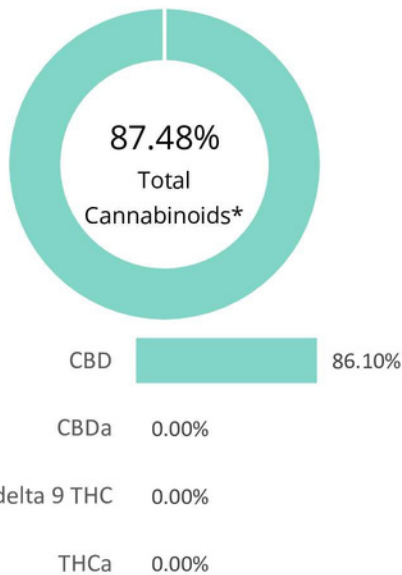


## Broad Spectrum Hemp Extract

<b>Batch ID:</b>	BSX111	<b>Test ID:</b>	T000175498
<b>Type:</b>	Concentrate	<b>Submitted:</b>	11/23/2021 @ 09:05 AM
<b>Test:</b>	Potency	<b>Started:</b>	11/29/2021
<b>Method:</b>	TM14 (HPLC-DAD)	<b>Reported:</b>	11/30/2021

## CANNABINOID PROFILE



Compound	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.13	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.15	ND	ND
Cannabidiolic acid (CBDA)	0.15	ND	ND
Cannabidiol (CBD)	0.15	86.10	861.0
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.16	ND	ND
Cannabinolic Acid (CBNA)	0.09	ND	ND
Cannabinol (CBN)	0.04	ND	ND
Cannabigerolic acid (CBGA)	0.14	ND	ND
Cannabigerol (CBG)	0.03	1.19	11.9
Tetrahydrocannabivarinic Acid (THCVA)	0.11	ND	ND
Tetrahydrocannabivarin (THCV)	0.03	ND	ND
Cannabidivarinic Acid (CBDVA)	0.06	ND	ND
Cannabidivarin (CBDV)	0.04	0.19	1.9
Cannabichromenic Acid (CBCA)	0.05	ND	ND
Cannabichromene (CBC)	0.06	ND	ND
<b>Total Cannabinoids</b>		<b>87.48</b>	<b>874.8</b>
Total Potential THC**		ND	ND
Total Potential CBD**		86.10	861.0

% = % (w/w) = Percent (Weight of Analyte / Weight of 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 step.

$$\text{Total THC} = \text{THC} + (\text{THCa} * (0.877))$$

$$\text{Total CBD} = \text{CBD} + (\text{CBDa} * (0.877))$$

ND = None Detected (Defined by Dynamic Range of the method)

## NOTES:

N/A

## FINAL APPROVAL



 Karen Winternheime  
 30-Nov-2021  
 5:36 PM



 Daniel Weidensaul  
 30-Nov-2021  
 5:38 PM

PREPARED BY / DATE

APPROVED BY / DATE

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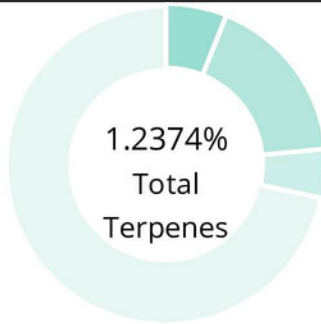


Certificate #4329.02

## Broad Spectrum Hemp Extract

<b>Batch ID:</b>	BSX111	<b>Test ID:</b>	T000175499
<b>Type:</b>	Concentrate	<b>Submitted:</b>	11/23/2021 @ 09:05 AM
<b>Test:</b>	Terpenes	<b>Started:</b>	12/2/2021
<b>Method:</b>	TM22 (GC-MS)	<b>Reported:</b>	12/3/2021

## TERPENE PROFILE



Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.8472	8.472
Camphene	0.0000	0.000
delta-3-Carene	0.0000	0.000
beta-Caryophyllene	0.2061	2.061
(-)-Caryophyllene Oxide	0.0000	0.000
p-Cymene	0.0000	0.000
Eucalyptol	0.0000	0.000
Geraniol	0.0000	0.000
alpha-Humulene	0.0578	0.578
(-)-Isopulegol	0.0000	0.000
d-Limonene	0.0000	0.000
Linalool	0.0718	0.718
beta-Myrcene	0.0000	0.000
cis-Nerolidol	0.0000	0.000
trans-Nerolidol	0.0545	0.545
Ocimene	0.0000	0.000
beta-Ocimene	0.0000	0.000
alpha-Pinene	0.0000	0.000
(-)-beta-Pinene	0.0000	0.000
alpha-Terpinene	0.0000	0.000
gamma-Terpinene	0.0000	0.000
Terpinolene	0.0000	0.000
	<b>1.2374</b>	<b>12.374</b>

