



Certificate of Analysis

Sample:KN10222001-002
Harvest/Lot ID: PB2012F291
Seed to Sale #N/A
Batch Date :12/14/20
Batch#: PB2012F291
Sample Size Received: 124.8 gram
Total Weight Volume: N/A
Retail Product Size: 62.4
Ordered : 02/18/21
sampled : 02/18/21
Completed: 03/06/21 Expires: 03/06/22
Sampling Method: SOP Client Method

Mar 06, 2021 | Asterra Labs

800 Cooke Rd.
Nashville, NC, 27856, US



PASSED

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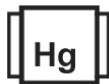
PRODUCT IMAGE



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
0.000%
TOTAL THC/Container :0.000 mg



Total CBD
0.706%
TOTAL CBD/Container :440.930 mg



Total Cannabinoids
0.730%
Total Cannabinoids/Container :455.526 mg

Filtration PASSED

Analyzed By	Weight	Extraction date	Extracted By
142	0.7785g	NA	NA
Analyte			LOD
Filtration and Foreign Material			0.3
Analysis Method -SOP.T.40.013	Batch Date : 02/22/21	13:07:27	Result
Analytical Batch -KN000459FIL	Reviewed On - 02/23/21	16:24:24	ND
Instrument Used : E-AMS-138 Microscope			

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. A SW-2T13 Stereo Microscope is used for inspection.

CBDV	CBDA	CBGA	CBG	CBD	THCV	CBN	D9-THC	D8-THC	CBC	THCA
ND	0.017%	0.021%	ND	0.690%	ND	ND	ND	ND	ND	ND
ND	0.170 mg/g	0.210 mg/g	ND	6.900 mg/g	ND	ND	ND	ND	ND	ND
LOD 0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %

Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
113	0.2343g	NA	NA
Analysis Method -Expanded Measurement of Uncertainty: Flower Matrix			
d9-THC:12.7%, THCa: 9.5%, TOTAL THC 11.1%. These uncertainties represent an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor k=2 for a normal distribution.			
Analytical Batch -KN000449POT	Instrument Used : HPLC E-SH1-008	Reviewed On - 02/23/21 15:25:38	Batch Date : 02/22/21 09:07:40

Reagent	Dilution	Consums. ID
120320.R02	40	00298878
022221.R03		190909059
021521.R03		947.217

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.). *Based on FL action limits.

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State License # n/a
ISO Accreditation #
17025:2017

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03/06/2021

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Email: brian.warren@asterrallabs.com

Sample : KN10222001-002
Harvest/LOT ID: PB2012F291

Batch# : PB2012F291 Sample Size Received : 124.8 gram
Sampled : 02/18/21 Total Weight Volume : N/A
Ordered : 02/18/21 Completed : 03/06/21 Expires: 03/06/22
Sample Method : SOP Client Method

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Terpenes

TESTED

Terpenes	LOD (%)	mg/g	%	Result (%)	Terpenes	LOD(%)	mg/g	%	Result (%)
ALPHA-PHELLANDRENE	.02	ND	ND		ISOPULEGOL	.02	ND	ND	
FENCHONE	.02	ND	ND		CIS-NEROLIDOL	.02	ND	ND	
GAMMA-TERPINENE	.02	ND	ND		3-CARENE	.02	ND	ND	
GERANIOL	.02	ND	ND		FENCHYL ALCOHOL	.02	ND	ND	
GERANYL ACETATE	.02	ND	ND		HEXAHYDROTHYMOL	.02	6.378	0.637	
GUAJOL	.02	ND	ND		EUCALYPTOL	.02	11.537	1.153	
LIMONENE	.02	1.557	0.155		ISOBORNEOL	.02	ND	ND	
LINALOOL	.02	ND	ND						
NEROL	.02	ND	ND						
OCIMENE	.02	ND	ND						
FARNESENE	.02	0.263	0.026						
PULEGONE	.02	0.254	0.025						
SABINENE	.02	ND	ND						
SABINENE HYDRATE	.02	ND	ND						
TERPINEOL	.02	0.735	0.073						
TERPINOLENE	.02	ND	ND						
TRANS-CARYOPHYLLENE	.02	0.502	0.050						
TRANS-NEROLIDOL	.02	ND	ND						
VALENCENE	.02	ND	ND						
CEDROL	.02	ND	ND						
ALPHA-HUMULENE	.02	ND	ND						
ALPHA-PINENE	.02	1.615	0.161						
ALPHA-TERPINENE	.02	ND	ND						
BETA-MYRCENE	.02	ND	ND						
BETA-PINENE	.02	0.232	0.023						
BORNEOL	.04	ND	ND						
CAMPHENE	.02	ND	ND						
CAMPHOR	.04	ND	ND						
CARYOPHYLLENE OXIDE	.02	ND	ND						
ALPHA-CEDRENE	.02	ND	ND						
ALPHA-BISABOLOL	.02	ND	ND						
Total (%)		2.307							



