

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics CBD Dog Chews
PRODUCT STRENGTH: 2 mg / chew
BATCH: 21344C
BEST BY DATE: 11/2023
Bulk LOT: 3004363

Click on the links to view third-party reports

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Brown	PASS
Odor	Joy Internal	Beef and grains, with some yeast	PASS
Appearance	Joy Internal	Squat cylindrical dog treats a plastic amber container	PASS
Primary Package Eval.	Joy Internal	Container clean and free of filth. Container caps tight and pressure seal is 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*: ≥ 2 mg / chew	2.6 mg	PASS
Potency - D9-THC	HPLC-UV DAD	LOQ: <0.01% (broad spectrum)	<0.01%	PASS
Pesticide Panel	LCMS-MS	Not Tested	N/A	N/A
Microbial Escherichia coli (STEC)	qPCR	Complies with USP 61/62	Absent	PASS
Microbial Salmonella	qPCR	Complies with USP 61/62	Absent	PASS
Microbial Yeast and Mold	Culture Plating	Complies with USP 61/62	Below LOQ	PASS
Microbial Total Coliforms	Culture Plating	Complies with USP 61/62	Below LOQ	PASS
Microbial Total Aerobic Count	Culture Plating	Complies with USP 61/62	3.3 x 10³	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	LCMS-MS	Total Aflatoxins <20 ppb†† Afltoxin B1 <20 ppb Ochratoxin <20 ppb	Below LOQ	PASS
Residual Solvents	GC-MS	Not Tested	N/A	N/A

*Level of Quantification
† Parts Per Million †† Part Per Billion

Quality Certified Keegan Schlittler 12/16/2021
 Keegan Schlittler
 Quality Assurance Manager Date



Certificate of Analysis

Sample: DE11119027-003

Harvest/Lot ID: N/A

Batch#: N/A

Seed to Sale# 1A4000B00010D25000000881

Batch Date: N/A

Sample Size Received: 48 gram

Total Weight/Volume: N/A

Retail Product Size: N/A gram

Ordered : 11/18/21

sampled : 11/18/21

Completed: 11/27/21

Sampling Method: SOP-024

PASSED

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Nov 27, 2021

License # 405R-00011

615 Wooten Rd Suite 110

Colorado Springs CO, 80915, US

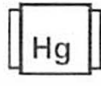
PRODUCT IMAGE



SAFETY RESULTS



Pesticides



Heavy Metals
PASSED



Microbials
PASSED



Mycotoxins
PASSED



Residuals Solvents



Filtration



Water Activity



Moisture



Homogeneity



Terpenes
NOT TESTED

CANNABINOID RESULTS



Total THC
0.005%



Total CBD
0.063%



Total Cannabinoids
0.069%



Cannabinoid Profile Test

Analyzed by
1259

Weight
4.1619g

Extraction date :
11/22/21 15:11:41

Extracted By :
[64]

Analysis Method -SOP-020 (R15)

Reviewed On - 11/23/21 15:07:29

Batch Date : 11/22/21 10:45:53

Analytical Batch -DE002697POT

Instrument Used : Agilent 1100 "Falcor" Running On : 11/22/21 19:00:41

Reagent	Dilution	Consums. ID	Consums. ID
101221-001	40	07051275	92106-92348
111221-001		1119999	5079-52506-5258
121221-001		8G045	
131221-001		81KB34782	
141221-001		258076054	
151221-002		12211-108CC 100	

Our High-Precision Cannabis Analysis utilizes High Performance Liquid Chromatography with UV-Vis detection (HPLC-UV) for accurate, lower limit of detection for all cannabinoids in 1 hour.



