# STRAIGHT HEMP

# CERTIFICATE OF ANALYSIS

| | | | |
|---|---|---|---|
| PRODUCT: | CBD Balm | PRODUCTION DATE: | 11/05/2019 |
| BATCH/LOT: | B0042 | BEST BY/EXP DATE: | 11/2020 |

| TEST | METHOD | SPECIFICATION | RESULTS |
|---|---|---|---|
| Strength & Composition | | | |
| Identity | Organoleptic | Conforming | PASS |
| Identity | UPLC/UV | Chemical Fingerprint | PASS |
| Total Cannabidiol (CBD)[i] | UPLC/UV | 17.8 – 21.2 mg/g | 19.6 mg/g |
| Total Tetrahydrocannabinol (THC)[ii] | UPLC/UV | NMT 0.30% | 0.09% |
| Terpene assay[iii] | HS-GC/MS | n/e | 16.16 mg/g |
| Microbiological[iv] | | | |
| Total Plate Count | USP 42 | NMT 1,000 cfu/ml | PASS |
| Total Yeast & Mold | USP 42 | NMT 100 cfu/ml | PASS |
| *E. coli* | USP 42 | Absent | PASS |
| *Salmonella* | USP 42 | Absent | PASS |
| *Staph. aureus* | USP 42 | Absent | PASS |
| *Pseudo. aeruginosa* | USP 42 | Absent | PASS |
| Heavy Metals[v] | | | |
| Arsenic (As) | ICP/MS | NMT 5 ppm | PASS |
| Cadmium (Cd) | ICP/MS | NMT 2 ppm | PASS |
| Lead (Pb) | ICP/MS | NMT 2 ppm | PASS |
| Mercury (Hg) | ICP/MS | NMT 1 ppm | PASS |
| Residual Solvents | | | |
| Multi-residue panel[vi] | GC-HS-MSD | Below MRL | PASS |
| Pesticides | | | |
| Multi-residue panel[vii] | UPLC-MS/MS | Below MRL | PASS |

David Cole
Director of Quality

12/6/19
Date

[i] Total CBD = CBD + (0.877*CBDa) to account for loss of acid group during decarboxylation
[ii] Total THC = THC + (0.877*THCa) to account for loss of acid group during decarboxylation
[iii] Sum of terpene assay (n=22)
[iv] Microbiological limits based on USP, WHO, and/or NSF/ANSI
[v] Limits for As and Pb set below CA Prop 65 *no significant risk level;* Cd and Hg set below USP permitted daily exposure for 110lb body weight
[vi] 11 Residue Panel: Propane, Butane, Pentane, Ethanol, Acetone, Isopropyl Alcohol, Hexane, Benzene, Heptanes, Toluene, Xylenes
[vii] 50 Residue Panel

NMT = Not More Than
MRL = Method Reporting Limit

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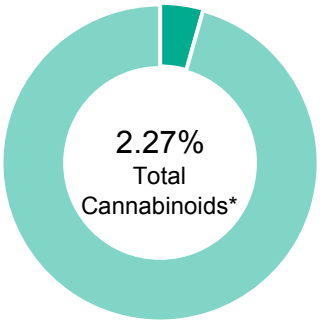
# CERTIFICATE OF ANALYSIS

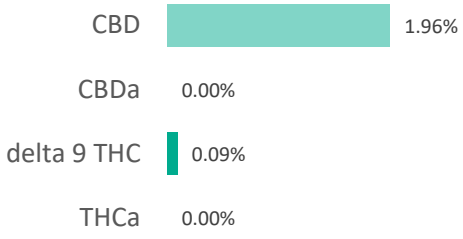
prepared for: Straight Hemp
*5135 W 58th Ave, Unit 5*
*Arvada, CO 80002*

## HHS - CBD BALM

| | | | |
|---|---|---|---|
| **Batch ID:** | B0042 | **Test ID:** | 4767729.002 |
| **Reported:** | 21-Nov-2019 | **Method:** | TM14 |
| **Type:** | Concentrate | | |
| **Test:** | Potency | | |

