

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

**10CO-60**

|                                              |                                       |                        |             |
|----------------------------------------------|---------------------------------------|------------------------|-------------|
| Batch ID or Lot Number:<br><b>3310494152</b> | Test, Test ID and Methods:<br>Various | Matrix:<br>Solution    | Page 1 of 6 |
| Reported:<br><b>09May2023</b>                | Started:<br>08May2023                 | Received:<br>08May2023 |             |


## Cannabinoids - Colorado Compliance


Test ID: T000242980

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

| Cannabinoid Analysis                         | LOD (mg/mL) | LOQ (mg/mL) | Result (mg/mL) | Result (mg/g) | Notes               |
|----------------------------------------------|-------------|-------------|----------------|---------------|---------------------|
| Cannabichromene (CBC)                        | 0.063       | 0.185       | 0.468          | 0.50          | Density = 0.945g/mL |
| Cannabichromenic Acid (CBCA)                 | 0.058       | 0.169       | 0.356          | 0.38          |                     |
| Cannabidiol (CBD)                            | 0.182       | 0.487       | 11.030         | 11.67         |                     |
| Cannabidiolic Acid (CBDA)                    | 0.187       | 0.499       | 8.569          | 9.07          |                     |
| Cannabidivarin (CBDV)                        | 0.043       | 0.115       | ND             | ND            |                     |
| Cannabidivarinic Acid (CBDVA)                | 0.078       | 0.208       | ND             | ND            |                     |
| Cannabigerol (CBG)                           | 0.036       | 0.105       | 0.281          | 0.30          |                     |
| Cannabigerolic Acid (CBGA)                   | 0.150       | 0.439       | ND             | ND            |                     |
| Cannabinol (CBN)                             | 0.047       | 0.137       | ND             | ND            |                     |
| Cannabinolic Acid (CBNA)                     | 0.102       | 0.299       | ND             | ND            |                     |
| Delta 8-Tetrahydrocannabinol (Delta 8-THC)   | 0.178       | 0.522       | ND             | ND            |                     |
| Delta 9-Tetrahydrocannabinol (Delta 9-THC)   | 0.162       | 0.474       | <LOQ           | <LOQ          |                     |
| Delta 9-Tetrahydrocannabinolic Acid (THCA-A) | 0.144       | 0.420       | ND             | ND            |                     |
| Tetrahydrocannabivarin (THCV)                | 0.033       | 0.095       | ND             | ND            |                     |
| Tetrahydrocannabivarinic Acid (THCVA)        | 0.127       | 0.371       | ND             | ND            |                     |
| <b>Total Cannabinoids</b>                    |             |             | <b>20.704</b>  | <b>21.92</b>  |                     |
| Total Potential THC                          |             |             | <LOQ           | <LOQ          |                     |
| Total Potential CBD                          |             |             | 18.545         | 19.62         |                     |

### Final Approval

  
Sam Smith  
09May2023  
10:00:00 AM MDT  
PREPARED BY / DATE

  
Karen Winternheimer  
09May2023  
10:02:00 AM MDT  
APPROVED BY / DATE

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## Cannabinoids - Colorado Compliance


Test ID: T000242979

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

| Cannabinoid Analysis                         | LOD (mg/mL) | LOQ (mg/mL) | Result (mg/mL) | Result (mg/g) | Notes               |
|----------------------------------------------|-------------|-------------|----------------|---------------|---------------------|
| Cannabichromene (CBC)                        | 0.064       | 0.187       | 0.456          | 0.48          | Density = 0.945g/mL |
| Cannabichromenic Acid (CBCA)                 | 0.058       | 0.171       | 0.337          | 0.36          |                     |
| Cannabidiol (CBD)                            | 0.185       | 0.493       | 10.805         | 11.43         |                     |
| Cannabidiolic Acid (CBDA)                    | 0.190       | 0.505       | 8.395          | 8.88          |                     |
| Cannabidivarin (CBDV)                        | 0.044       | 0.117       | ND             | ND            |                     |
| Cannabidivarinic Acid (CBDVA)                | 0.079       | 0.211       | ND             | ND            |                     |
| Cannabigerol (CBG)                           | 0.036       | 0.106       | 0.276          | 0.29          |                     |
| Cannabigerolic Acid (CBGA)                   | 0.152       | 0.444       | ND             | ND            |                     |
| Cannabinol (CBN)                             | 0.047       | 0.139       | ND             | ND            |                     |
| Cannabinolic Acid (CBNA)                     | 0.103       | 0.303       | ND             | ND            |                     |
| Delta 8-Tetrahydrocannabinol (Delta 8-THC)   | 0.181       | 0.529       | ND             | ND            |                     |
| Delta 9-Tetrahydrocannabinol (Delta 9-THC)   | 0.164       | 0.480       | <LOQ           | <LOQ          |                     |
| Delta 9-Tetrahydrocannabinolic Acid (THCA-A) | 0.145       | 0.426       | ND             | ND            |                     |
| Tetrahydrocannabivarin (THCV)                | 0.033       | 0.097       | ND             | ND            |                     |
| Tetrahydrocannabivarinic Acid (THCVA)        | 0.128       | 0.375       | ND             | ND            |                     |
| <b>Total Cannabinoids</b>                    |             |             | <b>20.269</b>  | <b>21.44</b>  |                     |
| Total Potential THC                          |             |             | <LOQ           | <LOQ          |                     |
| Total Potential CBD                          |             |             | 18.167         | 19.22         |                     |

