JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Nano CBD Softgels
PRODUCT STRENGTH: 10 mg CBD
TINCTURE BATCH: 21236A
BEST BY DATE: 04/06/2023
HEMP EXTRACT LOT: 21208

Click on the links to view third-party reports

Physical Atttributes

Test	Method	Specification	Results
Color	Joy Internal	Golden to Amber	PASS
Odor	Joy Internal	No odor	PASS
Appearance	Joy Internal	Dry, ovoid softgel capsules in container with lid and shrink-band	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Container caps tight and shrink bands 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	*NLT 10 mg / softgel	**10.4 mg**	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: >0.01% (broad spectrum)	**ND**	PASS
Expanded Pesticide Panel	HPLC-QQQ	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	**ND**	PASS
Microbial Escherichia coli (STEC)	PCR	Complies with CDPHE 6 CCR 1010-21 - LOQ 1 CFU/25 gram	**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 Panel	ICP-MS	Arsenic (As): ≤1.5 ppm Cadmium (Cd): ≤0.5 ppm Lead (Pb): ≤0.5 ppm Mercury (Hg): ≤1.5 ppm	**ND**	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb† Afltoxin B1 < 5 ppb Ochratoxin < 5ppb	**ND**	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	**ND**	PASS

* *Level of Quantitation, † Parts Per Million † Part Per Billion CFU/g=Colony Forming Units per Gram
*Nothing Less Than
10^2=100 CFU
10^3=1,000 CFU

Quality Certified Kayla Kolber 08/24/2021
Kayla Kolber Date
Quality Assurance Technician

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FO-106 Certificate of Analysis
Rev. 1.1 - Effective Date: 2/20/2020

Certificate of Analysis

Product Name: Daily Broad Spectrum 10 mg	**Product No.: -6-024-10-01**
	Country of Origin: USA
Lot No.: 21208	**Serving Size: 1 softgel**
	Manufacture Date: 04/06/2021
Product Packaging: Softgels in bottle	**Report Date: 04/13/2021**

Analyte	Test Method	Acceptable Limit	Test Results
Physical			
Appearance	Visual	Transparent encapsulated product	Conforms
Color	Visual	Amber gold to light brown	Conforms
Potency			
Total Cannabinoids	MSP-7.3.1.5	NLT 10 mg/capsule	11 mg/capsule
Total THC (delta 9 THC and THC-A)	MSP-7.3.1.5	0.1% w/w	None detected
Impurities			
Pesticides	MSP-7.5.1.6	Below action level limits	Conforms
Solvents	MSP-7.5.1.6	Below action level limits	Conforms
Microbiological Pathogens			
Escherichia coli	MSP-7.5.1.1	Absent/10 g	None detected
Salmonella	MSP-7.5.1.1	Absent /10 g	None detected
Yeasts & Molds	MSP-7.5.1.1	NMT 100 cfu/g	0 cfu/g
Ochratoxin A	MSP-7.5.1.1	None detected	None detected
Aflatoxins	MSP-7.5.1.1	None detected	None detected
Heavy Metals			
Arsenic	MSP-7.5.1.1	NMT 1.5 ppm	None detected
Cadmium	MSP-7.5.1.1	NMT 0.3 ppm	None detected
Lead	MSP-7.5.1.1	NMT 1.0 ppm	None detected
Mercury	MSP-7.5.1.1	NMT 0.5 ppm	None detected

Quality Control: _____ Date: 04/13/2021

Quality Assurance: _____ Date: 04/13/2021

certificate ID
1DF12

Nano Softgels 10mg

7USC1639 Certificate of Analysis

Lot# 21208 prod. date 4/5/2021
rec'd 4/7/2021 11:49:35 AM order 10354

total cannabinoids **11.0mg** per Gelcap

THC‡ ND
CBD‡ 10.4mg

This Product Has Been Tested and Complies with 7USC1639o(1)