## CANNABINOID PROFILE




| Compound | LOQ (%) | Result (%) | Result (mg/g) |
|---|---|---|---|
| Delta 9-Tetrahydrocannabinolic acid (THCA-A) | 0.04 | 0.00 | 0.0 |
| Delta 9-Tetrahydrocannabinol (Delta 9THC) | 0.02 | 0.09 | 0.9 |
| Cannabidiolic acid (CBDA) | 0.02 | 0.00 | 0.0 |
| Cannabidiol (CBD) | 0.01 | 1.96 | 19.6 |
| Delta 8-Tetrahydrocannabinol (Delta 8THC) | 0.02 | 0.00 | 0.0 |
| Cannabinolic Acid (CBNA) | 0.06 | 0.00 | 0.0 |
| Cannabinol (CBN) | 0.02 | 0.00 | 0.0 |
| Cannabigerolic acid (CBGA) | 0.04 | 0.00 | 0.0 |
| Cannabigerol (CBG) | 0.02 | 0.12 | 1.2 |
| Tetrahydrocannabivarinic Acid (THCVA) | 0.03 | 0.00 | 0.0 |
| Tetrahydrocannabivarin (THCV) | 0.02 | 0.00 | 0.0 |
| Cannabidivarinic Acid (CBDVA) | 0.02 | 0.00 | 0.0 |
| Cannabidivarin (CBDV) | 0.01 | 0.00 | 0.0 |
| Cannabichromenic Acid (CBCA) | 0.03 | 0.00 | 0.0 |
| Cannabichromene (CBC) | 0.04 | 0.10 | 1.0 |
| **Total Cannabinoids** | | **2.27** | **22.70** |
| Total Potential THC** | | 0.09 | 0.90 |
| Total Potential CBD** | | 1.96 | 19.60 |

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)

* Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.

** Total Potential THC/CBD 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)) and Total CBD = CBD + (CBDa *(0.877))

NOTES:
N/A

## FINAL APPROVAL

Tyler Wiese
21-Nov-2019
7:52 PM
PREPARED BY / DATE

Greg Zimpfer
21-Nov-2019
9:04 PM
APPROVED BY / DATE

*Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC 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 Botanacor Laboratories, LLC. ISO/IEC 17025:2005 Accredited A2LA Certificate Number 4329.02*

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*Certificate #4329.02*

 | 1001 S. Galapago St., Denver, CO 80223 | 888.800.8223 | www.Botanacor.com

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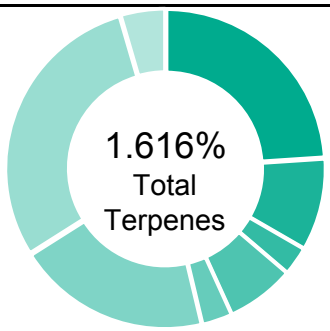
# CERTIFICATE OF ANALYSIS

prepared for: Straight Hemp
*5135 W 58th Ave, Unit 5*
*Arvada, CO 80002*

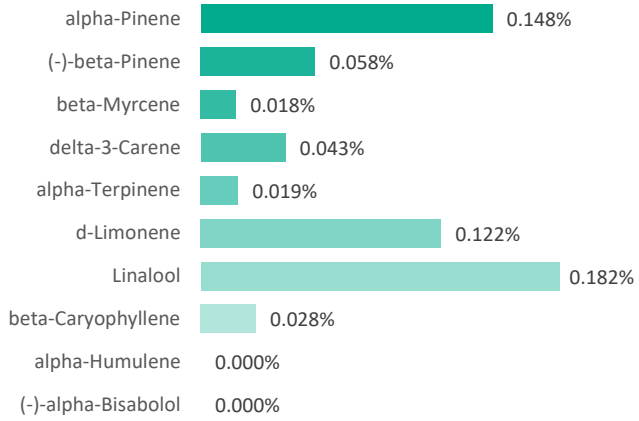
## HHS - CBD BALM

| | | | |
|---|---|---|---|
| **Batch ID:** | B0042 | **Test ID:** | 4570524.0023 |
| **Reported:** | 20-Nov-2019 | **Method:** | TM10 |
| **Type:** | Concentrate | | |
| **Test:** | Terpenes | | |

## TERPENE PROFILE




### PREDOMINANT TERPENES




| Compound | %(w/w) | mg/g |
|---|---|---|
| (-)-alpha-Bisabolol | 0.000 | 0 |
| Camphene | 0.027 | 0.27 |
| delta-3-Carene | 0.043 | 0.43 |
| beta-Caryophyllene | 0.028 | 0.28 |
| (-)-Caryophyllene Oxide | 0.000 | 0 |
| p-Cymene | 0.036 | 0.36 |
| Eucalyptol | 0.859 | 8.59 |
| Geraniol | 0.011 | 0.11 |
| alpha-Humulene | 0.000 | 0 |
| (-)-Isopulegol | 0.000 | 0 |
| d-Limonene | 0.122 | 1.22 |
| Linalool | 0.182 | 1.82 |
| beta-Myrcene | 0.018 | 0.18 |
| cis-Nerolidol | 0.000 | 0 |
| trans-Nerolidol | 0.000 | 0 |
| Ocimene | 0.003 | 0.03 |
| beta-Ocimene | 0.000 | 0 |
| alpha-Pinene | 0.148 | 1.48 |
| (-)-beta-Pinene | 0.058 | 0.58 |
| alpha-Terpinene | 0.019 | 0.19 |
| gamma-Terpinene | 0.047 | 0.47 |
| Terpinolene | 0.015 | 0.15 |
| | **1.616%** | **16.16** |