### Final Approval

  
Sam Smith  
09May2023  
10:00:00 AM MDT  
PREPARED BY / DATE

  
Karen Winternheimer  
09May2023  
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## Residual Solvents - Colorado Compliance

Test ID: T000242984


Methods: TM04 (GC-MS): Residual

| Solvents                      | Dynamic Range (ppm) | Result (ppm) | Notes |
|-------------------------------|---------------------|--------------|-------|
| Propane                       | 76 - 1515           | ND           |       |
| Butanes (Isobutane, n-Butane) | 162 - 3238          | ND           |       |
| Methanol                      | 49 - 987            | ND           |       |
| Pentane                       | 88 - 1751           | ND           |       |
| Ethanol                       | 82 - 1641           | ND           |       |
| Acetone                       | 79 - 1582           | ND           |       |
| Isopropyl Alcohol             | 79 - 1583           | ND           |       |
| Hexane                        | 5 - 100             | ND           |       |
| Ethyl Acetate                 | 80 - 1592           | ND           |       |
| Benzene                       | 0.2 - 3.2           | ND           |       |
| Heptanes                      | 80 - 1593           | ND           |       |
| Toluene                       | 14 - 289            | ND           |       |
| Xylenes (m,p,o-Xylenes)       | 105 - 2097          | 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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## Heavy Metals - Colorado Compliance

Test ID: T000242983  
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           |       |

### Final Approval

  
PREPARED BY / DATE  
Sam Smith  
10May2023  
01:28:00 PM MDT


  
APPROVED BY / DATE  
Karen Winternheimer  
10May2023  
01:37:00 PM MDT

## Mycotoxins - Colorado Compliance

Test ID: T000242985  
Methods: TM18 (UHPLC-QQQ  
LCMS/MS): Mycotoxins

| LCMS/MS): Mycotoxins                  | Dynamic Range (ppb) | Result (ppb) | Notes |
|---------------------------------------|---------------------|--------------|-------|
| Ochratoxin A                          | 3.68 - 123.86       | ND           | N/A   |
| Aflatoxin B1                          | 1.03 - 32.53        | ND           |       |
| Aflatoxin B2                          | 0.97 - 32.34        | ND           |       |
| Aflatoxin G1                          | 1.16 - 32.24        | ND           |       |
| Aflatoxin G2                          | 1.13 - 32.59        | ND           |       |
| Total Aflatoxins (B1, B2, G1, and G2) |                     | ND           |       |

### Final Approval

  
PREPARED BY / DATE  
Sam Smith  
10May2023  
03:13:00 PM MDT

  
APPROVED BY / DATE  
Karen Winternheimer  
10May2023  
03:15:00 PM MDT

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## Pesticides


Test ID: T000242981

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  
PREPARED BY / DATE

  
Sam Smith  
11May2023  
10:25:00 AM MDT  
APPROVED BY / DATE

Prepared for:  
**BLUEBIRD BOTANICALS**  
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|----------------------------------------------|---------------------------------------|------------------------|-------------|
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## Microbial Contaminants - Colorado Compliance

Test ID: T000242982  
Methods: TM25 (qPCR) TM24, TM26, TM27 (Culture Plating): Microbial (Colorado Panel)

|                       | Method                | LOD                     | Quantitation Range                        | Result        | Notes                                             |
|-----------------------|-----------------------|-------------------------|-------------------------------------------|---------------|---------------------------------------------------|
| STEC                  | TM25: PCR             | 10 <sup>0</sup> CFU/25g | NA                                        | Absent        | Free from visual mold, mildew, and foreign matter |
| <i>Salmonella</i>     | TM25: PCR             | 10 <sup>0</sup> CFU/25g | NA                                        | Absent        |                                                   |
| Total Yeast and Mold* | TM24: Culture Plating | 10 <sup>1</sup> CFU/g   | 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup> | None Detected |                                                   |
| Total Aerobic Count*  | TM26: Culture Plating | 10 <sup>2</sup> CFU/g   | 1.0x10 <sup>3</sup> - 1.5x10 <sup>5</sup> | None Detected |                                                   |
| Total Coliforms*      | TM27: Culture Plating | 10 <sup>1</sup> CFU/g   | 1.0x10 <sup>2</sup> - 1.5x10 <sup>4</sup> | 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/72e038dc-1d8e-45fc-be83-c0d94ea74370>

**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<sup>2</sup> = 100 CFU, 10<sup>3</sup> = 1,000 CFU, 10<sup>4</sup> = 10,000 CFU, 10<sup>5</sup> = 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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