

# STRAIGHT HEMP

# CERTIFICATE OF ANALYSIS

PRODUCT:	Full Spectrum Hemp Oil – Certified Organic	PRODUCTION DATE:	11/2021
BATCH/LOT:	0021321	<b>EXPIRATION DATE:</b>	11/2023
INGREDIENTS:	Organic Hemp Seed Oil, Organic Full Spectrum Hemp Extract	t, Hemp Terpenes	
ADDITIVES:	none		
EXCIPIENTS:	none		

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Identity	Organoleptic	Conforming	PASS
Identity	HPLC-DAD	Chemical Fingerprint	PASS
Total Cannabidiol (CBD) <sup>i</sup>	HPLC-DAD	36.7 – 42.3 mg/g	38.85 mg/g <sup>ii</sup>
Total Tetrahydrocannabinol (THC) <sup>iii</sup>	HPLC-DAD	NMT 0.30%	0.129%
Terpene assay <sup>iv</sup>	HS-GC/MS	n/e	5,218 ppm
Microbiological <sup>v</sup>			
Total Plate Count	TM-26	NMT 1,000 cfu/g	PASS
Total Yeast & Mold	TM-24	NMT 100 cfu/g	PASS
Total Coliforms	TM-27	NMT 100 cfu/g	PASS
E. coli	TM-25	Absent/25g	PASS
Salmonella	TM-25	Absent/25g	PASS
Mycotoxins			
Alfatoxin B1	LCMS	NMT 20 ppb	PASS
Alfatoxin B2	LCMS	NMT 20 ppb	PASS
Alfatoxin G1	LCMS	NMT 20 ppb	PASS
Alfatoxin G2	LCMS	NMT 20 ppb	PASS
Ochratoxin	LCMS	NMT 20 ppb	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 0.5 ppm	PASS
Mercury (Hg)	ICP/MS	NMT 0.1 ppm	PASS

- <sup>i</sup> Total CBD = CBD + (0.877\*CBDa) to account for loss of acid group during decarboxylation
- " Corresponds to 35.9 mg/ml

vi 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 6 CCR 1010-21

FSORG 0021321 211208

iii Total THC = THC + (0.877\*THCa) to account for loss of acid group during decarboxylation

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

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



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BATCH/LOT:	0021321	EXPIRATION DATE:	11/2023
INGREDIENTS:	Organic Hemp Seed Oil, Organic Full Spectrum Hemp Extrac	t, Hemp Terpenes	
ADDITIVES:	none		
EXCIPIENTS:	none		

METHOD	SPECIFICATION	RESULTS
GC-MS	Below MRI	PASS
		PASS
GC-IVIS	Below MRL	FASS
		PAGE
UPLC-MS/MS	Below MRL <sup>VIII</sup>	PASS
NMT = Not More Than MRL = Metho	od Reporting Limit	n/e = not established
	GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS GC-MS	GC-MS Below MRL GC-MS Below MRL

David Cole

Director of Quality

<sup>vii</sup> 21 solvent panel may also include: 1,1-Dichlorothene, 1,2-Dichloroethane, Acetonitrile, Chloroform, Ethyl Ether, Ethylene Oxide, Methylene Chloride, Trichloroethylene.
<sup>viii</sup> 50 residue panel

12

Date



Prepared for:

Ryan Weems

23-Nov-21

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# **ORGANIC Full Spectrum Oil**

#### Straight Hemp

Batch ID or Lot Number: <b>OO21321</b>	Test: <b>Potency</b>	Reported: <b>11/23/21</b>	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix:	Test ID:	Started:	USDA License:
Concentrate	T000177208	11/22/21	N/A
Status:	Method:	Received:	Sampler ID:
N/A	TM14 (HPLC-DAD): Potency - Broad Spectrum Analysis, 0.01% THC (Colorado Panel)	11/18/2021 @ 09:09 AM	N/A

## **CANNABINOID** PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.003	0.008	ND	ND	NOLES
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.003	0.009	0.129	1.29	N/A
Cannabidiolic acid (CBDA)	0.019	0.059	ND	ND	
Cannabidiol (CBD)	0.019	0.057	3.885	38.85	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.022	0.063	ND	ND	
Cannabinolic Acid (CBNA)	0.013	0.036	ND	ND	
Cannabinol (CBN)	0.006	0.016	0.013*	0.13*	
Cannabigerolic acid (CBGA)	0.019	0.053	ND	ND	
Cannabigerol (CBG)	0.004	0.013	0.049	0.49	
Tetrahydrocannabivarinic Acid (THCVA)	0.016	0.044	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.011	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.008	0.024	ND	ND	
Cannabidivarin (CBDV)	0.004	0.014	0.022	0.22	
Cannabichromenic Acid (CBCA)	0.007	0.020	ND	ND	
Cannabichromene (CBC)	0.008	0.022	0.178	1.78	
Total Cannabinoids			4.276	42.76	
Total Potential THC**			0.129	1.29	
Total Potential CBD**			3.885	38.85	

