

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics Green Apple Gummies - Organic + Kosher
PRODUCT STRENGTH: 10 mg CBD / gummy
BATCH: 230414B
BEST BY DATE: HEMP 11/8/2024
EXTRACT LOT: 00851

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Medium Green	PASS
Odor	Joy Internal	Sweet, apple, sour	PASS
Appearance	Joy Internal	Medium green 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 10 mg / gummy	14mg	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	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 Manufacture*
 10²=100 CFU
 10³=1,000 CFU

Quality Certified

Name



Date

Organic 10mg Green Apple CBD Gummy


Batch ID or Lot Number: 230414B	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 5 of 5
Reported: 21Nov2022	Started: 18Nov2022	Received: 17Nov2022	

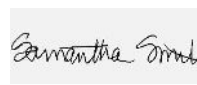
Cannabinoids - Colorado Compliance

Test ID: T000228045
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.008	0.028	ND	ND	Amendment to T000228045 issued on 21Nov2022 to include mg/serving. Item weight = 3.57g. CBD/serving = 14.53mg.
Cannabichromenic Acid (CBCA)	0.008	0.026	ND	ND	
Cannabidiol (CBD)	0.027	0.075	0.407	4.07	
Cannabidiolic Acid (CBDA)	0.028	0.077	ND	ND	
Cannabidivarin (CBDV)	0.006	0.018	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.012	0.032	ND	ND	
Cannabigerol (CBG)	0.005	0.016	0.066	0.66	
Cannabigerolic Acid (CBGA)	0.020	0.067	ND	ND	
Cannabinol (CBN)	0.006	0.021	ND	ND	
Cannabinolic Acid (CBNA)	0.013	0.045	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.023	0.079	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.021	0.072	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.019	0.064	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.015	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.017	0.056	ND	ND	
Total Cannabinoids			0.473	4.73	
Total Potential THC			ND	ND	
Total Potential CBD			0.407	4.07	

Final Approval


Karen Winternheimer
05Dec2022
02:19:00 PM MST
PREPARED BY / DATE


Sam Smith
05Dec2022
02:29:00 PM MST
APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/a8de2b63-fd46-4f8e-b826-f6dfefacedce>

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](#).



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Organic 10mg Green Apple CBD Gummy

Batch ID or Lot Number: 230414B	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 5
Reported: 21Nov2022	Started: 18Nov2022	Received: 17Nov2022	


Pesticides


Test ID: T000228046

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	306 - 2569	ND		Malathion	283 - 2728	ND
Acephate	43 - 2750	ND		Metalaxyl	42 - 2725	ND
Acetamiprid	43 - 2732	ND		Methiocarb	42 - 2693	ND
Azoxystrobin	43 - 2730	ND		Methomyl	40 - 2708	ND
Bifenazate	37 - 2709	ND		MGK 264 1	178 - 1588	ND
Boscalid	39 - 2710	ND		MGK 264 2	117 - 1142	ND
Carbaryl	41 - 2726	ND		Myclobutanil	48 - 2702	ND
Carbofuran	41 - 2730	ND		Naled	42 - 2747	ND
Chlorantraniliprole	42 - 2723	ND		Oxamyl	41 - 2725	ND
Chlorpyrifos	35 - 2774	ND		Paclobutrazol	41 - 2721	ND
Clofentezine	272 - 2769	ND		Permethrin	300 - 2735	ND
Diazinon	277 - 2737	ND		Phosmet	37 - 2712	ND
Dichlorvos	266 - 2748	ND		Prophos	280 - 2694	ND
Dimethoate	40 - 2718	ND		Propoxur	40 - 2733	ND
E-Fenpyroximate	298 - 2753	ND		Pyridaben	289 - 2666	ND
Etofenprox	44 - 2646	ND		Spinosad A	32 - 2240	ND
Etoxazole	306 - 2736	ND		Spinosad D	52 - 484	ND
Fenoxycarb	39 - 2746	ND		Spiromesifen	279 - 2775	ND
Fipronil	46 - 2803	ND		Spirotetramat	281 - 2719	ND
Flonicamid	49 - 2690	ND		Spiroxamine 1	18 - 1172	ND
Fludioxonil	291 - 2678	ND		Spiroxamine 2	22 - 1536	ND
Hexythiazox	40 - 2758	ND		Tebuconazole	278 - 2723	ND
Imazalil	261 - 2768	ND		Thiacloprid	41 - 2728	ND
Imidacloprid	46 - 2747	ND		Thiamethoxam	38 - 2751	ND
Kresoxim-methyl	44 - 2758	ND		Trifloxystrobin	42 - 2766	ND

