

STRAIGHT HEMP

CERTIFICATE OF ANALYSIS

PRODUCT: Full Spectrum Hemp Oil – Certified Organic
BATCH/LOT: OO22306
INGREDIENTS: Organic Hemp Seed Oil, Organic Full Spectrum Hemp Extract, Hemp Terpenes
ADDITIVES: none
EXCIPIENTS: none

PRODUCTION DATE: 11/2022
EXPIRATION DATE: 11/2024

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Identity	Organoleptic	Conforming	PASS
Identity	HPLC-DAD	Chemical Fingerprint	PASS
Total Cannabidiol (CBD) ⁱ	HPLC-DAD	36.7 – 42.3 mg/g	40.16 mg/g ⁱⁱ
Total Tetrahydrocannabinol (THC) ⁱⁱⁱ	HPLC-DAD	NMT 0.30%	0.165%
Terpene assay ^{iv}	HS-GC/MS	n/e	3,268 ppm
Microbiological^v			
Total Plate Count	TM-26	NMT 10,000 cfu/g	PASS
Total Yeast & Mold	TM-24	NMT 1,000 cfu/g	PASS
Total Coliforms	TM-27	NMT 1,000 cfu/g	PASS
<i>E. coli</i>	TM-25	Absent/25g	PASS
<i>Salmonella</i>	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^{vi}			
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

ⁱ Total CBD = CBD + (0.877*CBDA) to account for loss of acid group during decarboxylation

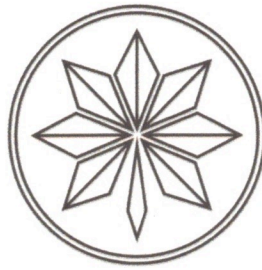
ⁱⁱ Corresponds to **37.1 mg/ml**

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

^{iv} Sum of terpene assay (n=22)

^v Microbiological limits based on USP, WHO, and/or NSF/ANSI

^{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



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EXCIPIENTS: none


PRODUCTION DATE: 11/2022
EXPIRATION DATE: 11/2024

TEST	METHOD	SPECIFICATION	RESULTS
Residual Solvents ^{vii}			
Acetone	GC-MS	Below MRL	PASS
Benzene	GC-MS	Below MRL	PASS
Butanes	GC-MS	Below MRL	PASS
Ethanol	GC-MS	Below MRL	PASS
Ethyl Acetate	GC-MS	Below MRL	PASS
Heptanes	GC-MS	Below MRL	PASS
Hexane	GC-MS	Below MRL	PASS
Isopropyl Alcohol	GC-MS	Below MRL	PASS
Methanol	GC-MS	Below MRL	PASS
Pentane	GC-MS	Below MRL	PASS
Propane	GC-MS	Below MRL	PASS
Toluene	GC-MS	Below MRL	PASS
Xylenes	GC-MS	Below MRL	PASS
Pesticides			
Multi-residue panel	UPLC-MS/MS	Below MRL ^{viii}	PASS

NMT = Not More Than

MRL = Method Reporting Limit

n/e = not established


David Cole
Director of Quality

11/18/22
Date

^{vii} 21 solvent panel may also include: 1,1-Dichloroethene, 1,2-Dichloroethane, Acetonitrile, Chloroform, Ethyl Ether, Ethylene Oxide, Methylene Chloride, Trichloroethylene.

^{viii} 50 residue panel

Prepared for:

ORGANIC Full Spectrum Hemp Oil

Straight Hemp

Batch ID or Lot Number: 0022306	Test: Potency	Reported: 11/9/22	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
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Matrix: Concentrate	Test ID: T000226806	Started: 11/8/22	USDA License: N/A
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Status: Active	Method: TM14 (HPLC-DAD): Potency - Broad Spectrum Analysis, 0.01% THC	Received: 11/04/2022 @ 11:14 AM	Sampler ID: N/A
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CANNABINOID PROFILE

