

Prepared for:  
**BLUEBIRD BOTANICALS**

PO BOX 271724  
Louisville, CO USA 80027

## COSG

Batch ID or Lot Number: <b>3216</b>	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 6
Reported: <b>09Mar2023</b>	Started: 08Mar2023	Received: 07Mar2023	

## Mycotoxins - Colorado Compliance


Test ID: T000237701


Methods: TM18 (UHPLC-QQQ)

LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	2.24 - 131.41	ND	N/A
Aflatoxin B1	0.95 - 32.65	ND	
Aflatoxin B2	0.91 - 32.33	ND	
Aflatoxin G1	0.91 - 33.00	ND	
Aflatoxin G2	2.11 - 32.84	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

### Final Approval

  
Sam Smith  
09Mar2023  
07:45:00 AM MST  
PREPARED BY / DATE

  
Karen Winternheimer  
09Mar2023  
07:48:00 AM MST  
APPROVED BY / DATE


## Heavy Metals - Colorado Compliance


Test ID: T000237699

Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.04 - 4.21	ND	
Cadmium	0.04 - 4.38	ND	
Mercury	0.04 - 4.37	ND	
Lead	0.04 - 4.42	ND	

### Final Approval

  
Sam Smith  
09Mar2023  
09:56:00 AM MST  
PREPARED BY / DATE

  
Karen Winternheimer  
09Mar2023  
10:09:00 AM MST  
APPROVED BY / DATE

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## Cannabinoids - Colorado Compliance

Test ID: T000237696

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

Cannabinoid Analysis


	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.057	0.167	0.298	0.45	# of Servings = 1 Sample Weight=0.661g
Cannabichromenic Acid (CBCA)	0.052	0.153	0.402	0.61	
Cannabidiol (CBD)	0.164	0.471	8.523	12.90	
Cannabidiolic Acid (CBDA)	0.168	0.483	8.075	12.22	
Cannabidivarin (CBDV)	0.039	0.111	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.070	0.202	ND	ND	
Cannabigerol (CBG)	0.033	0.095	0.277	0.42	
Cannabigerolic Acid (CBGA)	0.136	0.396	ND	ND	
Cannabinol (CBN)	0.042	0.124	ND	ND	
Cannabinolic Acid (CBNA)	0.093	0.270	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.162	0.472	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.147	0.428	<LOQ	<LOQ	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.130	0.380	ND	ND	
Tetrahydrocannabivarin (THCV)	0.030	0.086	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.115	0.335	ND	ND	
<b>Total Cannabinoids</b>			<b>17.575</b>	<b>26.60</b>	
Total Potential THC			<LOQ	<LOQ	
Total Potential CBD			15.605	23.62	

### Final Approval



Karen Winternheimer  
09Mar2023  
12:05:00 PM MST

PREPARED BY / DATE



Sam Smith  
09Mar2023  
12:07:00 PM MST

APPROVED BY / DATE

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Various

Matrix:  
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Reported:  
**09Mar2023**

Started:  
08Mar2023

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07Mar2023

## Cannabinoids - Colorado Compliance

Test ID: T000237695

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

Cannabinoid Analysis

	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.057	0.167	0.304	0.47	# of Servings = 1 Sample Weight=0.653g
Cannabichromenic Acid (CBCA)	0.052	0.153	0.384	0.59	
Cannabidiol (CBD)	0.164	0.471	8.667	13.27	
Cannabidiolic Acid (CBDA)	0.168	0.483	8.214	12.58	
Cannabidivarin (CBDV)	0.039	0.111	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.070	0.202	ND	ND	
Cannabigerol (CBG)	0.033	0.095	0.272	0.42	
Cannabigerolic Acid (CBGA)	0.136	0.396	ND	ND	
Cannabinol (CBN)	0.042	0.124	ND	ND	
Cannabinolic Acid (CBNA)	0.093	0.270	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.162	0.472	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.147	0.428	<LOQ	<LOQ	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.130	0.380	ND	ND	
Tetrahydrocannabivarin (THCV)	0.030	0.086	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.115	0.335	ND	ND	
<b>Total Cannabinoids</b>			<b>17.841</b>	<b>27.33</b>	
Total Potential THC			<LOQ	<LOQ	
Total Potential CBD			15.871	24.30	

### Final Approval



Karen Winternheimer  
09Mar2023  
12:05:00 PM MST

PREPARED BY / DATE



Sam Smith  
09Mar2023  
12:07:00 PM MST

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## Residual Solvents - Colorado Compliance

