




# STRAIGHT HEMP

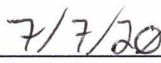
## CERTIFICATE OF ANALYSIS

PRODUCT: Full Spectrum Hemp Oil  
BATCH/LOT: ND200622  
INGREDIENTS: Organic Hemp Seed Oil, Full Spectrum Hemp Extract  
ADDITIVES: none  
EXCIPIENTS: none

PRODUCTION DATE: 06/2020  
EXPIRATION DATE: 06/2022

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Identity	Organoleptic	Conforming	PASS
Identity	UPLC/UV	Chemical Fingerprint	PASS
Total Cannabidiol (CBD) <sup>i</sup>	UPLC/UV	36.8 – 40.8 mg/g	37.5 mg/g <sup>ii</sup>
Total Tetrahydrocannabinol (THC) <sup>iii</sup>	UPLC/UV	NMT 0.30%	0.11%
Terpene assay <sup>iv</sup>	HS-GC/MS	n/e	4,910 ppm
Microbiological <sup>v</sup>			
Total Plate Count	USP 42	NMT 1,000 cfu/ml	PASS
Total Yeast & Mold	USP 42	NMT 100 cfu/ml	PASS
<i>E. coli</i>	USP 42	Absent	PASS
<i>Salmonella</i>	USP 42	Absent	PASS
<i>Staph. aureus</i>	USP 42	Absent	PASS
<i>Pseudo. aeruginosa</i>	USP 42	Absent	PASS
Heavy Metals <sup>vi</sup>			
Arsenic (As)	ICP/MS	NMT 1.0 ppm	PASS
Cadmium (Cd)	ICP/MS	NMT 0.5 ppm	PASS
Lead (Pb)	ICP/MS	NMT 1.0 ppm	PASS
Mercury (Hg)	ICP/MS	NMT 0.1 ppm	PASS
Residual Solvents			
Multi-residue panel	GC-HS-MSD	Below MRL <sup>vii</sup>	PASS
Pesticides			
Multi-residue panel	UPLC-MS/MS	Below MRL	PASS

  
David Cole  
Director of Quality

  
Date

<sup>i</sup> Total CBD = CBD + (0.877\*CBDA) to account for loss of acid group during decarboxylation

<sup>ii</sup> Corresponds to **34.6mg/ml**

<sup>iii</sup> Total THC = THC + (0.877\*THCA) to account for loss of acid group during decarboxylation

<sup>iv</sup> Sum of terpene assay (n=22)

<sup>v</sup> Microbiological limits based on USP, WHO, and/or NSF/ANSI

<sup>vi</sup> 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. Complies with 1 CCR 212-3

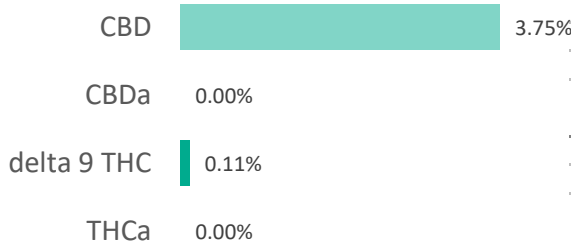
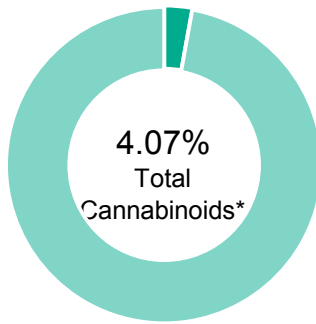
<sup>vii</sup> 11 solvent panel: Propane, Butane, Pentane, Ethanol, Acetone, Isopropyl Alcohol, Hexane, Benzene, Heptanes, Toluene, Xylenes

NMT = Not More Than

MRL = Method Reporting Limit

**Full Spectrum Hemp Oil**

<b>Batch ID:</b>	ND200622	<b>Test ID:</b>	5239179.0062
<b>Reported:</b>	29-Jun-2020	<b>Method:</b>	TM14
<b>Type:</b>	Concentrate		
<b>Test:</b>	Potency		