Compound	LOD (%)	LOQ (%)	Result (%)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.003	0.008	ND	ND	N/A
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.003	0.009	0.165	1.65	
Cannabidiolic acid (CBDA)	0.017	0.058	0.085	0.85	
Cannabidiol (CBD)	0.016	0.057	3.941	39.41	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.020	0.060	ND	ND	
Cannabinolic Acid (CBNA)	0.012	0.035	ND	ND	
Cannabinol (CBN)	0.005	0.016	0.021	0.21	
Cannabigerolic acid (CBGA)	0.017	0.051	ND	ND	
Cannabigerol (CBG)	0.004	0.012	0.042	0.42	
Tetrahydrocannabivarinic Acid (THCVA)	0.014	0.043	ND	ND	
Tetrahydrocannabivarin (THCV)	0.004	0.011	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.007	0.024	ND	ND	
Cannabidivarin (CBDV)	0.004	0.013	0.018	0.18	
Cannabichromenic Acid (CBCA)	0.007	0.020	ND	ND	
Cannabichromene (CBC)	0.007	0.021	0.138	1.38	
Total Cannabinoids			4.410	44.10	
Total Potential THC**			0.165	1.65	
Total Potential CBD**			4.016	40.16	

Prepared by: *Sam Smith*
Sam Smith
9-Nov-22
11:07 AM

Approved by: *K Winternheimer*
Karen Winternheimer
9-Nov-22
11:10 AM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

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

** 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 SC Laboratories, Inc. 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. All decision rulings are in accordance with the MED and results uploaded to METRC. This report may not be reproduced, except in full, without the written approval of SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited A2LA Certificate Number 4329.01

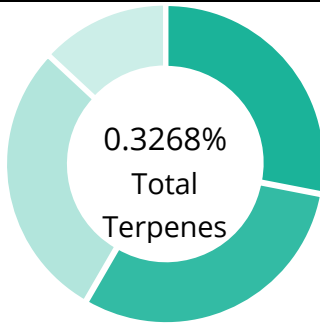


Certificate #4329.02

ORGANIC Full Spectrum Hemp Oil

Batch ID: OO22306	Test ID: T000226807
Type: Concentrate	Submitted: 11/04/2022 @ 11:14 AM
Test: Terpenes	Started: 5/16/2022
Method: TM22 (GC-MS)	Reported: 11/11/2022

TERPENE PROFILE



Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.0000	0.000
Camphene	0.0000	0.000
delta-3-Carene	0.0000	0.000
beta-Caryophyllene	0.0934	0.934
(-)-Caryophyllene Oxide	0.0000	0.000
p-Cymene	0.0000	0.000
Eucalyptol	0.0000	0.000
Geraniol	0.0000	0.000
alpha-Humulene	0.0427	0.427
(-)-Isopulegol	0.0000	0.000
d-Limonene	0.0000	0.000
Linalool	0.0000	0.000
beta-Myrcene	0.0990	0.990
cis-Nerolidol	0.0000	0.000
trans-Nerolidol	0.0000	0.000
Ocimene	0.0000	0.000
beta-Ocimene	0.0000	0.000
alpha-Pinene	0.0000	0.000
(-)-beta-Pinene	0.0917	0.917
alpha-Terpinene	0.0000	0.000
gamma-Terpinene	0.0000	0.000
Terpinolene	0.0000	0.000
	0.3268	3.268


PREDOMINANT TERPENES


alpha-Pinene	0.0000
(-)-beta-Pinene	0.0917
beta-Myrcene	0.0990
delta-3-Carene	0.0000
alpha-Terpinene	0.0000
d-Limonene	0.0000
Linalool	0.0000
beta-Caryophyllene	0.0934
alpha-Humulene	0.0427
(-)-alpha-Bisabolol	0.0000

NOTES:

N/A

FINAL APPROVAL


Karen Winternheimer
11-Nov-2022
4:32 PM


Sam Smith
11-Nov-2022
4:34 PM

PREPARED BY / DATE

APPROVED BY / DATE

Testing results are based solely upon the sample submitted to SC Laboratories, Inc. 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. All decision rulings are in accordance with the MED and results uploaded to METRC. This report may not be reproduced, except in full, without the written approval of SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited A2LA Certificate Number 4329.01