Daniel Wantanand

PREPARED BY / DATE

#### APPROVED BY / DATE

#### Definitions

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

\* Indicates a value below the Limit of Quantitiation (LOQ) and above the Limit of Detection (LOD).

Daniel Weidensaul

23-Nov-2021

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\*\* 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))

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

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

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.





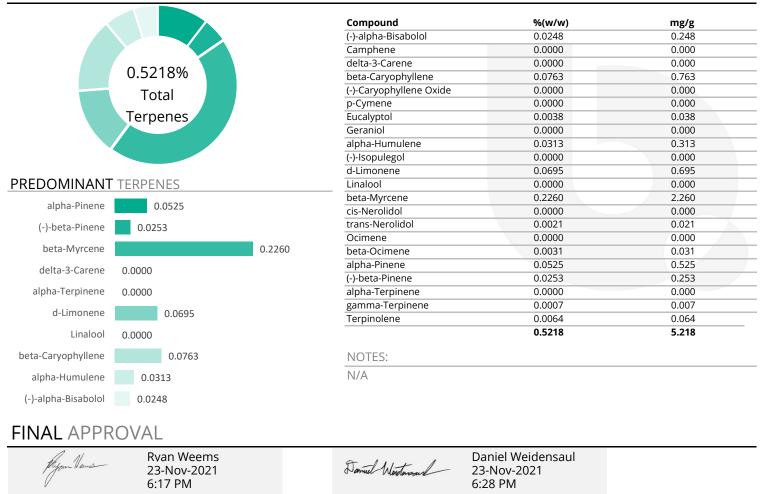


#### prepared for: Straight Hemp 5135 W 58th Ave, Unit 5 Arvada, CO 80002

#### **ORGANIC Full Spectrum Oil**

Batch ID:	0021321	Test ID:	T000177211
Туре:	Concentrate	Submitted:	11/18/2021 @ 09:09 AM
Test:	Terpenes	Started:	11/22/2021
Method:	TM22 (GC-MS)	Reported:	11/23/2021

# **TERPENE** PROFILE



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Prepared for:

# **ORGANIC Full Spectrum Oil**

## Straight Hemp

Batch ID or Lot Number: <b>OO21321</b>	Test: <b>Residual Solvents</b>	Reported: <b>11/23/21</b>	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: N/A	Test ID: T000177216	Started: 11/23/21	USDA License: N/A
Status: N/A	Methods: TM04 (GC-MS): Residual Solver (Colorado Panel)	Received: hts 11/18/2021 @ 09:09 AM	Sampler ID: N/A

# **RESIDUAL SOLVENTS DETERMINATION**

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	97 - 1947	*ND	-
Butanes (Isobutane, n-Butane)	195 - 3894	*ND	
Methanol	59 - 1190	*ND	
Pentane	81 - 1617	*ND	
Ethanol	86 - 1722	*ND	
Acetone	95 - 1900	*ND	
Isopropyl Alcohol	101 - 2014	*ND	
Hexane	6 - 116	*ND	
Ethyl Acetate	97 - 1945	*ND	
Benzene	0.2 - 3.9	*ND	
Heptanes	91 - 1821	*ND	
Toluene	18 - 352	*ND	
Xylenes	127 - 2548	*ND	
(m,p,o-Xylenes)	127 - 2340	ND	

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Ryan Weems 23-Nov-21 4:06 PM

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Karen Winternheimer 23-Nov-21 4:08 PM

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#### Definitions

Laboratories, LLC.

