JOY ORGANICS

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Nano CBD Softgels with Melatonin
PRODUCT STRENGTH: 25 mg CBD / 3 mg Melatonin / 3mg CBN
TINCTURE BATCH: 22BL06314- 220715B
BEST BY DATE: 6/16/2024
HEMP EXTRACT LOT: 22BL06314

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	*NTL 25mg / softgel	**34.15mg**	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: <0.01% THC (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 — Name

7/26/2022 — Date

2519 S. Shields St. #1042, Fort Collins, CO 80526
Tel: (833) 569-7223 www.joyorganics.com

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Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

Joy Organics BS 25mg + Melatonin

Batch ID or Lot Number:	Test:	Reported:	USDA License:
22BL06314	**Potency**	**24Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000211857	24Jun2022	N/A
	Method(s): TM14 (HPLC-DAD): Potency – Standard Cannabinoid Analysis	Received: 24Jun2022	Status: Active

Cannabinoids

	LOD (%)	**LOQ** (%)	**Result** (%)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.019	0.060	ND	ND	
Cannabichromenic Acid (CBCA)	0.017	0.055	ND	ND	
Cannabidiol (CBD)	0.048	0.158	7.589	75.89	
Cannabidiolic Acid (CBDA)	0.049	0.162	ND	ND	
Cannabidivarin (CBDV)	0.011	0.037	<LOQ	0.25	
Cannabidivarinic Acid (CBDVA)	0.021	0.068	ND	ND	
Cannabigerol (CBG)	0.011	0.034	0.464	4.64	
Cannabigerolic Acid (CBGA)	0.045	0.142	ND	ND	
Cannabinol (CBN)	0.014	0.044	1.067	10.67	
Cannabinolic Acid (CBNA)	0.031	0.097	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.054	0.169	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.049	0.154	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.043	0.136	ND	ND	
Tetrahydrocannabivarin (THCV)	0.010	0.031	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.038	0.120	ND	ND	
Total Cannabinoids			**9.145**	**91.45**	
Total Potential THC			ND	ND	
Total Potential CBD			7.589	75.89	

Final Approval

Daniel Weidensaul
24Jun2022
02:37:00 PM MDT

PREPARED BY / DATE

Sam Smith
24Jun2022
02:45:00 PM MDT

APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/20853c98-6633-4828-b4fe-0ad383e0ac37

Definitions
% = % (w/w) = Percent (weight of analyte / weight of product). ND = None Detected (defined by dynamic range of the method).
Total Potential Delta 9-THC or CBD is calculated to take into account the loss of a carboxyl group during decarboxylation step, using the following formulas: Total Potential Delta 9-THC = Delta 9-THC + (Delta 9-THCa *(0.877)) and Total CBD = CBD + (CBDa *(0.877)).

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CERTIFICATE OF ANALYSIS

Joy Organics BS 25mg + Melatonin

Batch ID or Lot Number:	Test:	Reported:	USDA License:
22BL06314	**Residual Solvents**	**27Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000211861	27Jun2022	N/A
	Method(s):	Received:	Status:
	TM04 (GC-MS): Residual Solvents	24Jun2022	Active

Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	68 - 1364	ND	
Butanes (Isobutane, n-Butane)	141 - 2815	ND	
Methanol	54 - 1085	ND	
Pentane	78 - 1561	ND	
Ethanol	80 - 1605	ND	
Acetone	87 - 1748	ND	
Isopropyl Alcohol	88 - 1770	ND	
Hexane	5 - 108	ND	
Ethyl Acetate	88 - 1768	ND	
Benzene	0.2 - 3.7	ND	
Heptanes	89 - 1788	ND	
Toluene	16 - 325	ND	
Xylenes (m,p,o-Xylenes)	121 - 2415	ND	

Final Approval

Jacob Miller
28Jun2022
06:31:00 PM MDT
PREPARED BY / DATE

Daniel Weidensaul
28Jun2022
06:31:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/b4308c0e-5ab6-417b-bad0-318e12d9a5a0

Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

Cert #4329.02

Certified Test Laboratory

CDPHE Certified

b4308c0e5ab6417bbad0318e12d9a5a0.1

botanacor

CERTIFICATE OF ANALYSIS

Joy Organics BS 25mg + Melatonin

Batch ID or Lot Number:	Test:	Reported:	USDA License:
22BL06314	**Pesticides**	**01Jul2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000211858	30Jun2022	NA
	Method(s):	Received:	Status:
	TM17 (LC-QQ LC MS/MS)	24Jun2022	NA

Pesticides

	Dynamic Range (ppb)	**Result** (ppb)
Abamectin	306 - 2780	ND
Acephate	41 - 2758	ND
Acetamiprid	43 - 2772	ND
Azoxystrobin	47 - 2763	ND
Bifenazate	44 - 2736	ND
Boscalid	67 - 2718	ND
Carbaryl	38 - 2723	ND
Carbofuran	42 - 2701	ND
Chlorantraniliprole	54 - 2793	ND
Chlorpyrifos	37 - 2809	ND
Clofentezine	280 - 2747	ND
Diazinon	283 - 2744	ND
Dichlorvos	280 - 2791	ND
Dimethoate	45 - 2764	ND
E-Fenpyroximate	290 - 2692	ND
Etofenprox	41 - 2790	ND
Etoxazole	297 - 2747	ND
Fenoxycarb	36 - 2767	ND
Fipronil	22 - 2702	ND
Flonicamid	48 - 2771	ND
Fludioxonil	332 - 2811	ND
Hexythiazox	46 - 2810	ND
Imazalil	292 - 2777	ND
Imidacloprid	44 - 2773	ND
Kresoxim-methyl	52 - 2813	ND