NOTES:
0

## FINAL APPROVAL

Daniel Weidensaul
20-Nov-2019
12:39 PM

PREPARED BY / DATE

David Green
20-Nov-2019
1:02 PM

APPROVED BY / DATE

*Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC. Botanacor Laboratories, LLC 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 Botanacor Laboratories, LLC. ISO/IEC 17025:2005 Accredited A2LA Certificate Number 4329.02*

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# CERTIFICATE OF ANALYSIS

prepared for: Straight Hemp
*5135 W 58th Ave, Unit 5*
*Arvada, CO 80002*

## HHS - CBD BALM

| | | | |
|---|---|---|---|
| **Batch ID:** | B0042 | **Test ID:** | T000035741 |
| **Reported:** | 5-Dec-2019 | **Method:** | Arsenic = Arsenic EPA 6020A (mod),<br>Cadmium = Cadmium EPA 6020A (mod),<br>Lead = Lead EPA 6020A (mod),<br>Mercury = Mercury EPA 6020A (mod) |
| **Type:** | Other | | |
| **Test:** | Metals | | |

## HEAVY METALS

| Compound | Reporting Limit (ppm) | Result (ppm) |
|---|---|---|
| Arsenic | 0.05 | <0.05 |
| Cadmium | 0.05 | <0.05 |
| Lead | 0.05 | <0.05 |
| Mercury | 0.05 | <0.05 |

## FINAL APPROVAL

Sam Smith
5-Dec-2019
8:22 AM
PREPARED BY / DATE

David Green
5-Dec-2019
8:39 AM
APPROVED BY / DATE

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# CERTIFICATE OF ANALYSIS

prepared for: Straight Hemp
*5135 W 58th Ave, Unit 5*
*Arvada, CO 80002*

## HHS - CBD BALM

| | | | |
|---|---|---|---|
| **Batch ID:** | B0042 | **Test ID:** | 9636320.002 |
| **Reported:** | 21-Nov-2019 | **Method:** | TM04 |
| **Type:** | Concentrate | | |
| **Test:** | Residual Solvents | | |

## RESIDUAL SOLVENTS

| Solvent | Reportable Range (ppm) | Result (ppm) |
|---|---|---|
| **Propane** | 100 - 2000 | 0 |
| **Butanes** (Isobutane, n-Butane) | 100 - 2000 | 0 |
| **Pentane** | 100 - 2000 | 0 |
| **Ethanol** | 100 - 2000 | 0 |
| **Acetone** | 100 - 2000 | 0 |
| **Isopropyl Alcohol** | 100 - 2000 | 0 |
| **Hexane** | 6 - 120 | 0 |
| **Benzene** | 0.2 - 4 | 0.0 |
| **Heptanes** | 100 - 2000 | 0 |
| **Toluene** | 18 - 360 | 0 |
| **Xylenes** (m,p,o-Xylenes) | 43 - 860 | 0 |

NOTES:
Free from visual mold, mildew, and foreign matter.

## FINAL APPROVAL

Karen Winternheimer
21-Nov-2019
2:54 PM

PREPARED BY / DATE

David Green
21-Nov-2019
3:02 PM

APPROVED BY / DATE

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# CERTIFICATE OF ANALYSIS

prepared for: Straight Hemp
*5135 W 58th Ave, Unit 5*
*Arvada, CO 80002*

## HHS - CBD BALM

| | | | |
|---|---|---|---|
| **Batch ID:** | B0042 | **Test ID:** | 2559202.0036 |
| **Reported:** | 23-Nov-2019 | **Method:** | TM17 |
| **Type:** | Concentrate | | |
| **Test:** | Pesticides | | |

## PESTICIDE RESIDUE

| Compound | Dynamic Range (ppb) | Result (ppb) |
|---|---|---|
| Acephate | 49 - 2273 | ND* |
| Acetamiprid | 49 - 2273 | ND* |
| Avermectin | 295 - 2273 | ND* |
| Azoxystrobin | 49 - 2273 | ND* |
| Bifenazate | 49 - 2273 | ND* |
| Boscalid | 295 - 2273 | ND* |
| Carbaryl | 49 - 2273 | ND* |
| Carbofuran | 49 - 2273 | ND* |
| Chlorantraniliprole | 49 - 2273 | ND* |
| Chlorpyrifos | 295 - 2273 | ND* |
| Clofentezine | 49 - 2273 | ND* |
| Diazinon | 49 - 2273 | ND* |
| Dichlorvos | 295 - 2273 | ND* |
| Dimethoate | 49 - 2273 | ND* |
| E-Fenpyroximate | 295 - 2273 | ND* |
| Etofenprox | 295 - 2273 | ND* |
| Etoxazole | 295 - 2273 | ND* |
| Fenoxycarb | 49 - 2273 | ND* |
| Fipronil | 295 - 2273 | ND* |
| Flonicamid | 49 - 2273 | ND* |
| Fludioxonil | 295 - 2273 | ND* |
| Hexythiazox | 295 - 2273 | ND* |
| Imazalil | 295 - 2273 | ND* |
| Imidacloprid | 49 - 2273 | ND* |
| Kresoxim-methyl | 49 - 2273 | ND* |