Terpenes

TESTED

Analyzed by 138	Weight 1.0049g	Extraction date NA	Extracted By NA
Analysis Method -SOP.T.40.090			
Analytical Batch -KN000456TER		Reviewed On - 03/06/21 13:17:57	
Instrument Used : E-SHI-109 Terpenes			
Running On :			
Batch Date : 02/22/21 10:15:44			
Reagent	Dilution	Consums. ID	
Terpenoid profile screening is performed using GC-MS with Liquid Injection (Gas Chromatography - Mass Spectrometer) which can screen 38 terpenes using Method SOP.T.40.090 Terpenoid Analysis Via GC-MS. Analytes ISO Pending			

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03/06/2021
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Email: brian.warren@asterralabs.com

Sample : KN10222001-002

Harvest/LOT ID: PB2012F291

Batch# : PB2012F291

Sampled : 02/18/21

Ordered : 02/18/21

Sample Size Received : 124.8 gram

Total Weight Volume : N/A

Completed : 03/06/21 Expires: 03/06/22

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	0.05	ppm	0.3	ND	PIPERONYL BUTOXIDE	0.05	ppm	3	ND
ACEPHATE	0.05	ppm	3	ND	PRALLETHRIN	0.05	ppm	0.4	ND
ACEQUINOCYL	0.05	ppm	2	ND	PROPICONAZOLE	0.05	ppm	1	ND
ACETAMIPRID	0.05	ppm	3	ND	PROPOXUR	0.05	ppm	0.1	ND
ALDICARB	0.05	ppm	0.1	ND	PYRETHRINS	0.05	ppm	1	ND
AZOXYSTROBIN	0.05	ppm	3	ND	PYRIDABEN	0.10	ppm	3	ND
BIFENAZATE	0.05	ppm	3	ND	SPINETORAM	0.05	ppm	3	ND
BIFENTHRIN	0.05	ppm	0.5	ND	SPIROMESIFEN	0.05	ppm	3	ND
BOSCALID	0.05	ppm	3	ND	SPIROTETRAMAT	0.05	ppm	3	ND
CARBARYL	0.05	ppm	0.5	ND	SPIROXAMINE	0.05	ppm	0.1	ND
CARBOFURAN	0.05	ppm	0.1	ND	TEBUCONAZOLE	0.05	ppm	1	ND
CHLORANTRANILIPROLE	0.05	ppm	3	ND	THIACLOPRID	0.05	ppm	0.1	ND
CHLORMEQUAT CHLORIDE	0.05	ppm	3	ND	THIAMETHOXAM	0.05	ppm	1	ND
CHLORPYRIFOS	0.05	ppm	0.1	ND	TOTAL SPINOSAD	0.02	ppm	3	ND
CLOFENTEZINE	0.10	ppm	0.5	ND	TRIFLOXYSTROBIN	0.05	ppm	3	ND
COUMAPHOS	0.05	ppm	0.1	ND					
CYPERMETHRIN	0.05	ppm	1	0.604					
DAMINOZIDE	0.05	ppm	0.1	ND					
DIAZANON	0.05	ppm	0.2	0.116					
DICHLORVOS	0.05	ppm	0.1	ND					
DIMETHOATE	0.05	ppm	0.1	ND					
DIMETHOMORPH	0.10	ppm	3	ND					
ETHOPROPHOS	0.05	ppm	0.1	ND					
ETOFENPROX	0.05	ppm	0.1	ND					
ETOXAZOLE	0.05	ppm	1.5	ND					
FENHEXAMID	0.05	ppm	3	ND					
FENOXYCARB	0.05	ppm	0.1	ND					
FENPYROXIMATE	0.05	ppm	2	ND					
FIPRONIL	0.05	ppm	0.1	ND					
FLONICAMID	0.05	ppm	2	ND					
FLUDIOXONIL	0.05	ppm	3	ND					
HEXYTHIAZOX	0.05	ppm	2	ND					
IMAZALIL	0.05	ppm	0.1	ND					
IMIDACLOPRID	0.05	ppm	3	ND					
KRESOXIM-METHYL	0.05	ppm	1	ND					
MALATHION	0.05	ppm	2	ND					
METALAXYL	0.05	ppm	3	ND					
METHIOCARB	0.05	ppm	0.1	ND					
METHOMYL	0.05	ppm	0.1	ND					
MEVINPHOS	0.05	ppm	0.1	ND					
MYCLOBUTANIL	0.05	ppm	3	ND					
NALED	0.05	ppm	0.5	ND					
OXAMYL	0.05	ppm	0.5	ND					
PACLOBUTRAZOL	0.05	ppm	0.1	ND					
PERMETHRINS	0.05	ppm	1	ND					
PHOSMET	0.05	ppm	0.2	ND					



