instrument Used :**  
**Batch Date :**

Analyzed by	Weight	Extraction date	Extracted By
NA	NA	NA	NA

Analyzed by	Weight	Extraction date	Extracted By
NA	NA	NA	NA

Microbiological testing for Fungal and Bacterial Identification via Polymerase Chain Reaction (PCR) method consisting of sample DNA amplified via tandem Polymerase Chain Reaction (PCR) as a crude lysate which avoids purification. (Method SOP.T.40.043) If a pathogenic Escherichia Coli, Salmonella, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, or Aspergillus terreus is detected in 1g of a sample, the sample fails the microbiological-impurity testing.

Aflatoxins B1, B2, G1, G2, and Ochratoxins A testing using LC-MS. (Method: SOP.T.30.060 for Sample Preparation and SOP.T40.060 Procedure for Mycotoxins Quantification Using LCMS. LOQ 1.0 ppb). Total Aflatoxins (Aflatoxin B1, B2, G1, G2) must be <20µg/Kg. Ochratoxins must be <20µg/Kg.



**Heavy Metals**

PASSED

**Reagent**

110119.52  
110119.44  
112519.01  
110119.36

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC	0.02	ppm	ND	10
CADMIUM	0.02	ppm	ND	4.1
LEAD	0.02	ppm	ND	10
MERCURY	0.02	ppm	ND	2

Analyzed by	Weight	Extraction date	Extracted By
18	0.480g	07/24/20 10:07:31	18

**Analysis Method -SOP.T.40.050, SOP.T.30.052**  
**Analytical Batch -M000844HEA | Reviewed On - 07/24/20 11:37:42**  
**Instrument Used : ICP-MS 2030**  
**Batch Date : 07/24/20 10:21:54**

Heavy Metals screening is performed using ICP-MS (Inductively Coupled Plasma - Mass Spectrometer) which can screen down to below single digit ppb concentrations for regulated heavy metals using Method SOP.T.30.052 Sample Preparation for Heavy Metals Analysis via ICP-MS and SOP.T.40.050 Heavy Metals Analysis via ICP-MS. \*Action Limits based on Colorado Regulations.

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