## PREDOMINANT TERPENES

alpha-Pinene	0.0000
(-)-beta-Pinene	0.0000
beta-Myrcene	0.0000
delta-3-Carene	0.0000
alpha-Terpinene	0.0000
d-Limonene	0.0000
Linalool	0.0718
beta-Caryophyllene	0.2061
alpha-Humulene	0.0578
(-)-alpha-Bisabolol	0.8472

## NOTES:

N/A

## FINAL APPROVAL



 Daniel Weidensaul  
3-Dec-2021  
3:51 PM



 Jacob Miller  
3-Dec-2021  
3:55 PM

PREPARED BY / DATE

APPROVED BY / DATE

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A2LA Certificate Number 4329.02



Certificate #4329.02

Prepared for:

**Broad Spectrum Hemp Extract**
**Colorado Botanicals**


Batch ID or Lot Number: <b>BSX111</b>	Test: <b>Pesticides</b>	Reported: <b>12/2/21</b>
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Matrix: Concentrate	Test ID: T000175500	Started: 12/1/21	USDA License: N/A
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Status: N/A	Method: TM17(LC-QQQ LC MS/MS):	Received: 11/23/2021 @ 09:05 AM	Sampler ID: N/A
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**PESTICIDE DETERMINATION**

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	39	ND	Fenoxycarb	43	ND	Paclobutrazol	48	ND
Acetamiprid	41	ND	Fipronil	50	ND	Permethrin	284	ND
Avermectin	339	ND	Fonicamid	48	ND	Phosmet	39	ND
Azoxystrobin	46	ND	Fludioxonil	316	ND	Prophos	312	ND
Bifenazate	41	ND	Hexythiazox	39	ND	Propoxur	44	ND
Boscalid	36	ND	Imazalil	283	ND	Pyridaben	290	ND
Carbaryl	41	ND	Imidacloprid	50	ND	Spinosad A	35	ND
Carbofuran	44	ND	Kresoxim-methyl	150	ND	Spinosad D	52	ND
Chlorantraniliprole	67	ND	Malathion	302	ND	Spiromesifen	290	ND
Chlorpyrifos	500	ND	Metalaxyl	44	ND	Spirotetramat	290	ND
Clofentezine	293	ND	Methiocarb	43	ND	Spiroxamine 1	19	ND
Diazinon	284	ND	Methomyl	42	ND	Spiroxamine 2	24	ND
Dichlorvos	293	ND	MGK 264 1	203	ND	Tebuconazole	306	ND
Dimethoate	42	ND	MGK 264 2	123	ND	Thiacloprid	41	ND
E-Fenpyroximate	280	ND	Myclobutanil	42	ND	Thiamethoxam	43	ND
Etofenprox	44	ND	Naled	47	ND	Trifloxystrobin	44	ND
Etoxazole	304	ND	Oxamyl	1500	ND			


 Karen Winternheimer  
 12/2/2021  
 3:50:00 PM


 Sam Smith  
 12/2/2021  
 3:57:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

**Definitions**

LOQ = Limit of Quantification  
 ppb = Parts per Billion

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Certificate #4329.02

Prepared for:

**Broad Spectrum Hemp Extract**
**Colorado Botanicals**

Batch ID or Lot Number: <b>BSX111</b>	Test: <b>Metals</b>	Reported: <b>11/29/21</b>	
Matrix: Concentrate	Test ID: T000175502	Started: 11/24/21	USDA License: N/A
Status: N/A	Method: TM19 (ICP-MS); Heavy Metals	Received: 11/23/2021 @ 09:05 AM	Sampler ID: N/A

**HEAVY METALS DETERMINATION**

Compound	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.045 - 4.52	ND	
Cadmium	0.045 - 4.53	ND	
Mercury	0.041 - 4.11	ND	
Lead	0.041 - 4.12	ND	


