



Sample: MO00609005-001
Harvest/Lot ID: N/A
Seed to Sale #N/A
Batch Date :N/A
Batch#: 25

Sample Size Received: 30 ml
Retail Product Size: 30
Ordered : 06/08/20
Sampled : 06/08/20

Completed: 06/16/20 Expires: 06/16/21
Sampling Method: SOP Client Method

Certificate of Analysis

Jun 16, 2020 | Pinnacle Hemp

2900 Davis Blvd
Joplin, MO, 64801, USA



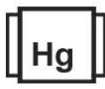
PASSED

Page 1 of 5

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
0.000%
THC/Container :0.000 mg



Total CBD
5.566%
CBD/Container :1552.914 mg



Total Cannabinoids
5.576%
Total Cannabinoids/Container :1555.704 mg



	D9-THC	THCA	CBD	CBDA	D8-THC	THCV	CBN	CBDV	CBC	CBG	CBGA
ND	ND	5.566%	ND	ND	ND	ND	0.010%	ND	ND	ND	ND
	ND	55.660 mg/g	ND	ND	ND	ND	0.100 mg/g	ND	ND	ND	ND
LOD	0.0001	0.001	0.0001	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
	%	%	%	%	%	%	%	%	%	%	%

Filtration PASSED

Analyzed By: 9 Weight: NA Extraction date: NA LOD(ppm): NA Extracted By: NA
Analysis Method -SOP.T.40.013 Batch Date :
Analytical Batch -NA Reviewed On - 06/09/20 13:48:08
Instrument Used :

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. An 5H-2B/T Stereo Microscope is use for inspection.

Cannabinoid Profile Test

Analyzed by: 19 Weight: 2.9986g Extraction date : 06/09/20 01:06:48 Extracted By : 19

Analysis Method -SOP.T.40.020, SOP.T.30.050 Reviewed On - 06/16/20 11:39:54
Analytical Batch -MO000653POT Instrument Used : HPLC Potency Analyzer Batch Date : 06/09/20 13:56:06

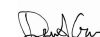
Reagent	Dilution	Consums. ID
103119.38 060420.R02 060420.R01	40	

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



Signature

06/16/2020

Signed On



Certificate of Analysis

PASSED
Pinnacle Hemp

 2900 Davis Blvd
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Email: kevin@pinnacleastro.com

Sample : MO00609005-001
Harvest/LOT ID: N/A
Batch# : 25
Sampled : 06/08/20
Ordered : 06/08/20
Sample Size Received : 30 ml
Completed : 06/16/20 Expires: 06/16/21
Sample Method : SOP Client Method
Page 2 of 5


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	%	0.008
ALPHA-PINENE	0.005	%	0.009	TERPINOLENE	0.005	%	0.007
ALPHA-TERPINENE	0.005	%	ND	TRANS-CARYOPHYLLENE	0.005	%	ND
BETA-MYRCENE	0.005	%	0.008	TRANS-NEROLIDOL	0.005	%	ND
BETA-PINENE	0.005	%	0.046	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	%	0.046				
GERANIOL	0.005	%	ND				
GERANYL ACETATE	0.01	%	ND				
GUAIOL	0.005	%	ND				
LIMONENE	0.005	%	0.353				
LINALOOL	0.01	%	ND				
NEROL	0.005	%	ND				
OCIMENE	0.005	%	ND				
ALPHA-PHELLANDRENE	0.005	%	ND				
PULEGONE	0.005	%	ND				
SABINENE	0.005	%	0.007				
Total			0.484				



Terpenes

TESTED

Analyzed by	Weight	Extraction date	Extracted By
18	1.051g	06/10/20 09:06:08	18

Analysis Method -SOP.T.40.090
Analytical Batch -MO000656TER **Reviewed On - 06/10/20 11:13:00**
Instrument Used : GCMS8050 with Liquid Handler
Batch Date : 06/10/20 09:02:19

Reagent	Dilution	Consums. ID
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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.

