SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

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

TF-30

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 1 of 7
3310491075	Various	Solution	
Reported:	**Started:**	**Received:**	
03May2023	02May2023	01May2023	

Cannabinoids - Colorado Compliance

Test ID: T000241785
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	0.203	ND	ND	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.066	0.186	ND	ND	
Cannabidiol (CBD)	0.209	0.540	52.050	55.08	
Cannabidiolic Acid (CBDA)	0.215	0.554	ND	ND	
Cannabidivarin (CBDV)	0.050	0.128	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.090	0.231	ND	ND	
Cannabigerol (CBG)	0.041	0.115	ND	ND	
Cannabigerolic Acid (CBGA)	0.170	0.483	ND	ND	
Cannabinol (CBN)	0.053	0.151	ND	ND	
Cannabinolic Acid (CBNA)	0.116	0.329	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.203	0.575	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.184	0.522	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.163	0.463	ND	ND	
Tetrahydrocannabivarin (THCV)	0.037	0.105	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.144	0.408	ND	ND	
Total Cannabinoids			**52.050**	**55.08**	
Total Potential THC			ND	ND	
Total Potential CBD			52.050	55.08	

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: T000241784
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	**LOD** (mg/mL)	**LOQ** (mg/mL)	**Result** (mg/mL)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.070	0.198	ND	ND	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.064	0.181	ND	ND	
Cannabidiol (CBD)	0.203	0.525	52.711	55.78	
Cannabidiolic Acid (CBDA)	0.209	0.539	ND	ND	
Cannabidivarin (CBDV)	0.048	0.124	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.087	0.225	ND	ND	
Cannabigerol (CBG)	0.040	0.112	ND	ND	
Cannabigerolic Acid (CBGA)	0.165	0.469	ND	ND	
Cannabinol (CBN)	0.052	0.146	ND	ND	
Cannabinolic Acid (CBNA)	0.113	0.320	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.197	0.559	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.179	0.508	ND	ND	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.158	0.450	ND	ND	
Tetrahydrocannabivarin (THCV)	0.036	0.102	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.140	0.397	ND	ND	
Total Cannabinoids			**52.711**	**55.78**	
Total Potential THC			ND	ND	
Total Potential CBD			52.711	55.78	

Final Approval

Karen Winternheimer
03May2023
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Sam Smith
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Mycotoxins - Colorado Compliance

Test ID: T000241790
Methods: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	**Result** (ppb)	**Notes**
Ochratoxin A	2.69 - 137.80	ND	N/A
Aflatoxin B1	1.08 - 33.08	ND	
Aflatoxin B2	1.02 - 33.01	ND	
Aflatoxin G1	1.08 - 33.11	ND	
Aflatoxin G2	1.02 - 32.85	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

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

Karen Winternheimer
04May2023
11:23:00 AM MDT
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Residual Solvents - Colorado Compliance

Test ID: T000241789
Methods: TM04 (GC-MS): Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	93 - 1853	ND	
Butanes (Isobutane, n-Butane)	193 - 3865	ND	
Methanol	58 - 1165	ND	
Pentane	99 - 1986	ND	
Ethanol	100 - 2007	ND	
Acetone	100 - 2007	ND	
Isopropyl Alcohol	101 - 2017	ND	
Hexane	6 - 118	ND	
Ethyl Acetate	99 - 1985	ND	
Benzene	0.2 - 3.6	ND	
Heptanes	101 - 2016	ND	
Toluene	18 - 356	ND	
Xylenes (m,p,o-Xylenes)	127 - 2540	ND	

Final Approval

Karen Winternheimer
04May2023
10:29:00 AM MDT
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Sam Smith
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Microbial Contaminants - Colorado Compliance

Test ID: T000241787
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: T000241786
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
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Sam Smith
05May2023
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Heavy Metals - Colorado Compliance

Test ID: T000241788
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

Sam Smith
05May2023
12:10:00 PM MDT
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Karen Winternheimer
05May2023
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https://results.botanacor.com/api/v1/coas/uuid/479e7322-71b8-4414-9ed4-515369e34ebb

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.

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