

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

10CL-60

Batch ID or Lot Number: 311112144	Test, Test ID and Methods: Various	Matrix: Solution	Page 1 of 6
Reported: 03May2023	Started: 02May2023	Received: 01May2023	


Cannabinoids - Colorado Compliance

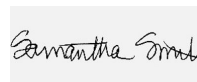
Test ID: T000241819

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

Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.071	0.202	0.805	0.85	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.065	0.185	ND	ND	
Cannabidiol (CBD)	0.208	0.538	22.643	23.96	
Cannabidiolic Acid (CBDA)	0.214	0.551	<LOQ	<LOQ	
Cannabidivarin (CBDV)	0.049	0.127	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.089	0.230	ND	ND	
Cannabigerol (CBG)	0.040	0.115	0.452	0.48	
Cannabigerolic Acid (CBGA)	0.169	0.480	ND	ND	
Cannabinol (CBN)	0.053	0.150	ND	ND	
Cannabinolic Acid (CBNA)	0.115	0.328	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.202	0.572	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.183	0.520	0.887	0.94	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.162	0.460	ND	ND	
Tetrahydrocannabivarin (THCV)	0.037	0.104	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.143	0.406	ND	ND	
Total Cannabinoids			24.787	26.23	
Total Potential THC			0.887	0.94	
Total Potential CBD			22.643	23.96	

Final Approval


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


Sam Smith
03May2023
12:22:00 PM MDT
APPROVED BY / DATE

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Cannabinoids - Colorado Compliance

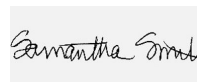
Test ID: T000241820

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

Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.073	0.206	0.794	0.84	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.066	0.188	ND	ND	
Cannabidiol (CBD)	0.212	0.547	22.348	23.65	
Cannabidiolic Acid (CBDA)	0.218	0.561	<LOQ	<LOQ	
Cannabidivarin (CBDV)	0.050	0.129	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.091	0.234	ND	ND	
Cannabigerol (CBG)	0.041	0.117	0.459	0.49	
Cannabigerolic Acid (CBGA)	0.172	0.489	ND	ND	
Cannabinol (CBN)	0.054	0.153	ND	ND	
Cannabinolic Acid (CBNA)	0.118	0.334	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.205	0.582	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.186	0.529	0.868	0.92	
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	0.413	ND	ND	
Total Cannabinoids			24.469	25.90	
Total Potential THC			0.868	0.92	
Total Potential CBD			22.348	23.65	

Final Approval


Karen Winternheimer
03May2023
12:19:00 PM MDT
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Sam Smith
03May2023
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Residual Solvents - Colorado Compliance

Test ID: T000241824
Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	98 - 1970	ND	
Butanes (Isobutane, n-Butane)	205 - 4108	ND	
Methanol	62 - 1239	ND	
Pentane	106 - 2111	ND	
Ethanol	107 - 2133	ND	
Acetone	107 - 2133	ND	
Isopropyl Alcohol	107 - 2144	ND	
Hexane	6 - 126	ND	
Ethyl Acetate	105 - 2110	ND	
Benzene	0.2 - 3.8	ND	
Heptanes	107 - 2142	ND	
Toluene	19 - 378	ND	
Xylenes (m,p,o-Xylenes)	135 - 2700	ND	

Final Approval


Karen Winternheimer
04May2023
10:29:00 AM MDT
PREPARED BY / DATE


Sam Smith
04May2023
10:31:00 AM MDT
APPROVED BY / DATE

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Mycotoxins - Colorado Compliance

Test ID: T000241825
Methods: TM18 (UHPLC-QQQ)
LCMS/MS: Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	2.26 - 116.03	ND	N/A
Aflatoxin B1	0.91 - 27.85	ND	
Aflatoxin B2	0.85 - 27.80	ND	
Aflatoxin G1	0.91 - 27.88	ND	
Aflatoxin G2	0.85 - 27.66	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval


Samantha Smith
04May2023
10:53:00 AM MDT
PREPARED BY / DATE



Karen Winternheimer
04May2023
11:23:00 AM MDT
APPROVED BY / DATE


Microbial Contaminants - Colorado Compliance

Test ID: T000241822
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
Salmonella	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


Eden Thompson-Wright
05May2023
02:00:00 PM MDT
PREPARED BY / DATE


Brett Hudson
05May2023
04:46:00 PM MDT
APPROVED BY / DATE

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Pesticides


Test ID: T000241821

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	357 - 3481	ND		Malathion	300 - 2788	ND
Acephate	68 - 2750	ND		Metalaxyl	44 - 2763	ND
Acetamiprid	46 - 2854	ND		Methiocarb	50 - 2812	ND
Azoxystrobin	44 - 2716	ND		Methomyl	49 - 2924	ND
Bifenazate	37 - 2690	ND		MGK 264 1	189 - 1720	ND
Boscalid	47 - 2701	ND		MGK 264 2	122 - 1074	ND
Carbaryl	39 - 2777	ND		Myclobutanil	49 - 2745	ND
Carbofuran	44 - 2766	ND		Naled	47 - 2797	ND
Chlorantraniliprole	48 - 2676	ND		Oxamyl	50 - 2938	ND
Chlorpyrifos	38 - 2918	ND		Paclobutrazol	38 - 2635	ND
Clofentezine	297 - 2744	ND		Permethrin	279 - 2800	ND
Diazinon	282 - 2764	ND		Phosmet	42 - 2709	ND
Dichlorvos	369 - 2754	ND		Prophos	290 - 2836	ND
Dimethoate	51 - 2873	ND		Propoxur	43 - 2770	ND
E-Fenpyroximate	291 - 2742	ND		Pyridaben	286 - 2813	ND
Etofenprox	41 - 2846	ND		Spinosad A	32 - 2061	ND
Etoxazole	284 - 2909	ND		Spinosad D	64 - 700	ND
Fenoxycarb	2 - 2719	ND		Spiromesifen	316 - 2739	ND
Fipronil	56 - 2573	ND		Spirotetramat	285 - 2660	ND
Flonicamid	45 - 2849	ND		Spiroxamine 1	20 - 1229	ND
Fludioxonil	313 - 2758	ND		Spiroxamine 2	27 - 1592	ND
Hexythiazox	40 - 2748	ND		Tebuconazole	297 - 2618	ND
Imazalil	284 - 2789	ND		Thiacloprid	46 - 2805	ND
Imidacloprid	37 - 2793	ND		Thiamethoxam	42 - 2840	ND
Kresoxim-methyl	39 - 2799	ND		Trifloxystrobin	44 - 2739	ND

Final Approval


Karen Winternheimer
05May2023
12:31:00 PM MDT
PREPARED BY / DATE


Sam Smith
05May2023
12:33:00 PM MDT
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Heavy Metals - Colorado Compliance

Test ID: T000241823
Methods: TM19 (ICP-MS): Heavy

Metals	Dynamic Range (ppm)	Result (ppm)	Notes
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


PREPARED BY / DATE
Sam Smith
05May2023
12:10:00 PM MDT


APPROVED BY / DATE
Karen Winternheimer
05May2023
12:14:00 PM MDT



<https://results.botanacor.com/api/v1/coas/uuid/cec4bed5-1c68-4c72-b068-c45f3e937838>

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 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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