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



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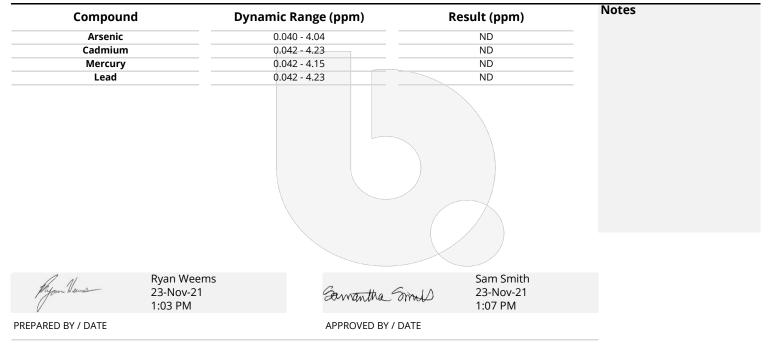
Prepared for:

#### **ORGANIC Full Spectrum Oil**

**Straight Hemp** 

Batch ID or Lot Number: <b>OO21321</b>	Test: <b>Metals</b>	Reported: <b>11/23/21</b>	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Unit Co	Test ID: T000177215	Started: 11/22/21	USDA License: N/A
Status: N/A	Method: TM19 (ICP-MS): Heavy Metals (Colorado Panel)	Received: 11/18/2021 @ 09:09 AM	Sampler ID: N/A

## HEAVY METALS DETERMINATION



#### Definitions

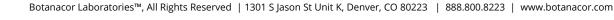
ND = None Detected (Defined by Dynamic Range of the method)



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ACCREDITED

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CERTIFICATE OF ANALYSIS

Prepared for:

#### **ORGANIC Full Spectrum Oil**

#### **Straight Hemp**

Batch ID or Lot Number: <b>OO21321</b>	Test: <b>Pesticides</b>	Reported: <b>11/24/21</b>	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix:	Test ID:	Started:	USDA License:
Concentrate	T000177212	11/22/21	N/A
Status:	Method:	Received:	Sampler ID:
N/A	TM17(LC-QQQ LC MS/MS):	11/18/2021 @ 09:09 AM	N/A

## **PESTICIDE** DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	33	ND	Fenoxycarb	42	ND	Paclobutrazol	46	ND
Acetamiprid	41	ND	Fipronil	68	ND	Permethrin	293	ND
Avermectin	316	ND	Flonicamid	42	ND	Phosmet	44	ND
Azoxystrobin	50	ND	Fludioxonil	286	ND	Prophos	279	ND
Bifenazate	44	ND	Hexythiazox	45	ND	Propoxur	44	ND
Boscalid	53	ND	Imazalil	276	ND	Pyridaben	284	ND
Carbaryl	42	ND	Imidacloprid	40	ND	Spinosad A	32	ND
Carbofuran	43	ND	Kresoxim-methyl	150	ND	Spinosad D	83	ND
Chlorantraniliprole	54	ND	Malathion	287	ND	Spiromesifen	258	ND
Chlorpyrifos	500	ND	Metalaxyl	45	ND	Spirotetramat	278	ND
Clofentezine	277	ND	Methiocarb	43	ND	Spiroxamine 1	18	ND
Diazinon	268	ND	Methomyl	43	ND	Spiroxamine 2	24	ND
Dichlorvos	271	ND	MGK 264 1	143	ND	Tebuconazole	292	ND
Dimethoate	40	ND	MGK 264 2	117	ND	Thiacloprid	40	ND
E-Fenpyroximate	270	ND	Myclobutanil	46	ND	Thiamethoxam	39	ND
Etofenprox	44	ND	Naled	47	ND	Trifloxystrobin	46	ND
Etoxazole	287	ND	Oxamyl	1500	ND			

Daniel Weidensaul Sam Smith Daniel Wardansen Samantha Small 11/24/2021 11/24/2021 2:30:00 PM 2:36:00 PM APPROVED BY / DATE

#### PREPARED BY / DATE

Definitions LOQ = Limit of Quantification ppb = Parts per Billion

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.





Prepared for:

## **ORGANIC Full Spectrum Oil**

### **Straight Hemp**

Batch ID or Lot Nur <b>0021321</b>	Micro	<sup>Test:</sup> Microbial Contaminants		Reported: <b>11/22/21</b>		Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002	
Matrix: Finished Product		Test ID: T000177213		Started: 11/18/21		USDA License: N/A	
Status: N/A	TM25 (qI TM24, TM	Methods: TM25 (qPCR) TM24, TM26, TM27(Culture Plating): Microbial (Colorado Panel)		ceived: /18/2021 @ 09:09	AM	Samp N/A	oler ID:
MICROBIAL	CONTAMINA	NTS DETE	RMINATIO	NC			
Contaminant	Method	LOD	LLOQ	ULOQ	Result		Notes
Total Aerobic Count*	TM-26, Culture Plating	10^2 CFU/g	10^3 CFU/g	1.5x10^5 CFU/g	None Detecte	d	Free from visual mold, mildew, and foreign