Pesticides

PASSED

Analyzed by 143	Weight 1.0288g	Extraction date 02/22/21 11:02:35	Extracted By 143
Analysis Method - SOP.T.30.060, SOP.T.40.060 , Analytical Batch - KN000453PES		Reviewed On- 02/23/21 16:24:24	
Instrument Used : E-SHI-125 Pesticides Running On : 02/22/21 11:35:42		Batch Date : 02/22/21 09:07:58	
Reagent 022321.A00 020321.A03 022321.A03 022321.A04	Dilution 10	Consums. ID P7364369 00299697	

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.T.40.060 Procedure for Pesticide Quantification Using LCMS). Analytes ISO pending. *Based on FL action limits. *

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Sample : KN10222001-002

Harvest/LOT ID: PB2012F291

Batch# : PB2012F291

Sampled : 02/18/21

Ordered : 02/18/21

Sample Size Received : 124.8 gram

Total Weight Volume : N/A

Completed : 03/06/21 **Expires:** 03/06/22


Sample Method : SOP Client Method

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Residual Solvents

PASSED



Residual Solvents

PASSED

Solvent	LOD	Units	Action Level (PPM)	Pass/Fail	Result
PROPANE	500	ppm	5000	PASS	ND
BUTANES (N-BUTANE)	500	ppm	5000	PASS	ND
METHANOL	25	ppm	3000	PASS	ND
ETHYLENE OXIDE	0.5	ppm	5	PASS	ND
PENTANES (N-PENTANE)	75	ppm	750	PASS	ND
ETHANOL	500	ppm	5000	PASS	ND
ETHYL ETHER	50	ppm	500	PASS	ND
1,1-DICHLOROETHENE	0.8	ppm	8	PASS	ND
ACETONE	75	ppm	750	PASS	ND
2-PROPANOL	50	ppm	500	PASS	ND
ACETONITRILE	6	ppm	60	PASS	ND
DICHLOROMETHANE	12.5	ppm	125	PASS	ND
N-HEXANE	25	ppm	250	PASS	ND
ETHYL ACETATE	40	ppm	400	PASS	ND
CHLOROFORM	0.2	ppm	2	PASS	ND
BENZENE	0.1	ppm	1	PASS	ND
1,2-DICHLOROETHANE	0.2	ppm	2	PASS	ND
HEPTANE	500	ppm	5000	PASS	ND
TRICHLOROETHYLENE	2.5	ppm	25	PASS	ND
TOLUENE	15	ppm	150	PASS	ND
XYLENES-M&P (1,3&1,4-DIMETHYLBENZENE)	10	ppm	150	PASS	ND
XYLENES-O (1,2-DIMETHYLBENZENE)	5	ppm	150	PASS	ND

