



Certificate of Analysis

Sample: M001209001-001
Harvest/Lot ID: 001
Seed to Sale #N/A
Batch Date : 12/05/20
Batch#: 12052020
Sample Size Received: 1 gram
Retail Product Size: 1 gram
Ordered : 12/07/20
Sampled : 12/07/20
Completed: 12/11/20 Expires: 12/11/21
Sampling Method: SOP Client Method

Dec 11, 2020 | Bay State Hemp Company

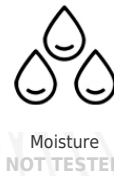
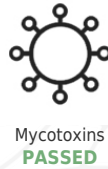
9 Aldrin Rd
Plymouth, MA, 02360, US



PASSED

Page 1 of 5

PRODUCT IMAGE SAFETY RESULTS



MISC.

CANNABINOID RESULTS



Total THC
0.190%



Total CBD
36.039%



Total Cannabinoids
82.272%

D9-THC	THCA	CBD	CBDA	D8-THC	THCV	CBN	CBDV	CBC	CBG	CBGA
0.190%	ND	36.039%	ND	8.675%	ND	6.450%	ND	6.631%	24.287%	ND
1.900 mg/g	ND	360.390 mg/g	ND	86.750 mg/g	ND	64.500 mg/g	ND	66.310 mg/g	242.870 mg/g	ND
LOD 0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %	0.01 %

Filtration PASSED

Analyzed By	Weight	Extraction date	Extracted By
564	1 g	12/10/20	564
Analyte			LOD
Filtration and Foreign Material			0.3
Analysis Method -SOP.T.40.013	Batch Date : 12/10/20 10:03:53		Result
Analytical Batch -M0001524FIL	Reviewed On - 12/10/20 10:07:42		ND
Instrument Used : Microscope			
Running On :			

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 used for inspection.

Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
NA	NA	NA	NA
Analysis Method -SOP.T.40.020, SOP.T.30.050	Reviewed On - 12/10/20 10:04:01	Batch Date :	
Analytical Batch - Instrument Used :	Running On :		

Reagent	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

12/11/2020

Signed On



Certificate of Analysis

PASSED

Bay State Hemp Company

9 Aldrin Rd
Plymouth, MA, 02360, US

Telephone: (800) 847-4427

Email: john@baystatehemp.com

Sample : M001209001-001

Harvest/LOT ID: 001

Batch# : 12052020

Sampled : 12/07/20

Ordered : 12/07/20

Sample Size Received : 1 gram

Completed : 12/11/20 Expires: 12/11/21

Sample Method : SOP Client Method

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Terpenes

TESTED

Terpenes	LOD	Units	Result (%)	Terpenes	LOD	Units	Result (%)
ALPHA-PHELLANDRENE	0.005	%	0.140	CIS-NEROLIDOL	0.005	%	ND
FENCHONE	0.01	%	ND	3-CARENE	0.005	%	ND
GAMMA-TERPINENE	0.005	%	ND	FENCHYL ALCOHOL	0.005	%	ND
GERANIOL	0.005	%	ND	HEXAHYDROT HYMOL	0.005	%	ND
GERANYL ACETATE	0.01	%	ND	EUCALYPTOL	0.005	%	ND
GUAJOL	0.005	%	ND	ISOBORNEOL	0.005	%	ND
LIMONENE	0.005	%	0.351				
LINALOOL	0.01	%	0.684				
NEROL	0.005	%	0.069				
OCIMENE	0.005	%	ND				
PULEGONE	0.005	%	ND				
SABINENE	0.005	%	ND				
SABINENE HYDRATE	0.01	%	ND				
TERPINEOL	0.005	%	ND				
TERPINOLENE	0.005	%	ND				
TRANS-CARYOPHYLLENE	0.005	%	0.171				
TRANS-NEROLIDOL	0.005	%	0.091				
VALENCENE	0.005	%	ND				
CEDROL	0.005	%	ND				
ALPHA-HUMULENE	0.005	%	0.009				
ALPHA-PINENE	0.005	%	ND				
ALPHA-TERPINENE	0.005	%	ND				
BETA-MYRCENE	0.005	%	0.022				
BETA-PINENE	0.005	%	ND				
BORNEOL	0.01	%	ND				
CAMPHENE	0.005	%	ND				
CAMPHOR	0.01	%	ND				
CARYOPHYLLENE OXIDE	0.005	%	0.022				
ALPHA-CEDRENE	0.005	%	ND				
ALPHA-BISABOLOL	0.005	%	ND				
ISOPULEGOL	0.01	%	ND				
Total		1.559					