Stillwater Laboratories

Potency per Gelcap

	MSP-7.5.1.4	LOD | LOQ | error (95%CI k=2)
total cannabinoids	**11.0mg**	**0.06 | 0.18 | ±0.38mg**
total THC‡	**ND**	**0.06 | 0.18 | ±0.18mg**
total THC (THC+THCa)	**ND**	**0.06 | 0.18 | ±0.18mg**
total CBD‡	10.4mg	0.06 | 0.18 | ±0.37mg
total CBD (CBD+CBDa)	10.4mg	0.06 | 0.18 | ±0.37mg
tetrahydrocannabolic acid (THCa)	ND	0.06 | 0.19 | ±0.19mg
Δ9-tetrahydrocannabinol (Δ9 THC)	ND	0.06 | 0.18 | ±0.18mg
Δ8-tetrahydrocannabinol (Δ8 THC)	ND	0.08 | 0.24 | ±0.24mg
tetrahydrocannabivarin (THCv)	ND	0.07 | 0.20 | ±0.20mg
cannabidiolic acid (CBDa)	ND	0.05 | 0.16 | ±0.16mg
cannabidiol (CBD)	10.4mg	0.06 | 0.19 | ±0.37mg
cannabidivarin (CBDv)	ND	0.06 | 0.18 | ±0.18mg
cannabigerolic acid (CBGa)	ND	0.06 | 0.17 | ±0.17mg
cannabigerol (CBG)	0.6mg	0.02 | 0.05 | ±0.06mg
cannabinol (CBN)	ND	0.03 | 0.10 | ±0.10mg
cannabichromene (CBC)	ND	0.06 | 0.18 | ±0.18mg

Microbial

	MSP-7.5.1.10	limit	LOD LOQ error	result
E.coli	ND	0CFU	0.0 | 0.1 | ±0.1CFU	PASS
Salmonella sp.	ND	0CFU	0.0 | 0.1 | ±0.1CFU	PASS
molds	ND	10000CFU	2.5 | 7.4 | ±7.4CFU	PASS
Ochratoxin A	ND	20 ppb	0.5 | 1.4 | ±1.4 ppb	PASS
Aflatoxin B1B2G1G2	ND	20 ppb	0.5 | 1.5 | ±1.5 ppb	PASS

Solvents

	MSP-7.5.1.7	limit	LOD LOQ error	result
Acetone	ND	5000 ppm	0.7 | 2.1 | ±2.1 ppm	PASS
Acetonitrile	ND	410 ppm	0.6 | 1.8 | ±1.8 ppm	PASS
Benzene	ND	0 ppm	0.0 | 0.1 | ±0.1 ppm	PASS
Butane	ND	5000 ppm	1.4 | 4.2 | ±4.2 ppm	PASS
Chloroform	ND	0 ppm	0.1 | 0.2 | ±0.2 ppm	PASS
Cyclohexane	ND	0 ppm	0.5 | 1.6 | ±1.6 ppm	PASS
Ethanol	ND	10000 ppm	0.7 | 2.1 | ±2.1 ppm	PASS
Heptane	ND	5000 ppm	0.4 | 1.2 | ±1.2 ppm	PASS
Hexane	ND	290 ppm	0.5 | 1.6 | ±1.6 ppm	PASS
Isopropyl alcohol	ND	5000 ppm	0.6 | 1.9 | ±1.9 ppm	PASS
Methanol	ND	3000 ppm	0.5 | 1.6 | ±1.6 ppm	PASS
Pentane	ND	5000 ppm	0.2 | 0.6 | ±0.6 ppm	PASS
Propane	ND	5000 ppm	0.5 | 1.6 | ±1.6 ppm	PASS
Toluene	ND	890 ppm	0.3 | 0.9 | ±0.9 ppm	PASS
Xylenes	ND	2170 ppm	0.3 | 1.0 | ±1.0 ppm	PASS

Metals

	MSP-7.5.1.11	limit	LOD LOQ error	result
Arsenic	ND	1500 ppb	2.8 | 8.5 | ±8.5 ppb	PASS
Cadmium	ND	500 ppb	3.0 | 9.1 | ±9.1 ppb	PASS
Lead	ND	500 ppb	4.7 | 14.2 | ±14.2 ppb	PASS
Mercury	ND	300 ppb	2.4 | 7.1 | ±7.1 ppb	PASS