Analyzed by 138 **Weight** 0.02494g **Extraction date** NA **Extracted By** NA

Analysis Method -SOP.T.40.032
Analytical Batch -KN000455SOL **Reviewed On** - 02/24/21 14:30:57
Instrument Used - E-SHI-106 Residual Solvents
Running On : 02/22/21 15:55:18
Batch Date : 02/22/21 09:40:34

Reagent	Dilution	Consums. ID
Residual solvents screening is performed using GC-MS which can detect below single digit ppm concentrations. Currently we analyze for 22 residual solvents. (Method: SOP.T.40.032 Residual Solvents Analysis via GC-MS). Analytes ISO pending. *Based on FL action limits.		

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Sample : KN10222001-002

Harvest/LOT ID: PB2012F291

Batch# : PB2012F291

Sampled : 02/18/21

Ordered : 02/18/21

Sample Size Received : 124.8 gram

Total Weight Volume : N/A

Completed : 03/06/21 Expires: 03/06/22

Sample Method : SOP Client Method

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Microbials

PASSED



Mycotoxins

PASSED

Analyte	LOD	Result
ESCHERICHIA_COLI_SHIGELLA_SPP		not present in 1 gram.
SALMONELLA_SPECIFIC_GENE		not present in 1 gram.
ASPERGILLUS_FLAVUS		not present in 1 gram.
ASPERGILLUS_FUMIGATUS		not present in 1 gram.
ASPERGILLUS_NIGER		not present in 1 gram.
ASPERGILLUS_TERREUS		not present in 1 gram.
TOTAL YEAST AND MOLD	100	< 100 CFU

Analysis Method -SOP.T.40.043
Analytical Batch -KN000457MIC , KN000458TYM Batch Date : 02/22/21, 02/22/21
Instrument Used : Micro E-HEW-069, Micro E-HEW-069
Running On : 02/22/21, 02/24/21

Analyzed by	Weight	Extraction date	Extracted By
142, 142	0.9927g	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.

Analyte	LOD	Units	Result	Action Level (PPM)
AFLATOXIN G2	0.005	ppm	ND	0.02
AFLATOXIN G1	0.005	ppm	ND	0.02
AFLATOXIN B2	0.005	ppm	ND	0.02
AFLATOXIN B1	0.005	ppm	ND	0.02
OCHRATOXIN A+	0.005	ppm	ND	0.02
TOTAL MYCOTOXINS		ppm	0.000	

Analysis Method -SOP.T.30.060, SOP.T.40.060
Analytical Batch -KN000454MYC | Reviewed On - 02/24/21 15:44:00
Instrument Used : E-SHI-125 Mycotoxins
Running On : 02/22/21 11:38:39
Batch Date : 02/22/21 09:08:20

Analyzed by	Weight	Extraction date	Extracted By
143	1.0288g	02/22/21 11:02:36	143

Aflatoxins B1, B2, G1, G2, and Ochratoxins A testing using LC-MS. (Method: SOP.T.30.060 for Sample Preparation and SOP.T.40.060 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. Analytes ISO pending. *Based on FL action limits.



Heavy Metals

PASSED

Reagent	Consums. ID
122820.02	7226/0030021
020421.R05	201015060
011521.R01	
020921.R14	
012221.R14	

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC-AS	0.04	ppm	ND	1.5
CADMIUM-CD	0.04	ppm	ND	0.5
MERCURY-HG	0.04	ppm	ND	3
LEAD-PB	0.04	ppm	ND	0.5

Analyzed by	Weight	Extraction date	Extracted By
12	0.28181g	NA	NA

Analysis Method -SOP.T.40.050, SOP.T.30.052
Analytical Batch -KN000460HEA | Reviewed On - 02/25/21 15:13:15
Instrument Used : Metals ICP/MS
Running On : 02/23/21 16:52:52
Batch Date : 02/22/21 13:37:31

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. Analytes ISO Pending. *Based on FL action limits.

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