Final Approval


 Sam Smith
 21Nov2022
 01:36:00 PM MST
 PREPARED BY / DATE


 Karen Winternheimer
 21Nov2022
 01:41:00 PM MST
 APPROVED BY / DATE

Organic 10mg Green Apple CBD Gummy

Batch ID or Lot Number: 230414B	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 2 of 5
Reported: 21Nov2022	Started: 18Nov2022	Received: 17Nov2022	


Heavy Metals - Colorado Compliance


Test ID: T000228048

Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.03 - 3.40	ND	
Cadmium	0.03 - 3.30	ND	
Mercury	0.03 - 3.43	ND	
Lead	0.03 - 3.03	ND	

Final Approval


Sam Smith
22Nov2022
10:39:00 AM MST
PREPARED BY / DATE


Karen Winternheimer
22Nov2022
10:43:00 AM MST
APPROVED BY / DATE

Organic 10mg Green Apple CBD Gummy

Batch ID or Lot Number: 230414B	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 3 of 5
Reported: 21Nov2022	Started: 18Nov2022	Received: 17Nov2022	

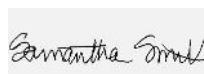
**Residual Solvents -
Colorado Compliance**

Test ID: T000228049

Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	80 - 1600	ND	
Butanes (Isobutane, n-Butane)	157 - 3147	ND	
Methanol	52 - 1033	ND	
Pentane	87 - 1730	ND	
Ethanol	86 - 1726	>1726	
Acetone	85 - 1702	ND	
Isopropyl Alcohol	87 - 1747	ND	
Hexane	5 - 105	ND	
Ethyl Acetate	88 - 1766	ND	
Benzene	0.2 - 3.6	ND	
Heptanes	89 - 1779	ND	
Toluene	15 - 300	ND	
Xylenes (m,p,o-Xylenes)	113 - 2260	ND	

Final Approval


Sam Smith
22Nov2022
01:59:00 PM MST

PREPARED BY / DATE


Karen Winternheimer
22Nov2022
01:59:00 PM MST

APPROVED BY / DATE

Organic 10mg Green Apple CBD Gummy

Batch ID or Lot Number: 230414B	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 4 of 5
Reported: 21Nov2022	Started: 18Nov2022	Received: 17Nov2022	

Microbial Contaminants - Colorado Compliance

Test ID: T000228047
 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
<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	2.8x10 ³ CFU/g	
Total Coliforms*	TM27: Culture Plating	10 ¹ CFU/g	1.0x10 ² - 1.5x10 ⁴	None Detected	

Final Approval

	Brett Hudson 23Nov2022 05:01:00 PM MST		Brianne Maillot 23Nov2022 05:08:00 PM MST
PREPARED BY / DATE		APPROVED BY / DATE	

Mycotoxins - Colorado Compliance

Test ID: T000228050
 Methods: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	4.35 - 115.89	ND	N/A
Aflatoxin B1	0.86 - 29.61	ND	
Aflatoxin B2	0.92 - 29.56	ND	
Aflatoxin G1	1.01 - 30.16	ND	
Aflatoxin G2	1.01 - 29.82	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

	Sam Smith 29Nov2022 09:14:00 AM MST		Karen Winternheimer 29Nov2022 09:17:00 AM MST
PREPARED BY / DATE		APPROVED BY / DATE	