

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics CBD Gummies for Sleep
PRODUCT STRENGTH: 30mg CBD, 3mg CBN, 1mg THC, + 3mg Melatonin / gummy
BATCH: 230213A
BEST BY DATE: HEMP 12/12/2024

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Purple	PASS
Odor	Joy Internal	Sweet, berry	PASS
Appearance	Joy Internal	Purple gummies with sugar coating in child proof container	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Container caps tight and seals intact	PASS
Secondary Package Eval.	Joy Internal	Labeling Compliance Checked, 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 30 mg / gummy	37mg	PASS
Potency - D9-THC	HPLC-UV DAD	<0.3% (full spectrum)	1.1mg	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 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	Below LOQ	PASS
Mycotoxins	ICP-MS	Total Aflatoxins <20 ppb† Aflatoxin B1 < 5 ppb Ochratoxin < 5ppb	Below LOQ	PASS
Residual Solvents	GC-HS-MSD	LOQ: Complies with CDPHE 6 CCR 1010-21 Industrial Hemp Extract	Below LOQ	PASS

* *Level of Quantitation, † Parts Per Million ‡ Part Per Billion CFU/g=Colony Forming Units per Gram
 * Nothing Less Than
 10²=100 CFU
 10³=1,000 CFU

Quality Certified  1/12/2023
 Name _____ Date _____

30 mg CBD Sleep Gummy with Melatonin

Batch ID or Lot Number: 230213A	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 1
Reported: 16Dec2022	Started: 15Dec2022	Received: 13Dec2022	


Cannabinoids - Colorado Compliance

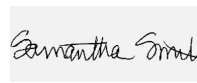
Test ID: T000230551

Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.007	0.024	0.031	0.31	
Cannabichromenic Acid (CBCA)	0.006	0.022	ND	ND	
Cannabidiol (CBD)	0.022	0.066	0.929	9.29	
Cannabidiolic Acid (CBDA)	0.023	0.068	ND	ND	
Cannabidivarin (CBDV)	0.005	0.016	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.010	0.028	ND	ND	
Cannabigerol (CBG)	0.004	0.014	<LOQ	<LOQ	
Cannabigerolic Acid (CBGA)	0.016	0.057	ND	ND	
Cannabinol (CBN)	0.005	0.018	0.088	0.88	
Cannabinolic Acid (CBNA)	0.011	0.039	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.019	0.068	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.018	0.062	0.028	0.28	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.016	0.055	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.012	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.014	0.048	ND	ND	
Total Cannabinoids			1.076	10.76	
Total Potential THC			0.028	0.28	
Total Potential CBD			0.929	9.29	

Final Approval


 Karen Winternheimer
 16Dec2022
 02:41:00 PM MST
 PREPARED BY / DATE


 Sam Smith
 16Dec2022
 02:42:00 PM MST
 APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/133513b8-6b26-45d7-b907-e70120b117a3>

Definitions
 LOD = Limit of Detection, ULOQ = Upper Limit of Quantitation, LLOQ = Lower Limit of Quantitation, PPB = Parts per Billion, % = % (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)). Fail equates to a concentration level of Delta 9-THC, on a dry weight basis, higher than 0.3 percent + or - the measurement uncertainty. Total Potential THC 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)). ALOQ = Above Limit Of Quantitation (defined by dynamic range of the method), CFU/g = Colony Forming Units per Gram. 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 SC Laboratories, Inc., in the condition it was received. SC Laboratories, Inc., 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 SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited by A2LA. Some tests listed on this COA may not be within our scope of A2LA accreditation. Please visit [A2LA for more details](#).



Cert #4329.02
 133513b86b2645d7b907e70120b117a3.1

30 mg CBD Sleep Gummy with Melatonin

Batch ID or Lot Number: 230213A	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 4
Reported: 15Dec2022	Started: 14Dec2022	Received: 13Dec2022	

Residual Solvents - Colorado Compliance

Test ID: T000230555


Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	87 - 1749	ND	
Butanes (Isobutane, n-Butane)	175 - 3495	ND	
Methanol	58 - 1153	ND	
Pentane	94 - 1884	ND	
Ethanol	93 - 1859	ND	
Acetone	94 - 1888	ND	
Isopropyl Alcohol	96 - 1913	ND	
Hexane	6 - 112	ND	
Ethyl Acetate	97 - 1936	ND	
Benzene	0.2 - 3.8	ND	
Heptanes	96 - 1926	ND	
Toluene	17 - 342	ND	
Xylenes (m,p,o-Xylenes)	126 - 2528	ND	

Final Approval

 Karen Winternheimer
15Dec2022
01:46:00 PM MST

PREPARED BY / DATE

 Sam Smith
15Dec2022
01:49:00 PM MST

APPROVED BY / DATE

30 mg CBD Sleep Gummy with Melatonin

Batch ID or Lot Number: 230213A	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 2 of 4
Reported: 15Dec2022	Started: 14Dec2022	Received: 13Dec2022	


