

Prepared for:

## **BLUEBIRD BOTANICALS**

PO BOX 271724 Louisville, CO USA 80027

### 15C-30

Batch ID or Lot Number: 3310493123	Test, Test ID and Methods: Various	Matrix: Solution	Page 1 of 7
Reported:	Started:	Received:	
03May2023	02May2023	01May2023	

## **Cannabinoids - Colorado Compliance**

Test ID: T000241799

Methods: TM14 (HPLC-DAD): Potency – Standard			Result		
Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	(mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.073	0.206	1.245	1.32	Density =
Cannabichromenic Acid (CBCA)	0.066	0.188	ND	ND	0.945g/mL
Cannabidiol (CBD)	0.212	0.547	35.330	37.39	
Cannabidiolic Acid (CBDA)	0.218	0.562	ND	ND	
Cannabidivarin (CBDV)	0.050	0.129	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.091	0.234	ND	ND	
Cannabigerol (CBG)	0.041	0.117	0.432	0.46	
Cannabigerolic Acid (CBGA)	0.172	0.489	ND	ND	
Cannabinol (CBN)	0.054	0.153	0.426	0.45	
Cannabinolic Acid (CBNA)	0.118	0.334	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.205	0.583	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.186	0.529	<loq< td=""><td><loq< td=""><td></td></loq<></td></loq<>	<loq< td=""><td></td></loq<>	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.165	0.469	ND	ND	
Tetrahydrocannabivarin (THCV)	0.037	0.106	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.146	0.414	ND	ND	
Total Cannabinoids			37.433	39.62	
Total Potential THC			<loq< td=""><td><loq< td=""><td></td></loq<></td></loq<>	<loq< td=""><td></td></loq<>	
Total Potential CBD			35.330	37.39	

**Final Approval** 

PREPARED BY / DATE

Karen Winternheimer 03May2023 Winternheimer 12:19:00 PM MDT

Samantha Smot 03May2023 12:22:00 PM MDT

Sam Smith



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## **Cannabinoids - Colorado Compliance**

Test ID: T000241798

Methods: TM14 (HPLC-DAD): Potency – Standard			Result		
Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	(mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.070	0.198	1.263	1.34	Density =
Cannabichromenic Acid (CBCA)	0.064	0.181	ND	ND	0.945g/mL
Cannabidiol (CBD)	0.204	0.527	35.896	37.99	
Cannabidiolic Acid (CBDA)	0.209	0.541	ND	ND	
Cannabidivarin (CBDV)	0.048	0.125	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.087	0.226	ND	ND	
Cannabigerol (CBG)	0.040	0.113	0.430	0.46	
Cannabigerolic Acid (CBGA)	0.166	0.471	ND	ND	
Cannabinol (CBN)	0.052	0.147	0.425	0.45	
Cannabinolic Acid (CBNA)	0.113	0.321	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.198	0.561	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.180	0.509	<loq< td=""><td><loq< td=""><td></td></loq<></td></loq<>	<loq< td=""><td></td></loq<>	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.159	0.451	ND	ND	
Tetrahydrocannabivarin (THCV)	0.036	0.102	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.140	0.398	ND	ND	
Total Cannabinoids			38.014	40.24	
Total Potential THC			<loq< td=""><td><loq< td=""><td></td></loq<></td></loq<>	<loq< td=""><td></td></loq<>	
Total Potential CBD			35.896	37.99	

**Final Approval** 

03May2023 12:19:00 PM MDT PREPARED BY / DATE

Karen Winternheimer 03May2023

Samantha Smot 03May2023 12:22:00 PM MDT

Sam Smith



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## **Residual Solvents -Colorado Compliance**

Test ID: T000241803

Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	96 - 1922	ND	
Butanes (Isobutane, n-Butane)	200 - 4008	ND	
Methanol	60 - 1208	ND	
Pentane	103 - 2059	ND	
Ethanol	104 - 2081	ND	
Acetone	104 - 2081	ND	
Isopropyl Alcohol	105 - 2092	181	
Hexane	6 - 123	ND	
Ethyl Acetate	103 - 2058	ND	
Benzene	0.2 - 3.7	ND	
Heptanes	104 - 2090	ND	
Toluene	18 - 369	ND	
Xylenes (m,p,o-Xylenes)	132 - 2634	ND	

**Final Approval** 

PREPARED BY / DATE

Karen Winternheimer 04May2023 MENHUMB 10:29:00 AM MDT

Samantha Smot 04May2023 10:31:00 AM MDT

Sam Smith



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## **Mycotoxins - Colorado Compliance**

Test ID: T000241804

Methods: TM18 (UHPLC-QQQ

LCMS/MS): Mycotoxins	<b>Dynamic Range</b> (ppb)	Result (ppb)	Notes
Ochratoxin A	2.55 - 130.78	ND	N/A
Aflatoxin B1	1.03 - 31.39	ND	
Aflatoxin B2	0.96 - 31.33	ND	
Aflatoxin G1	1.03 - 31.42	ND	
Aflatoxin G2	0.96 - 31.17	ND	
Total Aflatoxins (B1, B2, G1, ar	nd G2)	ND	