	Dynamic Range (ppb)	**Result** (ppb)
Malathion	293 - 2714	ND
Metalaxyl	49 - 2730	ND
Methiocarb	45 - 2812	ND
Methomyl	42 - 2766	ND
MGK 264 1	109 - 1647	ND
MGK 264 2	121 - 1152	ND
Myclobutanil	48 - 2785	ND
Naled	43 - 2785	ND
Oxamyl	42 - 2761	ND
Paclobutrazol	43 - 2735	ND
Permethrin	298 - 2789	ND
Phosmet	40 - 2703	ND
Prophos	287 - 2772	ND
Propoxur	42 - 2706	ND
Pyridaben	299 - 2798	ND
Spinosad A	36 - 2226	ND
Spinosad D	48 - 496	ND
Spiromesifen	235 - 2780	ND
Spirotetramat	293 - 2658	ND
Spiroxamine 1	19 - 1200	ND
Spiroxamine 2	25 - 1585	ND
Tebuconazole	284 - 2785	ND
Thiacloprid	43 - 2757	ND
Thiamethoxam	42 - 2794	ND
Trifloxystrobin	43 - 2746	ND

Final Approval

Daniel Weidensaul
01Jul2022
12:16:00 PM MDT
PREPARED BY / DATE

Sam Smith
01Jul2022
12:23:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/03474c6e-f5ab-4a8d-afb9-cfc702e69cb6

Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range
ppb = Parts Per Billion

Cert #4329.02
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Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

Joy Organics BS 25mg + Melatonin

Batch ID or Lot Number:	Test:	Reported:	USDA License:
22BL06314	**Mycotoxins**	**30Jun2022**	N/A
Matrix:	Test ID:	Started:	Sampler ID:
Concentrate	T000211863	29Jun2022	N/A
	Method(s): TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins	Received: 24Jun2022	Status: Active

Mycotoxins

	Dynamic Range (ppb)	**Result** (ppb)	**Notes**
Ochratoxin A	1.66 - 134.50	ND	N/A
Aflatoxin B1	1.04 - 33.53	ND	
Aflatoxin B2	1.36 - 33.27	ND	
Aflatoxin G1	1.14 - 33.17	ND	
Aflatoxin G2	1.49 - 33.56	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

Sam Smith
30Jun2022
03:25:00 PM MDT
PREPARED BY / DATE

Jacob Miller
30Jun2022
03:29:00 PM MDT
APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/4024c153-0d64-4f3c-97b3-f4e1bb933c77

Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

Cert #4329.02

Certified Test Laboratory

CDPHE Certified

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CERTIFICATE OF ANALYSIS

25mg Sleep Softgels

Batch ID or Lot Number:	Test:	Reported:	USDA License:
220713B	**Microbial Contaminants**	**19Jul2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Finished Product	T000214439	15Jul2022	NA
	Method(s): TM25 (PCR) TM24, TM26, TM27 (Culture Plating)	Received: 15Jul2022	Status: NA

Microbial Contaminants

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10^0 CFU/g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10^0 CFU/g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10^2 CFU/g	$1.0x10^3$ - $1.5x10^5$	None Detected	
Total Coliforms*	TM27: Culture Plating	10^1 CFU/g	$1.0x10^2$ - $1.5x10^4$	None Detected	

Final Approval

Brett Hudson
18Jul2022
05:21:00 PM MDT

PREPARED BY / DATE

Eden Thompson-Wright
19Jul2022
10:54:00 AM MDT

APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/fa7e0dbd-f820-4cd1-aaba-0718fd762f5b

Definitions
* 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
CFU/g = Colony Forming Units per Gram, LOD = Limit of Detection
ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation
STEC = Shiga Toxin-Producing E. coli

Cert #4329.02

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botanacor

Official Compliance: Colorado

CERTIFICATE OF ANALYSIS

Joy Organics BS 25mg + Melatonin

Batch ID or Lot Number:	Test:	Reported:	USDA License:
22BL06314	**Heavy Metals**	**28Jun2022**	NA
Matrix:	Test ID:	Started:	Sampler ID:
Unit Co	T000211860	27Jun2022	NA
	Method(s):	Received:	Status:
	TM19 (ICP-MS): Heavy Metals	24Jun2022	NA

Heavy Metals

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Arsenic	0.08 - 7.90	ND	
Cadmium	0.08 - 7.87	ND	
Mercury	0.08 - 7.80	ND	
Lead	0.08 - 7.99	ND	

Final Approval

Daniel Weidensaul
29Jun2022
08:05:00 PM MDT

PREPARED BY / DATE

Courtney Richards
29Jun2022
09:10:00 PM MDT

APPROVED BY / DATE

https://results.botanacor.com/api/v1/coas/uuid/22d7332e-3323-474d-afd2-d7af9d97a46d

Definitions
ND = None Detected (defined by dynamic range of the method)
Dynamic Range = Limit of Quantitation (LOQ) through Upper Limit of Method Range

Cert #4329.02

Certified Test Laboratory

CDPHE Certified

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