Pesticides


Test ID: T000230552

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	321 - 2637	ND		Malathion	284 - 2755	ND
Acephate	44 - 2805	ND		Metalaxyl	43 - 2742	ND
Acetamiprid	41 - 2778	ND		Methiocarb	44 - 2752	ND
Azoxystrobin	44 - 2739	ND		Methomyl	44 - 2780	ND
Bifenazate	41 - 2757	ND		MGK 264 1	182 - 1636	ND
Boscalid	45 - 2850	ND		MGK 264 2	119 - 1161	ND
Carbaryl	42 - 2760	ND		Myclobutanil	46 - 2750	ND
Carbofuran	41 - 2759	ND		Naled	43 - 2793	ND
Chlorantraniliprole	47 - 2775	ND		Oxamyl	42 - 2780	ND
Chlorpyrifos	53 - 2776	ND		Paclobutrazol	39 - 2755	ND
Clofentezine	273 - 2775	ND		Permethrin	166 - 2753	ND
Diazinon	280 - 2782	ND		Phosmet	41 - 2734	ND
Dichlorvos	286 - 2791	ND		Prophos	275 - 2783	ND
Dimethoate	42 - 2719	ND		Propoxur	41 - 2752	ND
E-Fenpyroximate	294 - 2748	ND		Pyridaben	291 - 2730	ND
Etofenprox	39 - 2748	ND		Spinosad A	34 - 2237	ND
Etoxazole	300 - 2730	ND		Spinosad D	51 - 491	ND
Fenoxycarb	43 - 2747	ND		Spiromesifen	280 - 2753	ND
Fipronil	40 - 2793	ND		Spirotetramat	270 - 2745	ND
Flonicamid	51 - 2761	ND		Spiroxamine 1	18 - 1194	ND
Fludioxonil	256 - 2801	ND		Spiroxamine 2	24 - 1562	ND
Hexythiazox	42 - 2732	ND		Tebuconazole	288 - 2716	ND
Imazalil	257 - 2783	ND		Thiacloprid	43 - 2770	ND
Imidacloprid	47 - 2785	ND		Thiamethoxam	41 - 2788	ND
Kresoxim-methyl	44 - 2789	ND		Trifloxystrobin	41 - 2773	ND

Final Approval


 Karen Winternheimer
 16Dec2022
 09:22:00 AM MST
 PREPARED BY / DATE


 Sam Smith
 16Dec2022
 09:32:00 AM MST
 APPROVED BY / DATE

30 mg CBD Sleep Gummy with Melatonin

Batch ID or Lot Number: 230213A	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 3 of 4
Reported: 15Dec2022	Started: 14Dec2022	Received: 13Dec2022	

Microbial Contaminants - Colorado Compliance

Test ID: T000230553
Methods: TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10 ⁰ CFU/25g	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 17Dec2022 02:32:00 PM MST		Brianne Maillot 19Dec2022 09:18:00 AM MST
PREPARED BY / DATE		APPROVED BY / DATE	

Heavy Metals - Colorado Compliance

Test ID: T000230554
Methods: TM19 (ICP-MS): Heavy Metals

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.04 - 4.22	ND	
Cadmium	0.05 - 4.63	ND	
Mercury	0.04 - 4.44	ND	
Lead	0.05 - 4.50	ND	

Final Approval

	Sam Smith 20Dec2022 08:06:00 AM MST		Karen Winternheimer 20Dec2022 08:07:00 AM MST
PREPARED BY / DATE		APPROVED BY / DATE	

30 mg CBD Sleep Gummy with Melatonin


Batch ID or Lot Number: 230213A	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 4 of 4
Reported: 15Dec2022	Started: 14Dec2022	Received: 13Dec2022	


Mycotoxins - Colorado Compliance

Test ID: T000230556
Methods: TM18 (UHPLC-QQQ)

LCMS/MS: Mycotoxins	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	4.09 - 122.30	ND	N/A
Aflatoxin B1	0.92 - 30.51	ND	
Aflatoxin B2	0.92 - 30.24	ND	
Aflatoxin G1	1.10 - 30.57	ND	
Aflatoxin G2	0.80 - 30.04	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval


Sam Smith
22Dec2022
08:42:00 AM MST
PREPARED BY / DATE


Karen Winternheimer
22Dec2022
08:44:00 AM MST
APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uiid/6846db01-8dd0-4b85-9b3c-c544fd0e2482>

Definitions
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Cert #4329.02
6846db018dd04b859b3cc544fd0e2482.1


GUMMB25 - Mixed Berry Sleep Gummy

Batch ID or Lot Number: 230213A	Test: Microbial Contaminants	Reported: 16Jan2023	USDA License: N/A
Matrix: Finished Product	Test ID: T000232893	Started: 13Jan2023	Sampler ID: N/A
	Method(s): TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)	Received: 13Jan2023	Status: Active

Microbial

Contaminants	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 ⁰ CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
<i>Salmonella</i>	TM25: PCR	10 ⁰ CFU/25g	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



Brianne Maillot
16Jan2023
03:41:00 PM MST

PREPARED BY / DATE



Eden Thompson-Wright
16Jan2023
04:31:00 PM MST

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/665a6392-c100-4509-877d-59de26ed1e26>

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

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Cert #4329.02

CDPHE Certified

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