| Compound | Dynamic Range (ppb) | Result (ppb) |
|---|---|---|
| Malathion | 49 - 2273 | ND* |
| Metalaxyl | 295 - 2273 | ND* |
| Methiocarb | 49 - 2273 | ND* |
| Methomyl | 49 - 2273 | ND* |
| MGK 264 1 | 49 - 2273 | ND* |
| MGK 264 2 | 295 - 2273 | ND* |
| Myclobutanil | 295 - 2273 | ND* |
| Naled | 295 - 2273 | ND* |
| Oxamyl | 49 - 2273 | ND* |
| Paclobutrazol | 49 - 2273 | ND* |
| Permethrin | 295 - 2273 | ND* |
| Phosmet | 49 - 2273 | ND* |
| Prophos | 295 - 2273 | ND* |
| Propoxur | 295 - 2273 | ND* |
| Pyridaben | 295 - 2273 | ND* |
| Spinosad A | 49 - 2273 | ND* |
| Spinosad D | 295 - 2273 | ND* |
| Spiromesifen | 49 - 2273 | ND* |
| Spirotetramat | 295 - 2273 | ND* |
| Spiroxamine 1 | 49 - 2273 | ND* |
| Spiroxamine 2 | 49 - 2273 | ND* |
| Tebuconazole | 49 - 2273 | ND* |
| Thiacloprid | 49 - 2273 | ND* |
| Thiamethoxam | 49 - 2273 | ND* |
| Trifloxystrobin | 295 - 2273 | ND* |

* ND = None Detected (Defined by Dynamic Range of the method)

N/A

## FINAL APPROVAL

Chris Jungling
23-Nov-2019
8:03 AM

PREPARED BY / DATE

Mike Branvold
23-Nov-2019
4:59 PM

APPROVED BY / DATE

*Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC 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 Botanacor Laboratories, LLC.*

# KML Laboratories, Inc.

261 Great Northern Road
Bonners Ferry, Idaho 83805
Phone: 208-267-0818
Fax: 208-267-0878
Email: Info@kmlmicro.com

## Certificate of Analysis

Straight Hemp
5135 W. 58th Ave, Ste 5
Arvada, CO 80002
Phone: 970-214-7814

Invoice Number: 19.1801
PO Number:
Received Date: 11/18/2019
Number of Samples: 02
Project Name: Routine Testing

**Microbiology Report:**

| | | |
|---|---|---|
| Lab #: 19-11358 | Sample Lot: B0042 | Sample Date: |
| Sample Name: CBD Balm | Additional ID: HHS | Plated Date: 11/18/19 |
| Qualifying Material Number: No QM | | |

| Test Performed | Results | Units | Detection Limit | Method | Date Analyzed |
|---|---|---|---|---|---|
| Aerobic Plate Count | nd | cfu/g | 10 | USP 42-NF 37 <2021> | 11/21/19 |
| E. *coli* | absent | P/A | 1 | USP 42-NF 37 <2022> | 11/21/19 |
| Staph *aureus* | absent | P/A | 1 | USP 42-NF 37 <2022> | 11/21/19 |
| Yeast | nd | cfu/g | 10 | USP 42-NF 37 <2021> | 11/23/19 |
| Mold | nd | cfu/g | 10 | USP 42-NF 37 <2021> | 11/23/19 |
| Salmonella | absent | P/A | 1 | USP 42-NF 37 <2022> | 11/22/19 |
| Pseudo. *aeruginosa* | absent | P/A | 1 | USP 42-NF 37 <m62> | 11/21/19 |
| Enterobacteriaceae Count | nd | cfu/g | 10 | 02-209-01 | 11/19/19 |

**Approved By: QA Director SMV 11/25/19**



AT-1805





**Note**: On this date, this material met the specifications designated above, and is **not known if statistically representative of the lot evaluated on a routine basis**. This information is not intended to relieve the purchaser from its responsibility to determine the suitability of this material for purchaser's purposes, to comply with all laws and regulations regarding the safe use of this material. nd = none detected above the listed detection limit

F10-0817 G Ref SOP 01-023