

CERTIFICATE OF ANALYSIS

PRODUCT NAME: Joy Organics Strawberry Lemonade Gummies - Organic + Kosher Certified
PRODUCT STRENGTH: 25mg CBD / gummy
BATCH: 220517A
BEST BY DATE: 5/17/2024
EXTRACT LOT: 637

Physical Attributes

Test	Method	Specification	Results
Color	Joy Internal	Medium Pink	PASS
Odor	Joy Internal	Sweet, strawberry, lemon	PASS
Appearance	Joy Internal	Medium pink 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	28.809mg	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
 10²=100 CFU
 10³=1,000 CFU

Quality Certified Kristen Mefford 5/20/2022
 Name Date

Prepared for:
OPEN BOOK EXTRACTS

317 LUCY GARRETT ROAD
ROXBORO, NC USA 27574

25mg BS Strawberry Lemonade (organic)


Batch ID or Lot Number: 637	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 5 of 6
Reported: 19May2022	Started: 10May2022	Received: 05May2022	


Cannabinoids - Colorado Compliance

Test ID: T000204001
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.007	0.022	ND	ND	Amendment to T000204001 issued 05May2022 to correct batch ID.
Cannabichromenic Acid (CBCA)	0.007	0.020	ND	ND	
Cannabidiol (CBD)	0.017	0.056	0.873	8.73	
Cannabidiolic Acid (CBDA)	0.017	0.057	ND	ND	
Cannabidivarin (CBDV)	0.004	0.013	<LOQ	0.04	
Cannabidivarinic Acid (CBDVA)	0.007	0.024	ND	ND	
Cannabigerol (CBG)	0.004	0.012	0.095	0.95	
Cannabigerolic Acid (CBGA)	0.017	0.052	ND	ND	
Cannabinol (CBN)	0.005	0.016	ND	ND	
Cannabinolic Acid (CBNA)	0.012	0.035	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.020	0.062	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.018	0.056	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.016	0.050	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.011	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.014	0.044	ND	ND	
Total Cannabinoids			0.972	9.72	
Total Potential THC			ND	ND	
Total Potential CBD			0.873	8.73	

Final Approval


Sam Smith
19May2022
02:25:00 PM MDT
PREPARED BY / DATE


Ryan Weems
19May2022
02:28:00 PM MDT
APPROVED BY / DATE

Prepared for:
OPEN BOOK EXTRACTS

317 LUCY GARRETT ROAD
ROXBORO, NC USA 27574

25mg BS Strawberry Lemonade (organic)

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Pesticides


Test ID: T000204002

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	262 - 2803	ND		Malathion	295 - 2716	ND
Acephate	40 - 2774	ND		Metalaxyl	44 - 2747	ND
Acetamiprid	40 - 2750	ND		Methiocarb	42 - 2784	ND
Azoxystrobin	46 - 2733	ND		Methomyl	40 - 2754	ND
Bifenazate	44 - 2768	ND		MGK 264 1	172 - 1642	ND
Boscalid	49 - 2825	ND		MGK 264 2	116 - 1125	ND
Carbaryl	42 - 2730	ND		Myclobutanil	48 - 2839	ND
Carbofuran	44 - 2708	ND		Naled	49 - 2767	ND
Chlorantraniliprole	50 - 2794	ND		Oxamyl	40 - 2763	ND
Chlorpyrifos	42 - 2806	ND		Paclobutrazol	42 - 2729	ND
Clofentezine	280 - 2751	ND		Permethrin	289 - 2752	ND
Diazinon	295 - 2773	ND		Phosmet	46 - 2774	ND
Dichlorvos	280 - 2747	ND		Prophos	288 - 2780	ND
Dimethoate	42 - 2738	ND		Propoxur	44 - 2720	ND
E-Fenpyroximate	290 - 2748	ND		Pyridaben	275 - 2783	ND
Etofenprox	43 - 2756	ND		Spinosad A	36 - 2251	ND
Etoazole	288 - 2744	ND		Spinosad D	48 - 510	ND
Fenoxycarb	43 - 2750	ND		Spiromesifen	267 - 2787	ND
Fipronil	39 - 2701	ND		Spirotetramat	292 - 2679	ND
Flonicamid	49 - 2737	ND		Spiroxamine 1	19 - 1198	ND
Fludioxonil	294 - 2770	ND		Spiroxamine 2	24 - 1555	ND
Hexythiazox	45 - 2754	ND		Tebuconazole	291 - 2779	ND
Imazalil	289 - 2784	ND		Thiacloprid	41 - 2746	ND
Imidacloprid	44 - 2763	ND		Thiamethoxam	42 - 2757	ND
Kresoxim-methyl	56 - 2820	ND		Trifloxystrobin	44 - 2738	ND