Pesticides

	MSP-7.5.1.8	limit	LOD LOQ error	result
Pyrethrin	ND	1.00 ppm	0.003 | 0.009 | ±0.009 ppm	PASS
Pyridaben	ND	3.00 ppm	0.001 | 0.003 | ±0.003 ppm	PASS
Spinetoram	ND	3.00 ppm	0.004 | 0.012 | ±0.012 ppm	PASS
Spinosad	ND	3.00 ppm	0.008 | 0.023 | ±0.023 ppm	PASS
Spiromesifen	ND	12.00 ppm	0.004 | 0.011 | ±0.011 ppm	PASS
Spirotetramat	ND	13.00 ppm	0.003 | 0.008 | ±0.008 ppm	PASS
Spiroxamine	ND	0.00 ppm	0.001 | 0.003 | ±0.003 ppm	PASS
Tebuconazole	ND	2.00 ppm	0.006 | 0.017 | ±0.017 ppm	PASS
Thiacloprid	ND	0.10 ppm	0.001 | 0.004 | ±0.004 ppm	PASS
Thiamethoxam	ND	4.50 ppm	0.003 | 0.010 | ±0.010 ppm	PASS
Trifloxystrobin	ND	30.00 ppm	0.003 | 0.008 | ±0.008 ppm	PASS

SECURITY FEATURE: WATERMARK MUST MATCH CERTIFICATE ID AND ISSUE DATE

Pesticides

	MSP-7.5.1.8	limit	LOD LOQ error	result
Abamectin	ND	0.30 ppm	0.008 | 0.025 | ±0.025 ppm	PASS
Acephate	ND	5.00 ppm	0.009 | 0.026 | ±0.026 ppm	PASS
Acequinocyl	ND	4.00 ppm	0.007 | 0.022 | ±0.022 ppm	PASS
Acetamiprid	ND	5.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Aldicarb	ND	0.00 ppm	0.002 | 0.007 | ±0.007 ppm	PASS
Azoxystrobin	ND	40.00 ppm	0.002 | 0.007 | ±0.007 ppm	PASS
Bifenazate	ND	5.00 ppm	0.002 | 0.005 | ±0.005 ppm	PASS
Bifenthrin	ND	0.50 ppm	0.001 | 0.003 | ±0.003 ppm	PASS
Boscalid	ND	10.00 ppm	0.024 | 0.071 | ±0.071 ppm	PASS
Carbaryl	ND	0.50 ppm	0.009 | 0.028 | ±0.028 ppm	PASS
Carbofuran	ND	0.00 ppm	0.002 | 0.006 | ±0.006 ppm	PASS
Chloantraniliprole	ND	40.00 ppm	0.023 | 0.068 | ±0.068 ppm	PASS
Chlorfenapyr	ND	0.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Chlorpyrifos	ND	0.00 ppm	0.047 | 0.141 | ±0.141 ppm	PASS
Clofentezine	ND	0.50 ppm	0.009 | 0.026 | ±0.026 ppm	PASS
Coumaphos	ND	0.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Cyfluthrin	ND	1.00 ppm	0.009 | 0.026 | ±0.026 ppm	PASS
Cypermethrin	ND	1.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Daminozide	ND	0.00 ppm	0.032 | 0.096 | ±0.096 ppm	PASS
Dichlorvos	ND	0.00 ppm	0.016 | 0.049 | ±0.049 ppm	PASS
Diazinon	ND	0.20 ppm	0.001 | 0.004 | ±0.004 ppm	PASS
Dimethoate	ND	0.00 ppm	0.002 | 0.007 | ±0.007 ppm	PASS
Etoxazole	ND	1.50 ppm	0.004 | 0.013 | ±0.013 ppm	PASS
Fenoxycarb	ND	0.00 ppm	0.004 | 0.012 | ±0.012 ppm	PASS
Fenpyroximate	ND	2.00 ppm	0.001 | 0.004 | ±0.004 ppm	PASS
Fipronil	ND	0.00 ppm	0.009 | 0.026 | ±0.026 ppm	PASS
Flonicamid	ND	2.00 ppm	0.114 | 0.341 | ±0.341 ppm	PASS
Fludioxonil	ND	30.00 ppm	0.008 | 0.023 | ±0.023 ppm	PASS
Hexythiazox	ND	2.00 ppm	0.001 | 0.003 | ±0.003 ppm	PASS
Imazalil	ND	0.00 ppm	0.008 | 0.023 | ±0.023 ppm	PASS
Imidacloprid	ND	3.00 ppm	0.001 | 0.004 | ±0.004 ppm	PASS
Malathion	ND	5.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Metalaxyl	ND	15.00 ppm	0.009 | 0.026 | ±0.026 ppm	PASS
Methiocarb	ND	0.00 ppm	0.004 | 0.013 | ±0.013 ppm	PASS
Methomyl	ND	0.10 ppm	0.001 | 0.002 | ±0.002 ppm	PASS
Methyl parathion	ND	0.00 ppm	0.001 | 0.004 | ±0.004 ppm	PASS
Mevinphos	ND	0.00 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Myclobutanil	ND	9.00 ppm	0.001 | 0.003 | ±0.003 ppm	PASS
Naled	ND	0.50 ppm	0.006 | 0.018 | ±0.018 ppm	PASS
Oxamyl	ND	0.20 ppm	0.003 | 0.008 | ±0.008 ppm	PASS
Paclobutrazol	ND	0.00 ppm	0.003 | 0.010 | ±0.010 ppm	PASS
Permethrin	ND	20.00 ppm	0.011 | 0.034 | ±0.034 ppm	PASS
Phosmet	ND	0.20 ppm	0.003 | 0.010 | ±0.010 ppm	PASS
Piperonylbutoxide	ND	8.00 ppm	0.012 | 0.035 | ±0.035 ppm	PASS
Prallethrin	ND	0.40 ppm	0.004 | 0.013 | ±0.013 ppm	PASS
Propiconazole	ND	20.00 ppm	0.004 | 0.013 | ±0.013 ppm	PASS
Propoxur	ND	0.00 ppm	0.007 | 0.020 | ±0.020 ppm	PASS