Test ID: T000237700

Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	103 - 2066	ND	
Butanes (Isobutane, n-Butane)	214 - 4275	ND	
Methanol	63 - 1265	ND	
Pentane	105 - 2109	ND	
Ethanol	108 - 2159	ND	
Acetone	105 - 2102	ND	
Isopropyl Alcohol	108 - 2155	ND	
Hexane	6 - 126	ND	
Ethyl Acetate	104 - 2083	ND	
Benzene	0.2 - 4.1	ND	
Heptanes	103 - 2065	ND	
Toluene	19 - 376	ND	
Xylenes (m,p,o-Xylenes)	137 - 2735	ND	

## Final Approval



Karen Winternheimer  
09Mar2023  
12:38:00 PM MST

PREPARED BY / DATE



Sam Smith  
09Mar2023  
12:40:00 PM MST

APPROVED BY / DATE

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## Pesticides

Test ID: T000237697

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)
Abamectin	287 - 2706	ND
Acephate	42 - 2791	ND
Acetamiprid	42 - 2774	ND
Azoxystrobin	43 - 2724	ND
Bifenazate	45 - 2727	ND
Boscalid	50 - 2758	ND
Carbaryl	41 - 2727	ND
Carbofuran	45 - 2722	ND
Chlorantraniliprole	43 - 2784	ND
Chlorpyrifos	47 - 2894	ND
Clofentezine	279 - 2736	ND
Diazinon	281 - 2750	ND
Dichlorvos	263 - 2763	ND
Dimethoate	44 - 2762	ND
E-Fenpyroximate	288 - 2879	ND
Etofenprox	47 - 2664	ND
Etoxazole	288 - 2838	ND
Fenoxycarb	45 - 2716	ND
Fipronil	47 - 2714	ND
Flonicamid	48 - 2864	ND
Fludioxonil	310 - 2748	ND
Hexythiazox	40 - 2838	ND
Imazalil	273 - 2749	ND
Imidacloprid	44 - 2758	ND
Kresoxim-methyl	43 - 2760	ND

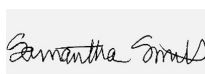
	Dynamic Range (ppb)	Result (ppb)
Malathion	287 - 2728	ND
Metalaxyl	42 - 2738	ND
Methiocarb	43 - 2757	ND
Methomyl	43 - 2799	ND
MGK 264 1	168 - 1649	ND
MGK 264 2	118 - 1130	ND
Myclobutanil	36 - 2729	ND
Naled	49 - 2737	ND
Oxamyl	42 - 2801	ND
Paclobutrazol	45 - 2726	ND
Permethrin	292 - 2741	ND
Phosmet	45 - 2684	ND
Prophos	286 - 2754	ND
Propoxur	44 - 2733	ND
Pyridaben	299 - 2820	ND
Spinosad A	36 - 2225	ND
Spinosad D	50 - 520	ND
Spiromesifen	276 - 2878	ND
Spirotetramat	284 - 2742	ND
Spiroxamine 1	19 - 1180	ND
Spiroxamine 2	23 - 1563	ND
Tebuconazole	278 - 2722	ND
Thiacloprid	45 - 2785	ND
Thiamethoxam	42 - 2797	ND
Trifloxystrobin	46 - 2732	ND

## Final Approval



Karen Winternheimer  
10Mar2023  
10:32:00 AM MST

PREPARED BY / DATE



Sam Smith  
10Mar2023  
10:35:00 AM MST

APPROVED BY / DATE

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## Microbial Contaminants - Colorado Compliance

Test ID: T000237698

Methods: TM25 (qPCR) TM24, TM26,

TM27 (Culture Plating): Microbial

(Colorado Panel)

	Method	LOD	Quantitation Range	Result	Notes
STEC	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	Free from visual mold, mildew, and foreign matter
Salmonella	TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	
Total Yeast and Mold*	TM24: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
Total Aerobic Count*	TM26: Culture Plating	10 <sup>2</sup> CFU/g	1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup>	None Detected	
Total Coliforms*	TM27: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	

## Final Approval



Brett Hudson  
10Mar2023  
04:57:00 PM MST



Brianne Maillot  
11Mar2023  
05:03:00 PM MST

PREPARED BY / DATE

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/0637ac9d-f436-4640-8261-669451354001>

## 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: 10<sup>2</sup> = 100 CFU, 10<sup>3</sup> = 1,000 CFU, 10<sup>4</sup> = 10,000 CFU, 10<sup>5</sup> = 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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