Certificate #4329.02


Prepared for:

ORGANIC Full Spectrum Hemp Oil
Straight Hemp


Batch ID or Lot Number: 0022306	Test: Metals	Reported: 11/10/22	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Unit Co	Test ID: T000226809	Started: 11/10/22	USDA License: N/A
Status: Active	Method: TM19 (ICP-MS): Heavy Metals	Received: 11/04/2022 @ 11:14 AM	Sampler ID: N/A

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)	Notes
Arsenic	0.037 - 3.65	ND	
Cadmium	0.036 - 3.56	ND	
Mercury	0.034 - 3.42	ND	
Lead	0.034 - 3.43	ND	


 Sam Smith
 10-Nov-22
 3:50 PM

PREPARED BY / DATE


 Karen Winterheimer
 10-Nov-22
 4:12 PM

APPROVED BY / DATE

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.



Certificate #4329.02

Prepared for:


ORGANIC Full Spectrum Hemp Oil


Straight Hemp

Batch ID or Lot Number: 0022306	Test: Residual Solvents	Reported: 11/9/22	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: N/A	Test ID: T000226810	Started: 11/9/22	USDA License: N/A
Status: Active	Methods: TM04 (GC-MS): Residual Solvents	Received: 11/04/2022 @ 11:14 AM	Sampler ID: N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)	Notes
Propane	95 - 1907	*ND	
Butanes (Isobutane, n-Butane)	189 - 3779	*ND	
Methanol	64 - 1274	*ND	
Pentane	106 - 2128	*ND	
Ethanol	105 - 2102	*ND	
Acetone	108 - 2155	*ND	
Isopropyl Alcohol	116 - 2318	*ND	
Hexane	6 - 130	*ND	
Ethyl Acetate	110 - 2199	*ND	
Benzene	0.2 - 4.6	*ND	
Heptanes	112 - 2232	*ND	
Toluene	19 - 386	*ND	
Xylenes (m,p,o-Xylenes)	141 - 2824	*ND	

 Sam Smith
9-Nov-22
1:56 PM

 Karen Winternheimer
9-Nov-22
1:57 PM

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APPROVED BY / DATE

Definitions

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

Testing results are based solely upon the sample submitted to SC Laboratories, Inc. 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. All decision rulings are in accordance with the MED and results uploaded to METRC. This report may not be reproduced, except in full, without the written approval of SC Laboratories, Inc. ISO/IEC 17025:2017 Accredited A2LA Certificate Number 4329.01



Certificate #4329.02

Prepared for:

ORGANIC Full Spectrum Hemp Oil

Straight Hemp

Batch ID or Lot Number: 0022306	Test: Pesticides	Reported: 11/10/22	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000226808	Started: 11/9/22	USDA License: N/A
Status: N/A	Method: TM17(LC-QQQ LC MS/MS):	Received: 11/04/2022 @ 11:14 AM	Sampler ID: N/A

PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	40	ND	Fenoxycarb	41	ND	Paclobutrazol	41	ND
Acetamiprid	37	ND	Fipronil	31	ND	Permethrin	276	ND
Abamectin	257	ND	Flonicamid	42	ND	Phosmet	42	ND
Azoxystrobin	41	ND	Fludioxonil	298	ND	Prophos	275	ND
Bifenazate	41	ND	Hexythiazox	41	ND	Propoxur	40	ND
Boscalid	33	ND	Imazalil	265	ND	Pyridaben	281	ND
Carbaryl	38	ND	Imidacloprid	43	ND	Spinosad A	32	ND
Carbofuran	40	ND	Kresoxim-methyl	150	ND	Spinosad D	46	ND
Chlorantraniliprole	43	ND	Malathion	285	ND	Spiromesifen	257	ND
Chlorpyrifos	500	ND	Metalaxyl	40	ND	Spirotetramat	265	ND
Clofentezine	270	ND	Methiocarb	39	ND	Spiroxamine 1	18	ND
Diazinon	281	ND	Methomyl	36	ND	Spiroxamine 2	22	ND
Dichlorvos	281	ND	MGK 264 1	164	ND	Tebuconazole	279	ND
Dimethoate	38	ND	MGK 264 2	105	ND	Thiacloprid	40	ND
E-Fenpyroximate	272	ND	Myclobutanil	13	ND	Thiamethoxam	36	ND
Etofenprox	40	ND	Naled	53	ND	Trifloxystrobin	42	ND
Etoxazole	284	ND	Oxamyl	1500	ND			