David Greene

Lab Director

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

Signature

06/16/2020

Signed On



Certificate of Analysis

PASSED

Pinnacle Hemp

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

Sample : MO00609005-001
Harvest/LOT ID: N/A

Batch# : 25
Sampled : 06/08/20
Ordered : 06/08/20

Sample Size Received : 30 ml
Completed : 06/16/20 Expires: 06/16/21
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	0.014
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
BFENTHRIN	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

Analyzed by 9	Weight 1g	Extraction date 06/10/20 09:06:15	Extracted By 9
Analysis Method - SOP.T.30.060, SOP.T.40.060 ,		Reviewed On- 06/09/20 13:48:08	
Analytical Batch - MO000651PES			
Instrument Used : LCMSMS 8060 P			
Batch Date : 06/09/20 12:01:05			

Reagent	Dilution	Consums. ID
03222004		GLC-06787
07021626		05280227
10301627		931CC
10301625		
10301624		
10301623		

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

Signature

06/16/2020

Signed On

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



Certificate of Analysis

PASSED

Pinnacle Hemp

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

Sample : MO00609005-001
Harvest/LOT ID: N/A
Batch# : 25
Sampled : 06/08/20
Ordered : 06/08/20

Sample Size Received : 30 ml
Completed : 06/16/20 Expires: 06/16/21
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	638.000
DICHLOROMETHANE	15	ppm	600	PASS	ND
ETHANOL	120	ppm	5000	PASS	ND

Analyzed by 18
Weight 0.055g
Extraction date 06/10/20 09:06:59
Extracted By 18
Analysis Method -SOP.T.40.032
Analytical Batch -MO000657SOL
Instrument Used : GCMS2010
Batch Date : 06/10/20 09:10:49
Reviewed On - 06/10/20 11:45:28

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
State License # 19-05-02P
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Signature

06/16/2020

Signed On



Certificate of Analysis

PASSED
Pinnacle Hemp

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

Sample : MO00609005-001
Harvest/LOT ID: N/A
Batch# : 25
Sampled : 06/08/20
Ordered : 06/08/20
Sample Size Received : 30 ml
Completed : 06/16/20 Expires: 06/16/21
Sample Method : SOP Client Method
Page 5 of 5

	Mycotoxins	PASSED		Heavy Metals	PASSED
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Analyte	LOD	Units	Result	Action Level (PPM)	Reagent
AFLATOXIN G2	0.001	ppm	ND	0.02	110119.52
AFLATOXIN G1	0.001	ppm	ND	0.02	110119.44
AFLATOXIN B2	0.001	ppm	ND	0.02	112519.01
AFLATOXIN B1	0.001	ppm	ND	0.02	110119.36
OCHRATOXIN A+	0.001	ppm	ND	0.02	

Analysis Method -SOP.T.30.060, SOP.T.40.060
Analytical Batch - | Reviewed On - 06/10/20 09:27:19
Instrument Used :
Batch Date :

Analyzed by	Weight	Extraction date	Extracted By
NA	NA	NA	NA

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.

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC	0.02	ppm	ND	10
CADMJUM	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	0.515g	06/10/20 09:06:15	18

Analysis Method -SOP.T.40.050, SOP.T.30.052
Analytical Batch -MO000655HEA | Reviewed On - 06/10/20 10:46:55
Instrument Used : ICP-MS 2030
Batch Date : 06/10/20 09:00:07

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.

	Microbials	PASSED
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Analyte

 ASPERGILLUS_TERREUS_1J2
 ASPERGILLUS_NIGER
 ASPERGILLUS_FUMIGATUS
 ASPERGILLUS_FLAVUS
 SALMONELLA_SPECIFIC_GENE
 ESCHERICHIA_COLI_SHIGELLA_SPP

Result

 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.

Analysis Method -SOP.T.40.043
Analytical Batch -NA | Reviewed On - 06/11/20 11:14:34
Instrument Used :
Batch Date :

Analyzed by	Weight	Extraction date	Extracted By
NA	NA	NA	NA

Reagent	Dilution	Consums. ID
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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.

David Greene

Lab Director

06/16/2020

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

Signature

Signed On