Certified by:

Kyle Larson, MSc
Deputy Director

Jacob Harris
QA Manager

Printed 4/13/2021 3:30 PM

ISO/IEC 17025:2017
ACCREDITED
Certificate #4961.01
https://portal.a2la.org/scopepdf/4961-01.pdf

Stillwater Laboratories Inc.
MT License L0001, L00007
6073 US93N Suite 5, Olney MT 59927
406-881-2019

INSTRUMENTS: Potency by HPLC (LC2030C-UV), solvents and terpenes by GCMS (QP2020/HS20), pesticides and mycotoxins by LCMSMS (LC8060), microbial by qPCR (AriaMx) and plating (Hardy Diagnostics), metals by ICPMS (ICPMS-2030)

• All testing was completed onsite at 6073 US93N, Olney MT •• Potency (cannabinoid concentration) is calcuated as: [cannabioid] = $[\text{cannabinoid}]_{HPLC} \times \text{volume}_{dilution}/m_{dry}$ ••• Decarboxyted cannabinoid concentration is calculated $XXX_{total} = 0.877 \times XXXa + XXX$ •••• Standards are used to calibrate the resulting data and estimate error using a standard estimate of error method; LOD is the limit of detection ($3.3s_b$). LOQ is the limit of quantification (3xLOD), and experimental error is calculated from weighing, dilution, and interpolation error using the formula $s_g^2 = \sum(\partial f/\partial i)^2 s_i^2$ where i is the contributor to error. The 95% confidence range is calculated from: (concentration) $\pm t_{CL90} \times s_g$. Sampling error is not considered in error calculations. ND = not detected (< LOD), NT = not tested, NL = no limit, NA = not applicable. ‡ = decarbed

botanacor

Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

SG10

Batch ID or Lot Number:	Test:	Reported:
21236A	**Microbial Contaminants**	**8/23/21**

Matrix:	Test ID:	Started:	USDA License:
Finished Product	T000158560	8/19/21	N/A

Status:	Methods:	Received:	Sampler ID:
N/A	TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	08/19/2021 @ 10:25 AM	N/A

MICROBIAL CONTAMINANTS DETERMINATION

Contaminant	Method	LOD	LLOQ	ULOQ	Result
Total Aerobic Count*	TM-26, Culture Plating	10^2 CFU/g	10^3 CFU/g	1.5x10^5 CFU/g	None Detected
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

Notes

Free from visual mold, mildew, and foreign matter

Brianne Maillot
8/23/2021
3:29:00 PM

PREPARED BY / DATE

Sarah Henning
8/23/2021
5:31:00 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:
10^2 = 100 CFU
10^3 = 1,000 CFU
10^4 = 10,000 CFU
10^5 = 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