Terpenes

TESTED

Analyzed by	Weight	Extraction date	Extracted By
18	0.960g	12/10/20 08:12:07	18
Analysis Method -SOP.T.40.090			
Analytical Batch -M0001521TER		Reviewed On - 12/10/20 09:07:16	
Instrument Used : GCMS8050 with Liquid Handler			
Running On :			
Batch Date : 12/10/20 08:49:32			
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

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



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12/11/2020

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Certificate of Analysis

PASSED

Bay State Hemp Company

9 Aldrin Rd
Plymouth, MA, 02360, US

Telephone: (800) 847-4427

Email: john@baystatehemp.com

Sample : M001209001-001

Harvest/LOT ID: 001

Batch# : 12052020

Sampled : 12/07/20


Ordered : 12/07/20

Sample Size Received : 1 gram

Completed : 12/11/20 Expires: 12/11/21

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

Analyzed by 564	Weight 1g	Extraction date NA	Extracted By NA
Analysis Method - SOP.T.30.060, SOP.T.40.060 ,		Reviewed On- 12/10/20 10:07:42	
Analytical Batch - M0001528PES			
Instrument Used : LCMSMS 8060 P			
Running On :			
Batch Date : 12/11/20 09:33:54			

Reagent <small>102919-38</small>	Dilution	Consums. ID <small>03-339-23D 00280227</small>
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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

12/11/2020
Signed On



Certificate of Analysis

PASSED

Bay State Hemp Company

9 Aldrin Rd
Plymouth, MA, 02360, US
Telephone: (800) 847-4427
Email: john@baystatehemp.com

Sample : MO01209001-001

Harvest/LOT ID: 001

Batch# : 12052020

Sampled : 12/07/20

Ordered : 12/07/20

Sample Size Received : 1 gram

Completed : 12/11/20 Expires: 12/11/21

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
HEPTANE	60	ppm	4000	PASS	ND
XYLENES-P (1,4-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
ETHYLENE OXIDE	0.6	ppm	50	PASS	ND
XYLENES-M (1,3-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
ETHYL ETHER	60	ppm	5000	PASS	ND
XYLENES-O (1,2-DIMETHYLBENZENE)	18	ppm	2170	PASS	ND
ETHYL ACETATE	48	ppm	5000	PASS	ND
ETHANOL	120	ppm	5000	PASS	289.000
DICHLOROMETHANE	15	ppm	600	PASS	ND

Analyzed by 18 **Weight** 0.024g **Extraction date** 12/10/20 08:12:09 **Extracted By** 18
Analysis Method -SOP.T.40.032
Analytical Batch -MO001520SOL **Reviewed On - 12/10/20 09:08:06**
Instrument Used : GCMS2010
Running On :
Batch Date : 12/10/20 08:48:49

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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Certificate of Analysis

PASSED

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Plymouth, MA, 02360, US

Telephone: (800) 847-4427

Email: john@baystatehemp.com

Sample : M001209001-001

Harvest/LOT ID: 001

Batch# : 12052020

Sampled : 12/07/20

Ordered : 12/07/20

Sample Size Received : 1 gram

Completed : 12/11/20 Expires: 12/11/21

Sample Method : SOP Client Method

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Microbials

PASSED



Mycotoxins

PASSED

Analyte	LOD	Result	Analyte	LOD	Units	Result	Action Level (PPM)
ASPERGILLUS_TERREUS_1J2		not present in 1 gram.	AFLATOXIN G2	0.001	ppm	ND	0.02
ASPERGILLUS_NIGER		not present in 1 gram.	AFLATOXIN G1	0.001	ppm	ND	0.02
ASPERGILLUS_FUMIGATUS		not present in 1 gram.	AFLATOXIN B2	0.001	ppm	ND	0.02
ASPERGILLUS_FLAVUS		not present in 1 gram.	AFLATOXIN B1	0.001	ppm	ND	0.02
SALMONELLA_SPECIFIC_GENE		not present in 1 gram.	OCHRATOXIN A+	0.001	ppm	ND	0.02
ESCHERICHIA_COLI_SHIGELLA_SPP		not present in 1 gram.					

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

Analysis Method -SOP.T.30.060, SOP.T.40.060
Analytical Batch -M0001529MYC | Reviewed On - 12/11/20 10:00:09
Instrument Used :
Running On :
Batch Date : 12/11/20 09:34:50

Analyzed by	Weight	Extraction date	Extracted By
NA	NA	NA	NA

Analyzed by	Weight	Extraction date	Extracted By
564	1g	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.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.



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	0.503g	12/10/20 09:12:25	18

Analysis Method -SOP.T.40.050, SOP.T.30.052
Analytical Batch -M0001522HEA | Reviewed On - 12/10/20 10:52:24
Instrument Used : ICP-MS 2030
Running On :
Batch Date : 12/10/20 09:28:40

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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