SC Labs®
Formerly Botanacor Labs

CERTIFICATE OF ANALYSIS

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

10CL-60

Batch ID or Lot Number:	Test, Test ID and Methods:	Matrix:	Page 1 of 7
411112240	Various	Finished Product	
Reported:	Started:	Received:	
12Aug2024	09Aug2024	08Aug2024	

Pesticides

Test ID: T000287693
Methods: TM17

(LC-QQ LC MS/MS)	**Dynamic Range** (ppb)	**Result** (ppb)
Abamectin	480 - 2797	ND
Acephate	48 - 2753	ND
Acetamiprid	46 - 2720	ND
Azoxystrobin	45 - 2696	ND
Bifenazate	47 - 2727	ND
Boscalid	53 - 2670	ND
Carbaryl	44 - 2690	ND
Carbofuran	49 - 2697	ND
Chlorantraniliprole	46 - 2696	ND
Chlorpyrifos	76 - 2706	ND
Clofentezine	291 - 2720	ND
Diazinon	301 - 2720	ND
Dichlorvos	272 - 2784	ND
Dimethoate	47 - 2747	ND
E-Fenpyroximate	287 - 2682	ND
Etofenprox	46 - 2668	ND
Etoxazole	279 - 2598	ND
Fenoxycarb	41 - 2711	ND
Fipronil	60 - 2725	ND
Flonicamid	48 - 2791	ND
Fludioxonil	289 - 2690	ND
Hexythiazox	50 - 2689	ND
Imazalil	292 - 2713	ND
Imidacloprid	43 - 2771	ND
Kresoxim-methyl	56 - 2736	ND

	Dynamic Range (ppb)	**Result** (ppb)
Malathion	289 - 2707	ND
Metalaxyl	47 - 2720	ND
Methiocarb	48 - 2697	ND
Methomyl	47 - 2796	ND
MGK 264 1	160 - 1603	ND
MGK 264 2	119 - 1077	ND
Myclobutanil	52 - 2686	ND
Naled	55 - 2690	ND
Oxamyl	46 - 2791	ND
Paclobutrazol	47 - 2691	ND
Permethrin	282 - 2703	ND
Phosmet	49 - 2556	ND
Prophos	258 - 2716	ND
Propoxur	48 - 2687	ND
Pyridaben	286 - 2700	ND
Spinosad A	37 - 2062	ND
Spinosad D	68 - 649	ND
Spiromesifen	270 - 2649	ND
Spirotetramat	304 - 2732	ND
Spiroxamine 1	18 - 1014	ND
Spiroxamine 2	28 - 1570	ND
Tebuconazole	306 - 2704	ND
Thiacloprid	46 - 2774	ND
Thiamethoxam	46 - 2784	ND
Trifloxystrobin	48 - 2678	ND

Final Approval

Karen Winternheimer
12Aug2024
08:06:00 AM MDT
PREPARED BY / DATE

Sam Smith
12Aug2024
08:10:00 AM MDT
APPROVED BY / DATE

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Heavy Metals - Colorado Compliance

Test ID: T000287695
Methods: TM19 (ICP-MS): Heavy Metals

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Arsenic	0.05 - 4.58	ND	
Cadmium	0.05 - 4.65	ND	
Mercury	0.05 - 4.63	ND	
Lead	0.05 - 4.71	ND	

Final Approval

Judith Marquez
13Aug2024
10:42:00 AM MDT
PREPARED BY / DATE

Sam Smith
13Aug2024
11:56:00 AM MDT
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Residual Solvents - Colorado Compliance

Test ID: T000287696
Methods: TM04 (GC-MS): Residual Solvents

	Dynamic Range (ppm)	**Result** (ppm)	**Notes**
Propane	87 - 1735	ND	
Butanes (Isobutane, n-Butane)	174 - 3480	ND	
Methanol	62 - 1241	ND	
Pentane	90 - 1803	ND	
Ethanol	92 - 1836	ND	
Acetone	100 - 1998	ND	
Isopropyl Alcohol	102 - 2041	ND	
Hexane	6 - 123	ND	
Ethyl Acetate	102 - 2044	ND	
Benzene	0.2 - 4.1	ND	
Heptanes	97 - 1936	ND	
Toluene	18 - 367	ND	
Xylenes (m,p,o-Xylenes)	129 - 2586	ND	

Final Approval

Karen Winternheimer
14Aug2024
08:44:00 AM MDT
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Sam Smith
14Aug2024
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Reported:	**Started:**	**Received:**	
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Cannabinoids - Colorado Compliance