**CANNABINOID PROFILE**


Compound	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.04	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.02	0.11	1.1
Cannabidiolic acid (CBDA)	0.09	ND	ND
Cannabidiol (CBD)	0.05	3.75	37.5
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.02	ND	ND
Cannabinolic Acid (CBNA)	0.06	ND	ND
Cannabinol (CBN)	0.03	ND	ND
Cannabigerolic acid (CBGA)	0.04	ND	ND
Cannabigerol (CBG)	0.02	0.05	0.5
Tetrahydrocannabivarinic Acid (THCVA)	0.04	ND	ND
Tetrahydrocannabivarin (THCV)	0.02	ND	ND
Cannabidivarinic Acid (CBDVA)	0.09	ND	ND
Cannabidivarin (CBDV)	0.05	ND	ND
Cannabichromenic Acid (CBCA)	0.03	ND	ND
Cannabichromene (CBC)	0.04	0.16	1.6
<b>Total Cannabinoids</b>		<b>4.07</b>	<b>40.70</b>
<b>Total Potential THC**</b>		<b>0.11</b>	<b>1.10</b>
<b>Total Potential CBD**</b>		<b>3.75</b>	<b>37.50</b>

**NOTES:**

N/A

% = % (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))

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

**FINAL APPROVAL**


 Michelle Gagnon  
 29-Jun-2020  
 2:56 PM



 Ben Minton  
 29-Jun-2020  
 4:04 PM

PREPARED BY / DATE

APPROVED BY / DATE

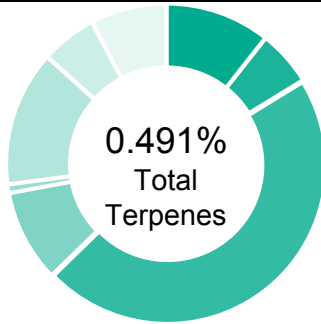
Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. 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



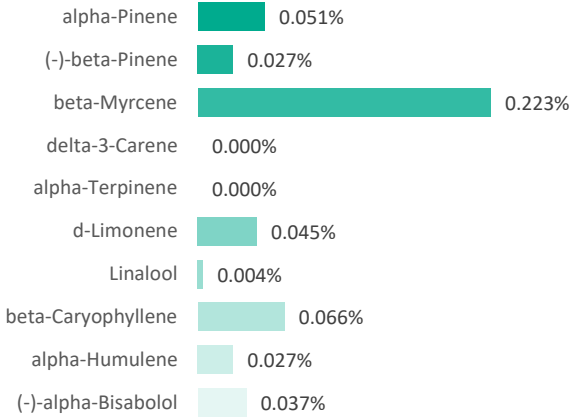
Certificate #4329.02

**Full Spectrum Hemp Oil**


<b>Batch ID:</b>	ND200622	<b>Test ID:</b>	7577619.001
<b>Reported:</b>	6-Jul-2020	<b>Method:</b>	TM10
<b>Type:</b>	Concentrate		
<b>Test:</b>	Terpenes		

**TERPENE PROFILE**


Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.037	0.37
Camphene	0.000	0
delta-3-Carene	0.000	0
beta-Caryophyllene	0.066	0.66
(-)-Caryophyllene Oxide	0.000	0
p-Cymene	0.000	0
Eucalyptol	0.007	0.07
Geraniol	0.000	0
alpha-Humulene	0.027	0.27
(-)-Isopulegol	0.000	0
d-Limonene	0.045	0.45
Linalool	0.004	0.04
beta-Myrcene	0.223	2.23
cis-Nerolidol	0.000	0
trans-Nerolidol	0.000	0
Ocimene	0.000	0
beta-Ocimene	0.000	0
alpha-Pinene	0.051	0.51
(-)-beta-Pinene	0.027	0.27
alpha-Terpinene	0.000	0
gamma-Terpinene	0.001	0.01
Terpinolene	0.003	0.03
	<b>0.491%</b>	<b>4.91</b>

**PREDOMINANT TERPENES**

 NOTES:  
 0

**FINAL APPROVAL**

	Michelle Gagnon 2-Jul-2020 4:04 PM		Ben Minton 6-Jul-2020 11:30 AM
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APPROVED BY / DATE

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## Full Spectrum Hemp Oil

<b>Batch ID:</b>	ND200622	<b>Test ID:</b>	T000082839
<b>Reported:</b>	6-Jul-2020	<b>Method:</b>	TM19
<b>Type:</b>	Concentrate		
<b>Test:</b>	Metals		

## HEAVY METALS

Analyte	Dynamic Range (ppm)	Result (ppm)
Arsenic	0.073 - 7.33	ND
Cadmium	0.072 - 7.16	ND
Mercury	0.065 - 6.51	ND
Lead	0.081 - 8.11	ND