 Sam Smith  
 29-Nov-21  
 10:23 AM

PREPARED BY / DATE


 Ryan Weems  
 29-Nov-21  
 10:25 AM

APPROVED BY / DATE

**Definitions**

ND = None Detected (Defined by Dynamic Range of the method)

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Certificate #4329.02



Prepared for:

**Broad Spectrum Hemp Extract**
**Colorado Botanicals**

Batch ID or Lot Number: <b>BSX111</b>	Test: <b>Residual Solvents</b>	Reported: <b>11/30/21</b>
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Matrix: N/A	Test ID: T000175503	Started: 11/30/21	USDA License: N/A
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Status: N/A	Methods: TM04 (GC-MS): Residual Solvents	Received: 11/23/2021 @ 09:05 AM	Sampler ID: N/A
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**RESIDUAL SOLVENTS DETERMINATION**

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
<b>Propane</b>	102 - 2040	*ND	
<b>Butanes</b> (Isobutane, n-Butane)	202 - 4038	*ND	
<b>Methanol</b>	60 - 1198	*ND	
<b>Pentane</b>	83 - 1661	*ND	
<b>Ethanol</b>	85 - 1696	*ND	
<b>Acetone</b>	98 - 1958	*ND	
<b>Isopropyl Alcohol</b>	102 - 2042	*ND	
<b>Hexane</b>	6 - 118	*ND	
<b>Ethyl Acetate</b>	98 - 1962	*ND	
<b>Benzene</b>	0.2 - 3.9	*ND	
<b>Heptanes</b>	92 - 1848	*ND	
<b>Toluene</b>	18 - 357	*ND	
<b>Xylenes</b> (m,p,o-Xylenes)	129 - 2573	*ND	


 Daniel Weidensaul  
 30-Nov-21  
 7:54 PM

PREPARED BY / DATE


 Ryan Weems  
 30-Nov-21  
 8:02 PM

APPROVED BY / DATE

**Definitions**

\* ND = None Detected (Defined by Dynamic Range of the method)

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**Broad Spectrum Hemp Extract**

<b>Batch ID:</b>	BSX111	<b>Test ID:</b>	t000175501
<b>Matrix:</b>	Concentrate	<b>Received:</b>	11/23/2021 @ 09:05 AM
<b>Test:</b>	Microbial Contaminants	<b>Started:</b>	11/23/2021
<b>Method:</b>	TM25 (qPCR) TM24, TM26, TM27, TM28 (Culture Plating)	<b>Reported:</b>	11/26/2021

**MICROBIAL CONTAMINANTS**

Contaminant	Method	LOD	LLOQ	ULOQ	Result
<b>Total Aerobic Count*</b>	TM-26 Culture Plating	10 <sup>2</sup> CFU/g	10 <sup>3</sup> CFU/g	1.5x10 <sup>5</sup> CFU/g	<b>None Detected</b>
<b>Total Coliforms*</b>	TM-27 Culture Plating	10 <sup>1</sup> CFU/g	10 <sup>2</sup> CFU/g	1.5x10 <sup>4</sup> CFU/g	<b>None Detected</b>
<b>Total Yeast and Molds*</b>	TM-24 Culture Plating	10 <sup>1</sup> CFU/g	10 <sup>2</sup> CFU/g	1.5x10 <sup>4</sup> CFU/g	<b>None Detected</b>
<b><i>E. coli</i></b>	TM-28 Culture Plating	1 CFU/g	NA	NA	<b>Absent</b>
<b><i>E. coli</i> (STEC)</b>	TM-25 PCR	1 CFU/g	NA	NA	<b>Absent</b>
<b><i>Salmonella</i></b>	TM-25 PCR	1 CFU/g	NA	NA	<b>Absent</b>

\* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.

Examples: 10<sup>2</sup> = 100 CFU  
 10<sup>3</sup> = 1,000 CFU  
 10<sup>4</sup> = 10,000 CFU  
 10<sup>5</sup> = 100,000 CFU

**NOTES:**

Free from visual mold, mildew, and foreign matter

**DEFINITIONS:**

CFU/g = Colony Forming Units per Gram.

LOD = Limit of Detection

ULOQ = Upper Limit of Quantitation

LLOQ = Lower Limit of Quantitation

**FINAL APPROVAL**


Carly Bader  
 11/26/2021  
 2:00:00 PM



Courtney Richards  
 11/26/2021  
 11:28:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

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Certificate #4329.03