Certificate of Analysis

PASSED

Sample ID: DE11119027-003

815 Wooten Rd Suite 110
Colorado Springs, CO, 80915, US
Telephone: 319-574-7159
Email: info@kaychalabs.com
License #: IUSH-00003

Sample #: DE11119027-003

Harvest/LOT ID: N/A

Batch#: N/A

Sampled: 11/18/21

Ordered: 11/18/21

Sample Size Received: 48 gram

Total Weight/Volume: N/A

Completed: 11/27/21 Expires: 11/27/22

Sample Method: SOP-024

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Microbials

PASSED



Mycotoxins

PASSED

Analyte
TOTAL YEAST AND MOLD
SHIGA TOXIN PRODUCING ESCHERICHIA COLI STEC
SALMONELLA SPECIES
TOTAL AEROBIC
TOTAL COLIFORM

LOD

Result

not present in 2 gram
not present in 1 gram
not present in 1 gram
1500
0

Analyte

AFLATOXIN G2
AFLATOXIN G1
AFLATOXIN B2
AFLATOXIN B1
OCHRATOXIN A+
AFLATOXINS

LOD

Units

Result

Action Level

0.200 ppb ND 20
0.100 ppb ND 20
0.0500 ppb ND 20
0.100 ppb ND 20
0.040 ppb ND 25
0 ppb 20

Analysis Method: SOP-021 (R2) | SOP-022 (R2) | SOP-023 (R1)
Analytical Batch: HFD02658MC | Batch Date: 11/22/21 11:06:30
Instrument Used: HPLC/MS - Full Panel
Running On: 11/22/21 16:31:25

Analysis Method: SOP-024 (R5)
Analytical Batch: DE002191HEC | Reviewed On: 11/23/21 14:26:45
Instrument Used: Seis 5500 Otop - Mycotoxins
Running On: 11/23/21 08:02:34

Analyzed by	Weight	Extraction date	Extracted By		
5	22.67g	11/22/21 04:11:18	K		
Reagent	Reagent	Reagent	Dilution	Consums. ID	Consums. ID
110271.805	110271.805	111121.01	1	16564-105C6-106H	0
081611.08	081611.08	112211.22		10898-021C4-021A	9730-822
05521.02	05521.02	110821.896		210116-361-B	7206720
100419.03	100419.03	110721.806		210627-687	70158
111821.805	111821.805	111821.805		210627-688	80103
12765-115CC-115	12765-115CC-115	02221.53		12765-115CC-115	04-205033

Analyzed by	Weight	Extraction date	Extracted By
1696	0.147g	11/22/21 02:12:37	1696
110271.805	110271.805	111121.01	1



Heavy Metals

PASSED

Reagent	Dilution	Consums. ID
082721.11	1M	04008-0401
108121.04		12911-120CC-048
071420.04		9264-9264
11221.01		

Metal	LOD	Unit	Result	Action Level
ARSENIC	0.0020	ppm	0.046	1.5
CADMIUM	0.0018	ppm	0.054	0.5
MERCURY	0.0025	ppm	ND	1
LEAD	0.0131	ppm	0.046	1

Analyzed by	Weight	Extraction date	Extracted By
7	0.409g	11/23/21 12:11:31	1696

Analysis Method: SOP-050 (R3)
Analytical Batch: DE002701HEA | Reviewed On: 11/24/21 10:27:49
Instrument Used: Shimadzu 2030 ICP-MS
Running On: 11/23/21 17:16:56
Batch Date: 11/23/21 08:06:17

Heavy Metals = systemically determined using ICP-MS inductively coupled plasma mass spectrometry with collision cell technology. Method used: EPA 8210-A. Method used: EPA 8210-A. Method used: EPA 8210-A.

Prepared for:

JOY ORGANICS
CHEW


Batch ID or Lot Number: 21344A	Test: Microbial Contaminants	Reported: 12/16/21	Location: 5042 Technology Parkway Ste. 50 FT. COLLINS, CO 80528
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Matrix: Finished Product	Test ID: T000181910	Started: 12/13/21	USDA License: N/A
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Status: N/A	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)	Received: 12/13/2021 @ 09:57 AM	Sampler ID: N/A
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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	3.3x10 ³ CFU/g	Free from visual mold, mildew, and foreign matter
Total Coliforms*	TM-27, Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected	
Total Yeast and Mold*	TM-24, Culture Plating	10 ¹ 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	


 Brianne Maillot
 12/16/2021
 10:27:00 AM


 Carly Bader
 12/16/2021
 11:47:00 AM

PREPARED BY / DATE

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.



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