Final Approval


 Ryan Weems
 19May2022
 02:12:00 PM MDT
 PREPARED BY / DATE


 Sam Smith
 19May2022
 02:25:00 PM MDT
 APPROVED BY / DATE

Prepared for:
OPEN BOOK EXTRACTS

 317 LUCY GARRETT ROAD
 ROXBORO, NC USA 27574


25mg BS Strawberry Lemonade (organic)


Batch ID or Lot Number: 637	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 6 of 6
Reported: 19May2022	Started: 10May2022	Received: 05May2022	

Microbial Contaminants - Colorado Compliance

 Test ID: T000204003
 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 Amendment to report T000204003 for batch ID correction. SCH 19May2022
<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

 Sarah Henning
 19May2022
 03:24:00 PM MDT
 PREPARED BY / DATE


 Carly Bader
 19May2022
 03:51:00 PM MDT
 APPROVED BY / DATE

<https://results.botanacor.com/api/v1/coas/uuid/50c6d8c0-075c-469c-8b29-630d51dd8ca5>

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 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. 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
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Prepared for:

OPEN BOOK EXTRACTS317 LUCY GARRETT ROAD
ROXBORO, NC USA 27574**25mg BS Strawberry Lemonade (organic)**

Batch ID or Lot Number: 637	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 3 of 6
Reported: 19May2022	Started: 10May2022	Received: 05May2022	

**Heavy Metals -
Colorado Compliance**

Test ID: T000204004


Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.05 - 4.67	ND	Amendment to certificate T000204004 issued on 09May2022, batch ID updated.
Cadmium	0.05 - 4.82	ND	
Mercury	0.05 - 4.54	ND	
Lead	0.03 - 3.04	ND	

Final Approval

Ryan Weems
19May2022
01:54:00 PM MDT

PREPARED BY / DATE



Sam Smith
19May2022
02:17:00 PM MDT

APPROVED BY / DATE

Prepared for:

OPEN BOOK EXTRACTS317 LUCY GARRETT ROAD
ROXBORO, NC USA 27574**25mg BS Strawberry Lemonade (organic)**

Batch ID or Lot Number: 637	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 6
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**Mycotoxins - Colorado
Compliance**

Test ID: T000204006

Methods: TM18 (UHPLC-QQQ)

LCMS/MS: Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	3.25 - 127.17	ND	Amendment to T000204006 issued 11May2022 to correct batch ID.
Aflatoxin B1	1.36 - 32.94	ND	N/A
Aflatoxin B2	1.49 - 32.94	ND	
Aflatoxin G1	1.46 - 32.55	ND	
Aflatoxin G2	1.59 - 32.61	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval
PREPARED BY / DATE
Sam Smith
19May2022
11:27:00 AM MDT
APPROVED BY / DATE
Ryan Weems
19May2022
11:42:00 AM MDT

Prepared for:

OPEN BOOK EXTRACTS317 LUCY GARRETT ROAD
ROXBORO, NC USA 27574**25mg BS Strawberry Lemonade (organic)**

Batch ID or Lot Number: 637	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 2 of 6
Reported: 19May2022	Started: 10May2022	Received: 05May2022	

**Residual Solvents -
Colorado Compliance**


Test ID: T000204005

Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	92 - 1841	ND	Amendment to certificate T000204005 issued on 09May2022, batch ID updated.
Butanes (Isobutane, n-Butane)	139 - 2778	ND	
Methanol	57 - 1143	ND	
Pentane	79 - 1579	ND	
Ethanol	80 - 1603	>1603	
Acetone	89 - 1785	ND	
Isopropyl Alcohol	93 - 1860	ND	
Hexane	5 - 110	ND	
Ethyl Acetate	92 - 1848	ND	
Benzene	0.2 - 3.8	ND	
Heptanes	93 - 1855	ND	
Toluene	18 - 358	ND	
Xylenes (m,p,o-Xylenes)	121 - 2414	ND	

Final Approval

Ryan Weems
19May2022
01:30:00 PM MDT

PREPARED BY / DATE

Sam Smith
19May2022
02:29:00 PM MDT

APPROVED BY / DATE