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

## FINAL APPROVAL

Morgan Ingraham  
6-Jul-2020  
2:59 PM

PREPARED BY / DATE

Ben Minton  
6-Jul-2020  
3:06 PM

APPROVED BY / DATE

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**Full Spectrum Hemp Oil**

<b>Batch ID:</b>	ND200622	<b>Test ID:</b>	T000082835
<b>Reported:</b>	29-Jun-2020	<b>Method:</b>	TM04
<b>Type:</b>	Concentrate		
<b>Test:</b>	Residual Solvents		

**RESIDUAL SOLVENTS**

Solvent	Dynamic Range (ppm)	Result (ppm)
Propane	96 - 1910	*ND
Butanes (Isobutane, n-Butane)	165 - 3304	*ND
Methanol	58 - 1156	*ND
Pentane	89 - 1782	*ND
Ethanol	90 - 1799	*ND
Acetone	92 - 1842	*ND
Isopropyl Alcohol	102 - 2032	*ND
Hexane	6 - 113	*ND
Ethyl Acetate	93 - 1856	*ND
Benzene	0.2 - 3.7	*ND
Heptanes	88 - 1769	*ND
Toluene	17 - 333	*ND
Xylenes (m,p,o-Xylenes)	121 - 2416	*ND

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

NOTES:  
N/A**FINAL APPROVAL**Daniel Weidensaul  
29-Jun-2020  
2:36 PMGreg Zimpfer  
29-Jun-2020  
6:07 PM

PREPARED BY / DATE

APPROVED BY / DATE

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Certificate #4329.02

## Full Spectrum Hemp Oil

<b>Batch ID:</b>	ND200622	<b>Test ID:</b>	5621504.0032
<b>Reported:</b>	30-Jun-2020	<b>Method:</b>	TM17
<b>Type:</b>	Concentrate		
<b>Test:</b>	Pesticides		

## PESTICIDE RESIDUE

Compound	Dynamic Range (ppb)	Result (ppb)	Compound	Dynamic Range (ppb)	Result (ppb)
Acephate	62 - 2568	ND*	Malathion	294 - 2568	ND*
Acetamiprid	39 - 2568	ND*	Metalaxyl	47 - 2568	ND*
Abamectin	>454	ND*	Methiocarb	40 - 2568	ND*
Azoxystrobin	47 - 2568	ND*	Methomyl	56 - 2568	ND*
Bifenazate	46 - 2568	ND*	MGK 264 1	205 - 2568	ND*
Boscalid	43 - 2568	ND*	MGK 264 2	131 - 2568	ND*
Carbaryl	46 - 2568	ND*	Myclobutanil	45 - 2568	ND*
Carbofuran	45 - 2568	ND*	Naled	54 - 2568	ND*
Chlorantraniliprole	50 - 2568	ND*	Oxamyl	49 - 2568	ND*
Chlorpyrifos	48 - 2568	ND*	Paclobutrazol	48 - 2568	ND*
Clofentezine	314 - 2568	ND*	Permethrin	319 - 2568	ND*
Diazinon	295 - 2568	ND*	Phosmet	48 - 2568	ND*
Dichlorvos	>341	ND*	Prophos	276 - 2568	ND*
Dimethoate	48 - 2568	ND*	Propoxur	49 - 2568	ND*
E-Fenpyroximate	35 - 2568	ND*	Pyridaben	45 - 2568	ND*
Etofenprox	46 - 2568	ND*	Spinosad A	33 - 2568	ND*
Etoxazole	319 - 2568	ND*	Spinosad D	85 - 2568	ND*
Fenoxycarb	>51	ND*	Spiromesifen	>301	ND*
Fipronil	50 - 2568	ND*	Spirotetramat	>281	ND*
Flonicamid	72 - 2568	ND*	Spiroxamine 1	18 - 2568	ND*
Fludioxonil	>275	ND*	Spiroxamine 2	23 - 2568	ND*
Hexythiazox	51 - 2568	ND*	Tebuconazole	315 - 2568	ND*
Imazalil	305 - 2568	ND*	Thiacloprid	47 - 2568	ND*
Imidacloprid	44 - 2568	ND*	Thiamethoxam	34 - 2568	ND*
Kresoxim-methyl	51 - 2568	ND*	Trifloxystrobin	50 - 2568	ND*

