

Prepared for:  
**BLUEBIRD BOTANICALS**  
PO BOX 271724  
Louisville, CO USA 80027

## GUM


Batch ID or Lot Number: <b>231009</b>	Test, Test ID and Methods: Various	Matrix: Finished Product	Page 1 of 7
Reported: <b>20Oct2023</b>	Started: 18Oct2023	Received: 18Oct2023	


## Residual Solvents - Colorado Compliance

Test ID: T000259186  
Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	81 - 1615	ND	
Butanes (Isobutane, n-Butane)	159 - 3184	ND	
Methanol	55 - 1092	ND	
Pentane	78 - 1553	ND	
Ethanol	90 - 1795	ND	
Acetone	85 - 1703	ND	
Isopropyl Alcohol	99 - 1982	ND	
Hexane	5 - 102	ND	
Ethyl Acetate	89 - 1781	ND	
Benzene	0.2 - 3.5	ND	
Heptanes	82 - 1648	ND	
Toluene	16 - 326	ND	
Xylenes (m,p,o-Xylenes)	122 - 2439	ND	

### Final Approval

  
K Winternheimer  
20Oct2023  
09:50:00 AM MDT  
PREPARED BY / DATE

  
Samantha Smith  
Sam Smith  
20Oct2023  
10:01:00 AM MDT  
APPROVED BY / DATE

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## Microbial Contaminants - Colorado Compliance

Test ID: T000259184  
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
<i>Salmonella</i>	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  
21Oct2023  
12:59:00 PM MDT  
PREPARED BY / DATE

  
Brianne Maillot  
22Oct2023  
12:39:00 PM MDT  
APPROVED BY / DATE

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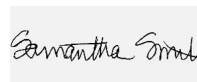
## Cannabinoids - Colorado Compliance

Test ID: T000259181  
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.333	1.122	<LOQ	<LOQ	# of Servings = 1 Sample Weight=4.2g
Cannabichromenic Acid (CBCA)	0.305	1.026	ND	ND	
Cannabidiol (CBD)	1.257	3.001	16.457	3.92	
Cannabidiolic Acid (CBDA)	1.290	3.078	ND	ND	
Cannabidivarin (CBDV)	0.297	0.710	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.538	1.284	ND	ND	
Cannabigerol (CBG)	0.189	0.637	<LOQ	<LOQ	
Cannabigerolic Acid (CBGA)	0.791	2.663	ND	ND	
Cannabinol (CBN)	0.247	0.831	ND	ND	
Cannabinolic Acid (CBNA)	0.540	1.817	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.943	3.172	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.856	2.881	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.758	2.553	ND	ND	
Tetrahydrocannabivarin (THCV)	0.172	0.579	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.669	2.251	ND	ND	
<b>Total Cannabinoids</b>			<b>16.457</b>	<b>3.92</b>	
Total Potential THC			ND	ND	
Total Potential CBD			16.457	3.92	

### Final Approval

  
Karen Winternheimer  
23Oct2023  
10:26:00 AM MDT  
PREPARED BY / DATE

  
Sam Smith  
23Oct2023  
10:28:00 AM MDT  
APPROVED BY / DATE

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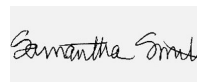
## Cannabinoids - Colorado Compliance

Test ID: T000259182  
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.323	1.087	<LOQ	<LOQ	# of Servings = 1 Sample Weight=4.2g
Cannabichromenic Acid (CBCA)	0.296	0.995	ND	ND	
Cannabidiol (CBD)	1.219	2.908	15.953	3.80	
Cannabidiolic Acid (CBDA)	1.250	2.983	ND	ND	
Cannabidivarin (CBDV)	0.288	0.688	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.521	1.244	ND	ND	
Cannabigerol (CBG)	0.183	0.617	<LOQ	<LOQ	
Cannabigerolic Acid (CBGA)	0.767	2.581	ND	ND	
Cannabinol (CBN)	0.239	0.805	ND	ND	
Cannabinolic Acid (CBNA)	0.523	1.761	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.914	3.075	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.830	2.793	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.735	2.474	ND	ND	
Tetrahydrocannabivarin (THCV)	0.167	0.562	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.648	2.182	ND	ND	
<b>Total Cannabinoids</b>			<b>15.953</b>	<b>3.80</b>	
Total Potential THC			ND	ND	
Total Potential CBD			15.953	3.80	