#### **Final Approval**

Sawantha Small 04May2023 10:53:00 AM MDT

Sam Smith

PREPARED BY / DATE

Wintersheumer 11:23:00 AM MDT

APPROVED BY / DATE

Karen Winternheimer 04May2023



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## **BLUEBIRD BOTANICALS**

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#### 15C-30

Batch ID or Lot Number: Test, Test ID and Methods: Matrix: Page 5 of 7

3310493123 Various Solution

Reported: Started: Received: 02May2023 01May2023

#### **Pesticides**

Test ID: T000241800 Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)
Abamectin	357 - 3481	ND
Acephate	68 - 2750	ND
Acetamiprid	46 - 2854	ND
Azoxystrobin	44 - 2716	ND
Bifenazate	37 - 2690	ND
Boscalid	47 - 2701	ND
Carbaryl	39 - 2777	ND
Carbofuran	44 - 2766	ND
Chlorantraniliprole	48 - 2676	ND
Chlorpyrifos	38 - 2918	ND
Clofentezine	297 - 2744	ND
Diazinon	282 - 2764	ND
Dichlorvos	369 - 2754	ND
Dimethoate	51 - 2873	ND
E-Fenpyroximate	291 - 2742	ND
Etofenprox	41 - 2846	ND
Etoxazole	284 - 2909	ND
Fenoxycarb	2 - 2719	ND
Fipronil	56 - 2573	ND
Flonicamid	45 - 2849	ND
Fludioxonil	313 - 2758	ND
Hexythiazox	40 - 2748	ND
Imazalil	284 - 2789	ND
Imidacloprid	37 - 2793	ND
Kresoxim-methyl	39 - 2799	ND

	<b>Dynamic Range</b> (ppb)	Result (ppb)
Malathion	300 - 2788	ND
Metalaxyl	44 - 2763	ND
Methiocarb	50 - 2812	ND
Methomyl	49 - 2924	ND
MGK 264 1	189 - 1720	ND
MGK 264 2	122 - 1074	ND
Myclobutanil	49 - 2745	ND
Naled	47 - 2797	ND
Oxamyl	50 - 2938	ND
Paclobutrazol	38 - 2635	ND
Permethrin	279 - 2800	ND
Phosmet	42 - 2709	ND
Prophos	290 - 2836	ND
Propoxur	43 - 2770	ND
Pyridaben	286 - 2813	ND
Spinosad A	32 - 2061	ND
Spinosad D	64 - 700	ND
Spiromesifen	316 - 2739	ND
Spirotetramat	285 - 2660	ND
Spiroxamine 1	20 - 1229	ND
Spiroxamine 2	27 - 1592	ND
Tebuconazole	297 - 2618	ND
Thiacloprid	46 - 2805	ND
Thiamethoxam	42 - 2840	ND
Trifloxystrobin	44 - 2739	ND

#### **Final Approval**

PREPARED BY / DATE

Karen Winternheimer 05May2023 12:31:00 PM MDT

Somantha Smoll

Sam Smith 05May2023 12:33:00 PM MDT



from visual mold, mildew, and

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## **Heavy Metals -Colorado Compliance**

Test ID: T000241802

Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	
Arsenic	0.05 - 4.82	ND	
Cadmium	0.05 - 4.65	ND	
Mercury	0.05 - 4.67	ND	
Lead	0.01 - 1.47	ND	

#### **Final Approval**

Gamantha Grand 05May2023 PREPARED BY / DATE

Sam Smith 12:10:00 PM MDT Menheumer 12:14:00 PM MDT

Karen Winternheimer 05May2023

#### **Microbial**

## **Contaminants -**

## **Colorado Compliance**

Test ID: T000241801

Methods: TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial

		Quantitation		
Method	LOD	Range	Result	Notes
TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	Free from visua
TM25: PCR	10 <sup>0</sup> CFU/25g	NA	Absent	foreign matter
ΓM24: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
ΓM26: Culture Plating	10 <sup>2</sup> CFU/g	1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup>	None Detected	
ΓM27: Culture Plating	10 <sup>1</sup> CFU/g	1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	None Detected	
T	M25: PCR M25: PCR M24: Culture Plating M26: Culture Plating M27: Culture	M25: PCR 10 <sup>0</sup> CFU/25g  M25: PCR 10 <sup>0</sup> CFU/25g  M24: Culture 10 <sup>1</sup> CFU/g  M26: Culture 10 <sup>2</sup> CFU/g  M27: Culture 10 <sup>1</sup> CFU/g	M25: PCR 10 <sup>0</sup> CFU/25g NA  M25: PCR 10 <sup>0</sup> CFU/25g NA  M24: Culture lating 10 <sup>1</sup> CFU/g 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup> M26: Culture lating 10 <sup>2</sup> CFU/g 1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup> M27: Culture 10 <sup>1</sup> CFU/g 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup>	M25: PCR 10 <sup>0</sup> CFU/25g NA Absent  M25: PCR 10 <sup>0</sup> CFU/25g NA Absent  M24: Culture Plating 10 <sup>1</sup> CFU/g 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup> None Detected  M26: Culture Plating 10 <sup>2</sup> CFU/g 1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup> None Detected  M27: Culture 10 <sup>1</sup> CFU/g 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup> None Detected

**Final Approval** 

Eden Thompson

Eden Thompson-Wright 05May2023 02:00:00 PM MDT

**Brett Hudson** 05May2023 04:46:00 PM MDT

PREPARED BY / DATE APPROVED BY / DATE



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https://results.botanacor.com/api/v1/coas/uuid/b8f56d5b-bc35-48f7-905e-23ce0d43bf8e

#### 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: 10^2 = 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 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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