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

N/A

## FINAL APPROVAL



 Tyler Wiese  
 30-Jun-2020  
 7:02 PM

PREPARED BY / DATE



 Ben Minton  
 30-Jun-2020  
 10:19 PM

APPROVED BY / DATE

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## Certificate of Analysis

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

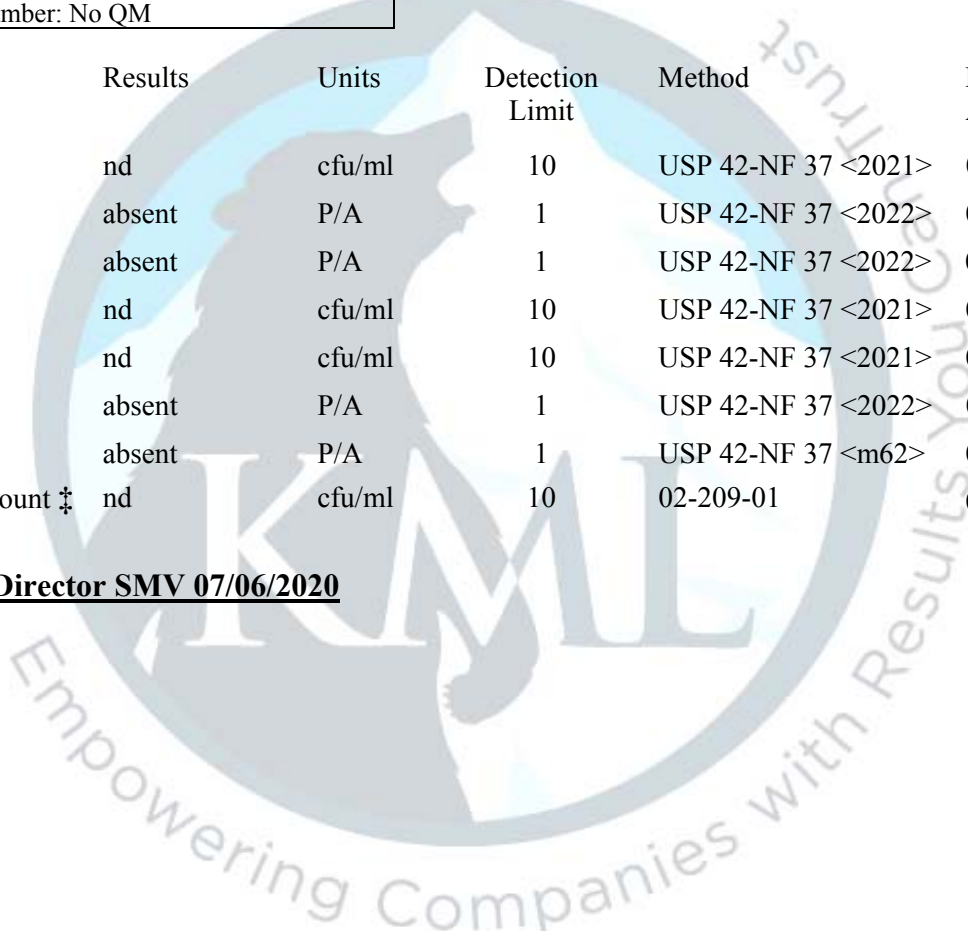
Invoice Number: 20.0945  
PO Number:  
Received Date: 06/29/2020  
Number of Samples: 01  
Project Name: Routine Testing

### Microbiology Report:

Lab #: 20-6228	Sample Lot: ND200622	Sample Date:
Sample Name: Full Spectrum Hemp Oil	Additional ID:	Plated Date: 06/29/2020
Qualifying Material Number: No QM		

Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/02/2020
<i>E. coli</i>	absent	P/A	1	USP 42-NF 37 <2022>	07/02/2020
<i>Staph aureus</i>	absent	P/A	1	USP 42-NF 37 <2022>	07/02/2020
Yeast	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/04/2020
Mold	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/04/2020
Salmonella	absent	P/A	1	USP 42-NF 37 <2022>	07/03/2020
<i>Pseudo. aeruginosa</i>	absent	P/A	1	USP 42-NF 37 <m62>	07/02/2020
Enterobacteriaceae Count ‡	nd	cfu/ml	10	02-209-01	06/30/2020

