

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Sports Cream
PRODUCT STRENGTH: 400 mg / bottle
TINCTURE BATCH: 21256-08
BEST BY DATE: 09/21/2023
HEMP EXTRACT LOT: CO407-001/CO623-001

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	white to off white	PASS
Odor	Joy Internal	Blend of Menthol, Camphor, Eucalyptus, Lavender, Rosemary, Wintergreen & Marjoram.	PASS
Appearance	Joy Internal	Creamy smooth cream consistency with medium viscosity	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Lid intact.	PASS
Secondary Package Eval.	Joy Internal	Labeling Compliance Checked, Cartons sturdy and clean. Sufficient cushion material exists. Box taped and secure.	PASS

Review of Third-Party Analysis

Panel	Method	Specification	Results*	Pass/Fail
Potency - Total CBD	HPLC-UV DAD	LOQ*: ≥ 400 mg / bottle	509.97 mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: $<0.01\%$ THC (Broad Spectrum)	Below LOQ	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS
Microbial Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 **CFU/25	Absent	PASS
Microbial Salmonella	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	Absent	PASS
Microbial Yeast and Mold	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	Below LOQ	PASS
Microbial Total Coliforms*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^2 CFU/gram	Below LOQ	PASS
Microbial Total Aerobic Count*	Culture Plating	Complies with CDPHE 6 CCR 1010-21 - LOQ 10^3 CFU/gram	Below LOQ	PASS
Heavy Metals	ICP-MS	Arsenic (As): ≤ 1.5 ppm† Cadmium (Cd): ≤ 0.5 ppm Lead (Pb): ≤ 0.5 ppm Mercury (Hg): ≤ 1.5 ppm	Below LOQ	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb†† Aflatoxin B1 < 5 ppb Ochratoxin < 5 ppb	Below LOQ	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS

*Level of Quantification

**Colony Forming Units per Gram

† Parts Per Million †† Part Per Billion


Values expressed in scientific notation.

Examples:

$10^2=100$

$10^3=1,000$

Quality Certified


 Kayla Kolber
 Quality Assurance Technician

10/05/2021

Date

5042 Technology Parkway, Fort Collins, CO 80528

Tel: (833) 569-7223 www.joyorganics.com

FO-106 Certificate of Analysis

1.2 - Effective Date: 10/05/2021

HSC400

Batch ID or Lot Number: 21256-08	Test: Potency	Reported: 9/30/21	
Matrix: Concentrate	Test ID: T000164705	Started: 9/29/21	USDA License: N/A
Status: N/A	Method: TM14 (HPLC-DAD): Potency - Broad Spectrum Analysis, 0.01% THC (Colorado Panel)	Received: 09/22/2021 @ 10:38 AM	Sampler ID: N/A

CANNABINOID PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.003	0.009	ND	ND	N/A Density: 0.98 g/mL
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.003	0.010	ND	ND	
Cannabidiolic acid (CBDA)	0.017	0.057	ND	ND	
Cannabidiol (CBD)	0.016	0.056	0.441	4.41	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.024	0.063	ND	ND	
Cannabinolic Acid (CBNA)	0.014	0.036	ND	ND	
Cannabinol (CBN)	0.006	0.017	ND	ND	
Cannabigerolic acid (CBGA)	0.020	0.053	ND	ND	
Cannabigerol (CBG)	0.005	0.013	0.045	0.45	
Tetrahydrocannabivarinic Acid (THCVA)	0.017	0.045	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.012	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.007	0.024	ND	ND	
Cannabidivarin (CBDV)	0.004	0.013	ND	ND	
Cannabichromenic Acid (CBCA)	0.008	0.020	ND	ND	
Cannabichromene (CBC)	0.009	0.022	ND	ND	
Total Cannabinoids			0.486	4.86	
Total Potential THC**			ND	ND	
Total Potential CBD**			0.441	4.41	

Daniel Weidensaul
 Daniel Weidensaul
 30-Sep-2021
 04:48 PM

K Winterheimer
 Karen Winterheimer
 30-Sep-21
 4:50 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)

* Indicates a value below the Limit of Quantitation (LOQ) and above the Limit of Detection (LOD).

** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.

Total THC = THC + (THCa *(0.877)) and

Total CBD = CBD + (CBDa *(0.877))

Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

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

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



CDPHE Certified



Certificate #4329.02

HSC400


Batch ID or Lot Number: **21256-08** Test: **Pesticides** Reported: **9/29/21**

Matrix: Concentrate Test ID: t000164706 Started: 9/28/21 USDA License: N/A

Status: N/A Method: TM17(LC-QQQ LC MS/MS): Received: 09/22/2021 @ 10:38 AM Sampler ID: N/A

PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	41	ND	Fenoxycarb	42	ND	Paclobutrazol	42	ND
Acetamiprid	40	ND	Fipronil	33	ND	Permethrin	287	ND
Avermectin	316	ND	Flonicamid	51	ND	Phosmet	43	ND
Azoxystrobin	43	ND	Fludioxonil	295	ND	Prophos	293	ND
Bifenazate	46	ND	Hexythiazox	47	ND	Propoxur	41	ND
Boscalid	54	ND	Imazalil	284	ND	Pyridaben	298	ND
Carbaryl	39	ND	Imidacloprid	42	ND	Spinosad A	35	ND
Carbofuran	41	ND	Kresoxim-methyl	150	ND	Spinosad D	54	ND
Chlorantraniliprole	53	ND	Malathion	299	ND	Spiromesifen	272	ND
Chlorpyrifos	500	ND	Metaxyl	43	ND	Spirotetramat	305	ND
Clofentezine	285	ND	Methiocarb	42	ND	Spiroxamine 1	18	ND
Diazinon	290	ND	Methomyl	44	ND	Spiroxamine 2	24	ND
Dichlorvos	290	ND	MGK 264 1	160	ND	Tebuconazole	290	ND
Dimethoate	42	ND	MGK 264 2	136	ND	Thiacloprid	41	ND
E-Fenpyroximate	317	ND	Myclobutanil	40	ND	Thiamethoxam	43	ND
Etofenprox	44	ND	Naled	44	ND	Trifloxystrobin	43	ND
Etoxazole	307	ND	Oxamyl	1500	ND			


Sam Smith
9/29/2021
5:13:00 PM

PREPARED BY / DATE


Courtney Richards
9/29/2021
7:12:00 PM

APPROVED BY / DATE

Definitions

LOQ = Limit of Quantification
ppb = Parts per Billion

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.




Certificate #4329.02

HSC400


Batch ID or Lot Number: 21256-08	Test: Microbial Contaminants	Reported: 9/25/21	
Matrix: Finished Product	Test ID: T000164707	Started: 9/22/21	USDA License: N/A
Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 09/22/2021 @ 10:38 AM	Sampler ID: N/A

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result	Notes
Total Aerobic Count*	TM-26, Culture Plating	10 ² CFU/g	10 ³ CFU/g	1.5x10 ⁵ CFU/g	None Detected	Free from visual mold, mildew, and foreign matter
Total Coliforms*	TM-27, Culture Plating	10 ² CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
Total Yeast and Mold*	TM-24, Culture Plating	10 ² CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
E. coli (STEC)	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	
Salmonella	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	


 Jackson Osaghae-Nosa
 9/25/2021
 1:53:00 PM

PREPARED BY / DATE


 Courtney Richards
 9/25/2021
 10:06:00 PM

APPROVED BY / DATE

Definitions

LOD = Limit of Detection | LLOQ = Lower Limit of Quantitation | ULOQ = Upper Limit of Quantitation

 CFU/g = Colony Forming Units per Gram | STEC = Shiga Toxin-Producing *E. coli*

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

Examples:
 10² = 100 CFU
 10³ = 1,000 CFU
 10⁴ = 10,000 CFU
 10⁵ = 100,000 CFU

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



CDPHE Certified



Certificate #4329.02

HSC400

Batch ID or Lot Number: 21256-08	Test: Metals	Reported: 9/30/21	
Matrix: Unit Co	Test ID: T000164708	Started: 9/29/21	USDA License: N/A
Status: N/A	Method: TM19 (ICP-MS): Heavy Metals (Colorado Panel)	Received: 09/22/2021 @ 10:38 AM	Sampler ID: N/A

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.047 - 4.73	ND	
Cadmium	0.046 - 4.60	ND	
Mercury	0.044 - 4.38	ND	
Lead	0.048 - 4.76	ND	

 Ryan Weems 30-Sep-21 12:59 PM	 Sam Smith 30-Sep-21 1:02 PM
PREPARED BY / DATE	APPROVED BY / DATE

Definitions

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

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



CDPHE Certified



Certificate #4329.02

HSC400Batch ID or Lot Number:
21256-08Test:
MycotoxinsReported:
10/1/21Matrix:
ConcentrateTest ID:
T000164710Started:
9/29/21USDA License:
N/AStatus:
N/AMethod:
TM18 (UHPLC-QQQ LCMS/MS):
Mycotoxins (Colorado Panel)Received:
09/22/2021 @ 10:38 AMSampler ID:
N/A**MYCOTOXIN DETERMINATION**

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	1.8 - 130.2	ND	N/A
Aflatoxin B1	1.1 - 33.3	ND	
Aflatoxin B2	1.1 - 33	ND	
Aflatoxin G1	0.9 - 32.9	ND	
Aflatoxin G2	1.1 - 31.8	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Sam Smith
30-Sep-21
11:46 AM

PREPARED BY / DATE

Courtney Richards
1-Oct-21
8:35 AM

APPROVED BY / DATE

Definitions

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

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



CDPHE Certified



Certificate #4329.02

HSC400

Batch ID or Lot Number: 21256-08	Test: Residual Solvents	Reported: 10/1/21	
Matrix: N/A	Test ID: T000164709	Started: 9/30/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solvents (Colorado Panel)	Received: 09/22/2021 @ 10:38 AM	Sampler ID: N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	105 - 2105	*ND	
Butanes (Isobutane, n-Butane)	208 - 4168	*ND	
Methanol	79 - 1583	*ND	
Pentane	111 - 2225	*ND	
Ethanol	123 - 2456	*ND	
Acetone	125 - 2500	*ND	
Isopropyl Alcohol	134 - 2684	*ND	
Hexane	8 - 152	*ND	
Ethyl Acetate	128 - 2556	*ND	
Benzene	0 - 5	*ND	
Heptanes	119 - 2375	*ND	
Toluene	23 - 463	*ND	
Xylenes (m,p,o-Xylenes)	170 - 3410	*ND	

 Hannah Wright
1-Oct-21
10:29 AM

PREPARED BY / DATE

 Ryan Weems
1-Oct-21
10:31 AM

APPROVED BY / DATE

Definitions

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

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC.



CDPHE Certified



Certificate #4329.02