Universal Diagnostics 673 N. Bardstown Rd. Mount Washington, KY, 40047 (502) 444-2044 www.UD-Labs.com Lic # 19-05-02P



# Certificate of Analysis

Feb 19,2021 | Kentucky Heritage Hemp Company

Cox's Creek, KY, 8596211797 The state of the s

Matrix: Derivative
Accession Number: 210209KA0007D
Harvest/Lot ID:

Seed to Sale: \*

Batch Date: 02/09/21
Batch #: 345

Sample Size Received: 1 units Retail Product Size: 1 units

**Ordered:** 02/09/21

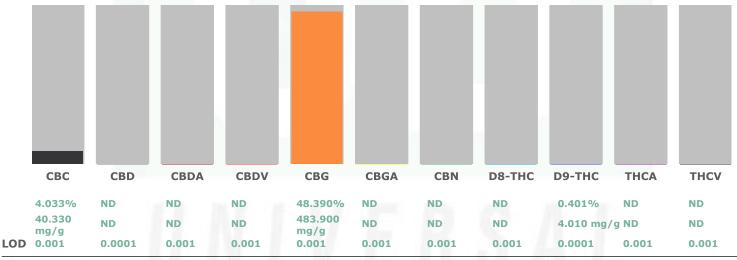
**Completed:** 02/19/21 **Expires:** 02/18/22

Sampling Method: SOP Client Method

Kentucky Heritage Hemp

#### CANNABINOID RESULTS

Total THC	Total CBD	<b>Total Cannabnoids</b>
0.401%	0.000%	52.824%



Full spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection (HPLC-PDA). (Method: SOP.KY.02.005) sample prep and Shimadzu High Sensitivity Method SOP.KY.02.012 for analysis. LOQ for all cannabinoids is 1 mg/L). % = %w/w = Percent (Weight of Analyte/Weight Product) Total Cannabinoids result reflects the absolute sum of all cannabinoids detected. \*\*Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation Total THC = THC + (THCa\*0.877) Total CBD = CBD + (CBDa\*0.877)

## Filth & Foreign Matter

**PASSED** 

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. SOP.KY.02.11

Pesticides									P	AS	SE	D
	 _	4.4	 	_	, –	 	_	4.4			_	

Pesticides	LLOQ	Result	Units	Action Level	Pass / Fail	Pesticides	LLOQ	Result	Units	Action Level	Pass / Fail
- cis-permethrin	0.0041	ND	ppm	0.4	PASS	- trans-permethrin	0.0118	ND	ppm	0.4	PASS
ABAMECTIN B1A	0.02	ND	ppm	0.5	PASS	ACEPHATE	0.01	ND	ppm	0.4	PASS
ACEQUINOCYL	0.05	ND	ppm	2	PASS	ACETAMIPRID	0.01	ND	ppm	0.2	PASS
ALDICARB	0.02	ND	ppm	0.4	PASS	AZOXYSTROBIN	0.01	ND	ppm	0.2	PASS

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#### **David Greene**

Lab Director

State License # 19-05-02P



02/19/21

Signature

Signed On

Page 1 of 3

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Cox's Creek, KY,

**Telephone**: 8596211797

Email: bobby.gaffney@gmail.com



**Kentucky Heritage Hemp** 

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Harvest/Lot ID:

Matrix: Derivative

Seed to Sale: \*

Batch Date: 02/09/21

Batch #: 345

Sample Size Received: 1 units

Retail Product Size: 1 units

Ordered: 02/09/21

**Expires:** 02/18/22

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								Sam	pling Met	Client Method	
Pesticides	LLOQ	Result	Units	Action Level	Pass / Fail	Pesticides	LLOQ	Result	Units	Action Level	Pass / Fail
BIFENAZATE	0.01	ND	ppm	0.2	PASS	BIFENTHRIN	0.01	ND	ppm	0.2	PASS
BOSCALID	0.01	ND	ppm	0.4	PASS	CARBARYL	0.01	ND	ppm	0.2	PASS
CARBOFURAN	0.01	ND	ppm	0.2	PASS	CHLORANTRANILIPROLE	0.01	ND	ppm	0.2	PASS
CHLORPYRIFOS	0.01	ND	ppm	0.2	PASS	CLOFENTEZINE	0.01	ND	ppm	0.2	PASS
COUMAPHOS	0.01	ND	ppm	0.2	PASS	CYPERMETHRIN	0.02	ND	ppm	1	PASS
DAMINOZIDE	0.02	ND	ppm	1	PASS	DIAZANON	0.01	ND	ppm	0.2	PASS
DICHLORVOS	0.05	ND	ppm	0.1	PASS	DIMETHOATE	0.01	ND	ppm	0.2	PASS
DIMETHOMORPH	0.005	ND	ppm	0.1	PASS	ETHOPROPHOS	0.01	ND	ppm	0.2	PASS
ETOFENPROX	0.01	ND	ppm	0.4	PASS	ETOXAZOLE	0.01	ND	ppm	0.2	PASS
FENHEXAMID	0.005	ND	ppm	0.1	PASS	FENOXYCARB	0.01	ND	ppm	0.2	PASS
FENPYROXIMATE	0.01	ND	ppm	0.4	PASS	FIPRONIL	0.02	ND	ppm	0.4	PASS
FLONICAMID	0.01	ND	ppm	1	PASS	FLUDIOXONIL	0.01	ND	ppm	0.4	PASS
HEXYTHIAZOX	0.01	ND	ppm	1	PASS	IMAZALIL	0.01	ND	ppm	0.2	PASS
IMIDACLOPRID	0.01	ND	ppm	0.4	PASS	KRESOXIM-METHYL	0.01	ND	ppm	0.4	PASS
MALATHION	0.01	ND	ppm	0.2	PASS	METALAXYL	0.01	ND	ppm	0.2	PASS
METHIOCARB	0.01	ND	ppm	0.2	PASS	METHOMYL	0.01	ND	ppm	0.4	PASS
MEVINPHOS	0.01	ND	ppm	0.1	PASS	MYCLOBUTANIL	0.01	ND	ppm	0.2	PASS
NALED	0.01	ND	ppm	0.5	PASS	OXAMYL	0.01	ND	ppm	1	PASS
PACLOBUTRAZOL	0.01	ND	ppm	0.4	PASS	PERMETHRINS (sum)	0.05	ND	ppm	1	PASS
PHOSMET	0.01	ND	ppm	0.2	PASS	PIPERONYL BUTOXIDE	0.01	ND	ppm	2	PASS
PRALLETHRIN	0.05	ND	ppm	0.2	PASS	PROPICONAZOLE	0.01	ND	ppm	0.4	PASS
PROPOXUR	0.01	ND	ppm	0.2	PASS	PYRETHRIN I	0.01	ND	ppm	1	PASS
PYRIDABEN	0.01	ND	ppm	0.2	PASS	SPINETORAM	0.01	ND	ppm	0.5	PASS
SPINOSAD (SPINOSYN A)	0.01	ND	ppm	0.2	PASS	SPINOSAD (SPINOSYN D)	0.01	ND	ppm	0.2	PASS
SPIROMESIFEN	0.01	ND	ppm	0.2	PASS	SPIROTETRAMAT	0.02	ND	ppm	0.2	PASS
SPIROXAMINE	0.01	ND	ppm	0.2	PASS	TEBUCONAZOLE	0.01	ND	ppm	0.4	PASS
THIACLOPRID	0.01	ND	ppm	0.2	PASS	THIAMETHOXAM	0.01	ND	ppm	0.2	PASS
Trifloxystrobin	0.01	ND	ppm	0.2	PASS						