**Approved By: QA Director SMV 07/06/2020**



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Page 1 of 2

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## Certificate of Analysis

Straight Hemp  
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 Arvada, CO 80002  
 Phone: 970-214-7814

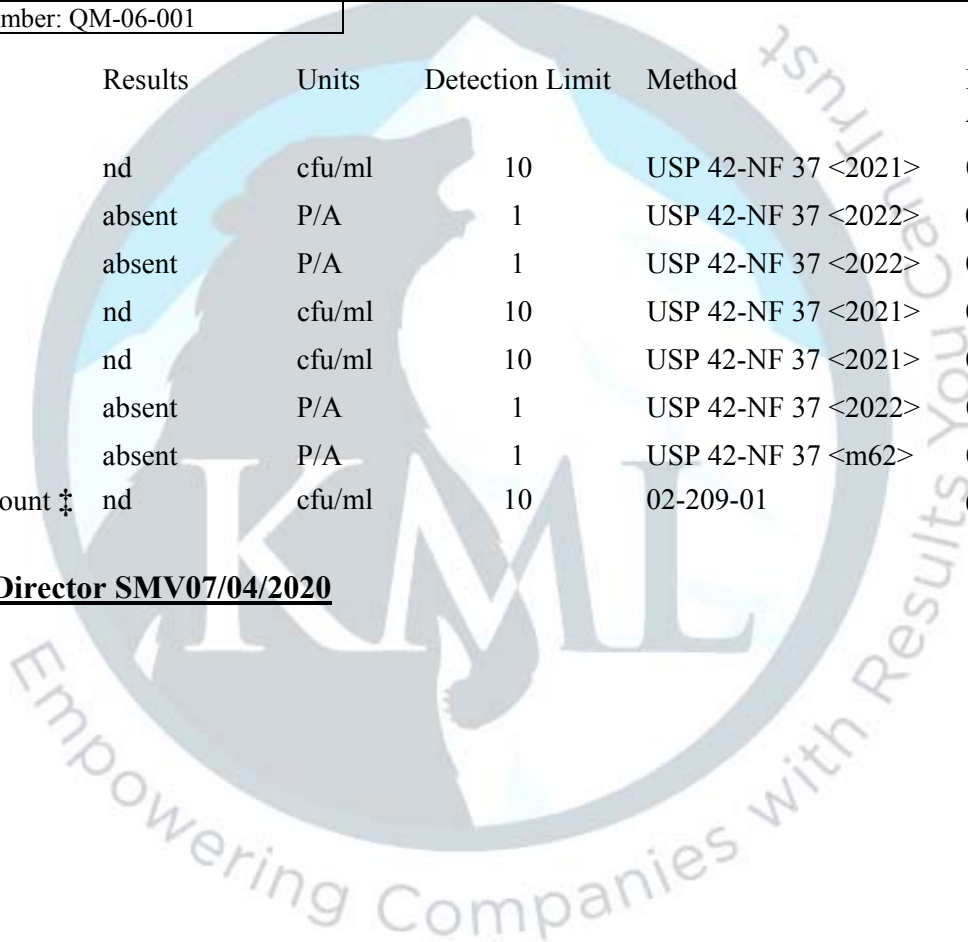
Invoice Number: 20.0945  
 PO Number:  
 Received Date: 06/29/2020  
 Number of Samples: 01  
 Project Name: Routine Testing

### Microbiology Report:

Lab #: Control 06292020	Additional ID: Negative Control Purposes	Plated Date: 06/29/2020
Sample Name: Control 06292020		
Qualifying Material Number: QM-06-001		

Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/02/2020
<i>E. coli</i>	absent	P/A	1	USP 42-NF 37 <2022>	07/02/2020
<i>Staph aureus</i>	absent	P/A	1	USP 42-NF 37 <2022>	07/02/2020
Yeast	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/04/2020
Mold	nd	cfu/ml	10	USP 42-NF 37 <2021>	07/04/2020
Salmonella	absent	P/A	1	USP 42-NF 37 <2022>	07/03/2020
<i>Pseudo. aeruginosa</i>	absent	P/A	1	USP 42-NF 37 <m62>	07/02/2020
Enterobacteriaceae Count ‡	nd	cfu/ml	10	02-209-01	06/30/2020

**Approved By: QA Director SMV07/04/2020**



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