Test ID: T000287692
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	**LOD** (mg/mL)	**LOQ** (mg/mL)	**Result** (mg/mL)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.049	0.170	0.660	0.70	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.044	0.155	ND	ND	
Cannabidiol (CBD)	0.222	0.517	20.790	22.00	
Cannabidiolic Acid (CBDA)	0.227	0.531	<LOQ	<LOQ	
Cannabidivarin (CBDV)	0.052	0.122	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.095	0.221	ND	ND	
Cannabigerol (CBG)	0.028	0.096	0.604	0.64	
Cannabigerolic Acid (CBGA)	0.115	0.402	ND	ND	
Cannabinol (CBN)	0.036	0.126	ND	ND	
Cannabinolic Acid (CBNA)	0.079	0.275	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.137	0.479	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.125	0.435	0.524	0.55	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.110	0.386	ND	ND	
Tetrahydrocannabivarin (THCV)	0.025	0.088	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.097	0.340	ND	ND	
Total Cannabinoids			**22.578**	**23.89**	
Total Potential THC			0.524	0.55	
Total Potential CBD			20.790	22.00	

Final Approval

Samantha Smith
Sam Smith
14Aug2024
12:34:00 PM MDT
PREPARED BY / DATE

K Winternheimer
Karen Winternheimer
14Aug2024
12:37:00 PM MDT
APPROVED BY / DATE

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411112240	Various	Finished Product	
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12Aug2024	09Aug2024	08Aug2024	

Cannabinoids - Colorado Compliance

Test ID: T000287691
Methods: TM14 (HPLC-DAD): Potency – Standard

Cannabinoid Analysis	**LOD** (mg/mL)	**LOQ** (mg/mL)	**Result** (mg/mL)	**Result** (mg/g)	**Notes**
Cannabichromene (CBC)	0.050	0.175	0.660	0.70	Density = 0.945g/mL
Cannabichromenic Acid (CBCA)	0.046	0.160	ND	ND	
Cannabidiol (CBD)	0.229	0.534	21.662	22.92	
Cannabidiolic Acid (CBDA)	0.234	0.547	<LOQ	<LOQ	
Cannabidivarin (CBDV)	0.054	0.126	<LOQ	<LOQ	
Cannabidivarinic Acid (CBDVA)	0.098	0.228	ND	ND	
Cannabigerol (CBG)	0.028	0.099	ND	ND	
Cannabigerolic Acid (CBGA)	0.119	0.415	ND	ND	
Cannabinol (CBN)	0.037	0.130	ND	ND	
Cannabinolic Acid (CBNA)	0.081	0.283	ND	ND	
Delta 8-Tetrahydrocannabinol (Delta 8-THC)	0.142	0.495	ND	ND	
Delta 9-Tetrahydrocannabinol (Delta 9-THC)	0.129	0.449	0.536	0.57	
Delta 9-Tetrahydrocannabinolic Acid (THCA-A)	0.114	0.398	ND	ND	
Tetrahydrocannabivarin (THCV)	0.026	0.090	ND	ND	
Tetrahydrocannabivarinic Acid (THCVA)	0.100	0.351	ND	ND	
Total Cannabinoids			**22.858**	**24.19**	
Total Potential THC			0.536	0.57	
Total Potential CBD			21.662	22.92	

Final Approval

Sam Smith
14Aug2024
12:34:00 PM MDT
PREPARED BY / DATE

Karen Winternheimer
14Aug2024
12:37:00 PM MDT
APPROVED BY / DATE

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411112240	Various	Finished Product	
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Mycotoxins - Colorado Compliance

Test ID: T000287697
Methods: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins

	Dynamic Range (ppb)	**Result** (ppb)	**Notes**
Ochratoxin A	1.35 - 126.18	ND	N/A
Aflatoxin B1	1.00 - 32.65	ND	
Aflatoxin B2	1.16 - 32.43	ND	
Aflatoxin G1	1.29 - 32.33	ND	
Aflatoxin G2	1.99 - 32.36	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Final Approval

Sam Smith
15Aug2024
11:25:00 AM MDT
PREPARED BY / DATE

Karen Winternheimer
15Aug2024
11:26:00 AM MDT
APPROVED BY / DATE

Microbial Contaminants - Colorado Compliance

Test ID: T000287694
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

Nora Langer
12Aug2024
04:38:00 PM MDT
PREPARED BY / DATE

Brett Hudson
20Aug2024
03:17:00 PM MDT
APPROVED BY / DATE

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https://results.botanacor.com/api/v1/coas/uuid/b8ac0bd7-40f5-4027-b216-c350aebc655b

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.

Cert #4329.02
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