

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

15CO-30

Batch ID or Lot Number: 3310496157	Test, Test ID and Methods: Various	Matrix: Concentrate	Page 1 of 6
Reported: 09May2023	Started: 09May2023	Received: 08May2023	


Residual Solvents - Colorado Compliance

Test ID: T000242991


Methods: TM04 (GC-MS): Residual

Solvents	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	96 - 1917	ND	
Butanes (Isobutane, n-Butane)	205 - 4096	ND	
Methanol	62 - 1249	ND	
Pentane	111 - 2215	ND	
Ethanol	104 - 2076	ND	
Acetone	100 - 2001	ND	
Isopropyl Alcohol	100 - 2002	ND	
Hexane	6 - 127	ND	
Ethyl Acetate	101 - 2013	ND	
Benzene	0.2 - 4.0	ND	
Heptanes	101 - 2015	ND	
Toluene	18 - 366	ND	
Xylenes (m,p,o-Xylenes)	133 - 2653	ND	

Final Approval


Sam Smith
09May2023
03:33:00 PM MDT

PREPARED BY / DATE


Karen Winternheimer
09May2023
03:33:00 PM MDT

APPROVED BY / DATE

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Mycotoxins - Colorado Compliance

Test ID: T000242992
Methods: TM18 (UHPLC-QQQ)
LCMS/MS: Mycotoxins

	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	3.66 - 123.38	ND	N/A
Aflatoxin B1	1.03 - 32.41	ND	
Aflatoxin B2	0.96 - 32.21	ND	
Aflatoxin G1	1.16 - 32.12	ND	
Aflatoxin G2	1.13 - 32.47	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval


Sam Smith
10May2023
03:13:00 PM MDT
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Karen Winternheimer
10May2023
03:15:00 PM MDT
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Heavy Metals - Colorado Compliance

Test ID: T000242990
Methods: TM19 (ICP-MS): Heavy Metals

	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.05 - 4.62	ND	
Cadmium	0.05 - 4.93	ND	
Mercury	0.05 - 4.90	ND	
Lead	0.01 - 1.41	ND	

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Sam Smith
10May2023
01:28:00 PM MDT
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Karen Winternheimer
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Cannabinoids - Colorado Compliance


Test ID: T000242987

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

Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.066	0.193	0.715	0.76	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.061	0.177	0.618	0.65	
Cannabidiol (CBD)	0.191	0.508	15.431	16.33	
Cannabidiolic Acid (CBDA)	0.196	0.521	14.657	15.51	
Cannabidivarin (CBDV)	0.045	0.120	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.082	0.217	<LOQ	<LOQ	
Cannabigerol (CBG)	0.038	0.110	0.375	0.40	
Cannabigerolic Acid (CBGA)	0.157	0.459	ND	ND	
Cannabinol (CBN)	0.049	0.143	ND	ND	
Cannabinolic Acid (CBNA)	0.107	0.313	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.187	0.547	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.170	0.496	0.699	0.74	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.151	0.440	<LOQ	<LOQ	
Tetrahydrocannabivarin (THCV)	0.034	0.100	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.133	0.388	ND	ND	
Total Cannabinoids			32.495	34.39	
Total Potential THC			0.926	0.98	
Total Potential CBD			28.285	29.93	

Final Approval


Sam Smith
11May2023
08:00:00 AM MDT
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Karen Winternheimer
11May2023
08:07:00 AM MDT
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Cannabinoids - Colorado Compliance


Test ID: T000242986

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

Cannabinoid Analysis	LOD (mg/mL)	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)	Notes
Cannabichromene (CBC)	0.072	0.210	0.709	0.75	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.066	0.192	0.622	0.66	
Cannabidiol (CBD)	0.207	0.551	15.274	16.16	
Cannabidiolic Acid (CBDA)	0.213	0.565	14.514	15.36	
Cannabidivarin (CBDV)	0.049	0.130	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.089	0.236	<LOQ	<LOQ	
Cannabigerol (CBG)	0.041	0.119	0.367	0.39	
Cannabigerolic Acid (CBGA)	0.170	0.498	ND	ND	
Cannabinol (CBN)	0.053	0.155	ND	ND	
Cannabinolic Acid (CBNA)	0.116	0.339	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.203	0.593	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.184	0.538	0.700	0.74	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.163	0.477	<LOQ	<LOQ	
Tetrahydrocannabivarin (THCV)	0.037	0.108	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.144	0.421	ND	ND	
Total Cannabinoids			32.186	34.06	
Total Potential THC			0.927	0.98	
Total Potential CBD			28.003	29.63	

Final Approval


Sam Smith
11May2023
08:00:00 AM MDT
PREPARED BY / DATE


Karen Winternheimer
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Pesticides


Test ID: T000242988

Methods: TM17

(LC-QQ LC MS/MS)	Dynamic Range (ppb)	Result (ppb)		Dynamic Range (ppb)	Result (ppb)	
Abamectin	378 - 2769	ND		Malathion	287 - 2799	ND
Acephate	43 - 2754	ND		Metalaxyl	38 - 2811	ND
Acetamiprid	40 - 2768	ND		Methiocarb	44 - 2678	ND
Azoxystrobin	42 - 2784	ND		Methomyl	40 - 2805	ND
Bifenazate	40 - 2782	ND		MGK 264 1	168 - 1670	ND
Boscalid	42 - 2628	ND		MGK 264 2	112 - 1086	ND
Carbaryl	43 - 2760	ND		Myclobutanil	40 - 2671	ND
Carbofuran	43 - 2732	ND		Naled	45 - 2772	ND
Chlorantraniliprole	43 - 2646	ND		Oxamyl	41 - 2799	ND
Chlorpyrifos	44 - 2784	ND		Paclobutrazol	43 - 2746	ND
Clofentezine	275 - 2759	ND		Permethrin	293 - 2838	ND
Diazinon	292 - 2802	ND		Phosmet	40 - 2782	ND
Dichlorvos	285 - 2827	ND		Prophos	299 - 2688	ND
Dimethoate	40 - 2771	ND		Propoxur	43 - 2750	ND
E-Fenpyroximate	306 - 2809	ND		Pyridaben	316 - 2744	ND
Etofenprox	42 - 2769	ND		Spinosad A	32 - 2092	ND
Etoxazole	318 - 2742	ND		Spinosad D	66 - 670	ND
Fenoxycarb	28 - 2816	ND		Spiromesifen	293 - 2785	ND
Fipronil	66 - 2797	ND		Spirotetramat	287 - 2858	ND
Flonicamid	46 - 2843	ND		Spiroxamine 1	18 - 1197	ND
Fludioxonil	302 - 2682	ND		Spiroxamine 2	25 - 1510	ND
Hexythiazox	41 - 2779	ND		Tebuconazole	288 - 2788	ND
Imazalil	277 - 2819	ND		Thiacloprid	41 - 2742	ND
Imidacloprid	45 - 2816	ND		Thiamethoxam	39 - 2800	ND
Kresoxim-methyl	38 - 2811	ND		Trifloxystrobin	42 - 2727	ND

Final Approval


Karen Winternheimer
11May2023
10:16:00 AM MDT
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Sam Smith
11May2023
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Microbial Contaminants - Colorado Compliance

Test ID: T000242989
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
<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



Brett Hudson
11May2023
01:49:00 PM MDT

PREPARED BY / DATE



Eden Thompson-Wright
11May2023
01:55:00 PM MDT

APPROVED BY / DATE



<https://results.botanacor.com/api/v1/coas/uuid/894dafd8-5b1e-4aa9-81ee-29416ebadf0>

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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