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). \*\*

## **PASSE Mycotoxins**

											I
Analyte	LLOQ	Result	Units	Action Level	Pass / Fail	Analyte	LLOQ	Result	Units	Action Level	Pass / Fail
Aflatoxin B1	0.001	ND	ppm	0.2	PASS	Aflatoxin B2	0.001	ND	ppm	0.2	PASS
Aflatoxin G1	0.001	ND	ppm	0.2	PASS	Aflatoxin G2	0.001	ND	ppm	0.2	PASS
Ocratoxin A+	0.001	ND	ppm	0.2	PASS						

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 1.0ppb). Total Aflatoxins (Aflotoxin B1, B2, G1, G2) must be 20g/Kg. Ochratoxins must be 20g/Kg

Residual Solvents				PAS	SSED	Heav	y Metals			PAS	SED
Solvent	LLOQ	Result	Units	Action Level	Pass/Fail	Metal	LLOQ	Result	Unit	Action Level	Pass / Fail
				(PPM)		Arsenic	0.02	ND	ppm	3	PASS
1,1-DICHLOROETHENE	2.0	ND	ppm	8	PASS	Cadmium	0.02	ND	ppm	0.3	PASS
1,2-DICHLOROETHENE	0.24	ND	ppm	1870	PASS	Lead	0.02	ND	ppm	10	PASS
,			r r	10,0		Mercury	0.02	ND	ppm	3	PASS

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Lab Director

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Batch #: 345

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Retail Product Size: 1 units

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Completed: 02/19/21 Expires: 02/18/22

Sampling Method: SOP Client Method

Residual
<b>Solvents</b>

# **PASSED**

Solvents					
Solvent	LLOQ	Result	Units	Action Level (PPM)	Pass/Fail
2-PROPANOL	60.0	ND	ppm	5000	PASS
ACETONE	90.0	ND	ppm	5000	PASS
ACETONITRILE	7.2	ND	ppm	410	PASS
BUTANES (N-BUTANE)	50.0	ND	ppm	5000	PASS
CHLOROFORM	0.24	ND	ppm	60	PASS
DICHLOROMETHANE	15.0	ND	ppm	600	PASS
ETHANOL	120.0	504	ppm	5000	PASS
ETHYL ACETATE	48.0	ND	ppm	5000	PASS
ETHYL ETHER	60.0	ND	ppm	5000	PASS
ETHYLENE OXIDE	0.6	ND	ppm	50	PASS
HEPTANE	60.0	ND	ppm	5000	PASS
HEXANES	6.0	ND	ppm	290	PASS
METHANOL	30.0	ND	ppm	3000	PASS
PENTANES	90.0	ND	ppm	2500	PASS
PROPANE	80.0	ND	ppm	5000	PASS
TOLUENE	18.0	ND	ppm	1068	PASS
TRICHLOROETHENE	3.0	ND	ppm	80	PASS
XYLENES	18.0	ND	ppm	2170	PASS
XYLENES-M (1,3- DIMETHYLBENZENE)	18.0	ND	ppm	2170	PASS
XYLENES-O (1,2- DIMETHYLBENZENE)	18.0	ND	ppm	2170	PASS
XYLENES-P (1,4- DIMETHYLBENZENE)	18.0	ND	ppm	2170	PASS

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**

#### **Analyte** Result ASPERGILLUS FLAVUS. not present in 1 gram. ASPERGILLUS FUMIGATUS. not present in 1 gram. ASPERGILLUS NIGER. not present in 1 gram. ASPERGILLUS\_TERREUS\_1J2. not present in 1 gram. ESCHERICHIA\_COLI\_SHIGELLA\_SPP not present in 1 gram. SALMONELLA SPECIFIC GENE. not present in 1 gram.

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.

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