### Final Approval

  
Karen Winternheimer  
23Oct2023  
10:26:00 AM MDT  
PREPARED BY / DATE


  
Sam Smith  
23Oct2023  
10:28:00 AM MDT  
APPROVED BY / DATE

## Heavy Metals - Colorado Compliance

Test ID: T000259185  
Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.04 - 4.39	ND	
Cadmium	0.04 - 4.47	ND	
Mercury	0.05 - 4.62	ND	
Lead	0.05 - 4.60	ND	

### Final Approval

  
Sam Smith  
23Oct2023  
01:08:00 PM MDT  
PREPARED BY / DATE

  
Karen Winternheimer  
23Oct2023  
01:11:00 PM MDT  
APPROVED BY / DATE

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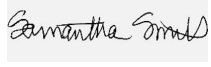
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Reported: <b>20Oct2023</b>	Started: 18Oct2023	Received: 18Oct2023	


## Mycotoxins - Colorado Compliance

Test ID: T000259187  
Methods: TM18 (UHPLC-QQQ)  
LCMS/MS: Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	2.43 - 132.19	ND	N/A
Aflatoxin B1	0.98 - 33.08	ND	
Aflatoxin B2	0.92 - 32.82	ND	
Aflatoxin G1	0.95 - 33.28	ND	
Aflatoxin G2	1.12 - 33.93	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

### Final Approval

  
PREPARED BY / DATE  
Sam Smith  
24Oct2023  
07:50:00 AM MDT

  
APPROVED BY / DATE  
Karen Winternheimer  
24Oct2023  
08:04:00 AM MDT

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## Pesticides


Test ID: T000259183

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	285 - 2621	ND		Malathion	290 - 2740	ND
Acephate	44 - 2875	ND		Metalaxyl	45 - 2686	ND
Acetamiprid	46 - 2783	ND		Methiocarb	43 - 2692	ND
Azoxystrobin	45 - 2697	ND		Methomyl	44 - 2849	ND
Bifenazate	40 - 2645	ND		MGK 264 1	177 - 1656	ND
Boscalid	37 - 2708	ND		MGK 264 2	116 - 1052	ND
Carbaryl	44 - 2656	ND		Myclobutanil	89 - 2626	ND
Carbofuran	47 - 2714	ND		Naled	48 - 2737	ND
Chlorantraniliprole	40 - 2711	ND		Oxamyl	43 - 2836	ND
Chlorpyrifos	41 - 2724	ND		Paclobutrazol	47 - 2697	ND
Clofentezine	275 - 2716	ND		Permethrin	284 - 2728	ND
Diazinon	291 - 2673	ND		Phosmet	45 - 2670	ND
Dichlorvos	336 - 2722	ND		Prophos	306 - 2666	ND
Dimethoate	44 - 2763	ND		Propoxur	44 - 2699	ND
E-Fenpyroximate	278 - 2759	ND		Pyridaben	284 - 2750	ND
Etofenprox	45 - 2697	ND		Spinosad A	36 - 2032	ND
Etoxazole	278 - 2760	ND		Spinosad D	63 - 670	ND
Fenoxycarb	17 - 2699	ND		Spiromesifen	262 - 2730	ND
Fipronil	49 - 2700	ND		Spirotetramat	295 - 2684	ND
Flonicamid	48 - 2802	ND		Spiroxamine 1	18 - 1176	ND
Fludioxonil	294 - 2624	ND		Spiroxamine 2	24 - 1486	ND
Hexythiazox	39 - 2728	ND		Tebuconazole	300 - 2719	ND
Imazalil	267 - 2714	ND		Thiacloprid	44 - 2772	ND
Imidacloprid	45 - 2904	ND		Thiamethoxam	43 - 2849	ND
Kresoxim-methyl	45 - 2652	ND		Trifloxystrobin	45 - 2697	ND

## Final Approval

  
Karen Winternheimer  
25Oct2023  
08:59:00 AM MDT  
PREPARED BY / DATE

  
Sam Smith  
25Oct2023  
09:02:00 AM MDT  
APPROVED BY / DATE

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<https://results.botanacor.com/api/v1/coas/uuid/01e3feb0-d93f-4e20-bba6-7bb9cfe7af15>

**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  $\times$  (0.877)) and Total CBD = CBD + (CBDa  $\times$  (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  $\times$  (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:  $10^2$  = 100 CFU,  $10^3$  = 1,000 CFU,  $10^4$  = 10,000 CFU,  $10^5$  = 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 A2LA Cert #: 4329.02 Chemical; 4329.03 Biological. 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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