	.,					
Total Coliforms*	TM-27, Culture Plating	10^1 CFU/g	10^2 CFU/g	1.5x10^4 CFU/g	None Detected	mildew, matter
Total Yeast and Mold*	TM-24, Culture Plating	10^1 CFU/g	10^2 CFU/g	1.5x10^4 CFU/g	None Detected	
E. coli (STEC)	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	•
Salmonella	TM-25, PCR	1 CFU/25 g	NA	NA	Absent	

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Eden Thompson-Wright 11/22/2021 12:59:00 PM

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APPROVED BY / DATE

Jackson Osaghae-Nosa 11/22/2021 1:14:00 PM

PREPARED BY / DATE

#### Definitions

LOD = Limit of Detection | LLOQ = Lower Limit of Quantitation | ULOQ = Upper Limit of Quantitation CFU/g = Colony Forming Units per Gram | STEC = Shiga Toxin-Producing *E. coli* \* 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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Prepared for:

#### **ORGANIC Full Spectrum Oil**

**Straight Hemp** 

Batch ID or Lot Number: <b>OO21321</b>	<sup>Test:</sup> <b>Mycotoxins</b>	Reported: <b>11/22/21</b>	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000177217	Started: 11/19/21	USDA License: N/A
Status: N/A	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins (Colorado Panel)	Received: 11/18/2021 @ 09:09 AM	Sampler ID: N/A

## **MYCOTOXIN** DETERMINATION

Compound	Dynamic Range (ppb)		Result (ppb)	Notes	
Ochratoxin A	3 - 136.5		ND	N/A	
Aflatoxin B1			ND		
Aflatoxin B2		1.1 - 33.5	ND		
Aflatoxin G1		1 - 34.1	ND		
Aflatoxin G2		1.2 - 33.2	ND		
Total Aflatoxins (B1, B2, G1	l, and G2)		ND		
Gunonthe Some D	Sam Smith 22-Nov-21		Fym News Ryan Weems 22-Nov-21		
Eamanthe Simul					

#### Definitions

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

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

Invoice Number: 21.1458 PO Number: Received Date: 11/19/2021 Number of Samples: 01 Project Name: **Routine Testing** 

#### **Microbiology Report:**

Lab #: 21-12191	S	Sample Lot: OO21321		Sample Date: 11/18/2021	
Sample Name: Organic Full S	A	Additional ID:		Plated Date: 11/19/2021	
Qualifying Material Number: No QM				3	
Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 43-NF 38	3<2021> 11/22/2021
Coliforms	nd	cfu/ml	10	Bam C4 sec G	11/20/2021
E. coli	absent	P/A	1	USP 43-NF 38	3 <2022> 11/22/2021
Staph aureus	absent	P/A	1	USP 43-NF 38	3 <2022> 11/22/2021
Yeast	nd	cfu/ml	10	USP 43-NF 38	3 <2021> 11/24/2021
Mold	nd	cfu/ml	10	USP 43-NF 38	3 <2021> 11/24/2021
Salmonella	absent	P/A	1 -	USP 43-NF 38	3 <2022> 11/23/2021
Pseudo. aeruginosa	absent	P/A		USP 43-NF 38	3 <m62> 11/22/2021</m62>

# onering Companies with Approved By: QA Director SMV 11/24/2021



Malter

Page 1 of 2



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# **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. 58<sup>th</sup> Ave, Ste 5 Arvada, CO 80002 Phone: 970-214-7814

Invoice Number: 21.1458 PO Number: Received Date: 11/19/2021 Number of Samples: 01 Project Name: **Routine Testing** 

#### **Microbiology Report:**

Lab #: Control 11192021		Ade	ditional ID: Negative	Plated Date: 11/19/2021	
Sample Name: Control 111	92021				
Qualifying Material Numbe	er: QM-06-001			3	
Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 43-NF 38	<2021> 11/22/2021
Coliforms	nd	cfu/ml	10	Bam C4 sec G	11/20/2021
E. coli	absent	P/A	1	USP 43-NF 38	<2022> 11/22/2021
Staph aureus	absent	P/A	1	USP 43-NF 38	<2022> 11/22/2021
Yeast	nd	cfu/ml	10	USP 43-NF 38	<2021> 11/24/2021
Mold	nd	cfu/ml	10	USP 43-NF 38	<2021> 11/24/2021
Salmonella	absent	P/A	1 .	USP 43-NF 38	<2022> 11/23/2021
Pseudo. aeruginosa	absent	P/A	1	USP 43-NF 38	<m62> 11/22/2021</m62>

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