K Winternheimer
Karen Winternheimer
11/10/2022
12:28:00 PM

Samantha Smith
Sam Smith
11/10/2022
12:30:00 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

LOQ = Limit of Quantification
ppb = Parts per Billion

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Certificate #4329.02

Prepared for:

ORGANIC Full Spectrum Hemp Oil

Straight Hemp

Batch ID or Lot Number: 0022306	Test: Mycotoxins	Reported: 11/9/22	Location: 5135 W 58th Ave, Unit 5 Arvada, CO 80002
Matrix: Concentrate	Test ID: T000226811	Started: 11/8/22	USDA License: N/A
Status: Active	Method: TM18 (UHPLC-QQQ LCMS/MS): Mycotoxins	Received: 11/04/2022 @ 11:14 AM	Sampler ID: N/A

MYCOTOXIN DETERMINATION

Compound	Dynamic Range (ppb)	Result (ppb)	Notes
Ochratoxin A	4 - 132.1	ND	N/A
Aflatoxin B1	0.9 - 32.8	ND	
Aflatoxin B2	0.9 - 33.1	ND	
Aflatoxin G1	1 - 33.2	ND	
Aflatoxin G2	1 - 33.6	ND	
Total Aflatoxins (B1, B2, G1, and G2)		ND	

Samantha Smith
Sam Smith
9-Nov-22
7:30 AM

K Winterheimer
Karen Winterheimer
9-Nov-22
7:36 AM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

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

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Certificate #4329.02

**EMSL Analytical, Inc.**

5700 Memorial Highway, Suite 122, Tampa, FL 33615
 Phone/Fax: (813)280-8752 / (813)280-8753
www.EMSL.com www.FoodTestingLab.com www.ShelfLifeStudy.com

EMSL Order #: **932206544**
 Customer ID: **SHMP75**
 Customer PO:

Attn: **David Cole**
Straight Hemp
4927 SW 41st Blvd
Suite 40-50
Gainesville, FL 32608

Phone:
 Fax: **Not Available**

Project: **OO22306**

Date Collected: **11/03/2022**
 Date Received: **11/4/2022**
 Date Analyzed: **11/9/2022**

Report Date: 11/9/2022

Revision: R0

Food Microbiology Analytical Report

Lab Sample #: 932206544-0001

Sample Identification: Full Spectrum Hemp Oil - OO22306

<u>Test Parameter</u>	<u>Result</u>	<u>Detection Limit</u>	<u>Methods</u>	<u>Comment</u>
Aerobic Plate Count	<10 CFU / mL	10 CFU / mL	PF-AOAC990.12	
Yeast	<10 CFU / mL	10 CFU / mL	PF-AOAC997.02	
Mold	<10 CFU / mL	10 CFU / mL	PF-AOAC997.02	
Total Coliform	<10 CFU / mL	10 CFU / mL	PF-AOAC991.14, 998.08	
E.coli	<10 CFU / mL	10 CFU / mL	PF-AOAC991.14, 998.08	
Staphylococcus aureus	<10 CFU / mL	10 CFU / mL	PF-AOAC2003.07, 2003.08, 2003.11	



EMSL Analytical, Inc.

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Phone/Fax: (813)280-8752 / (813)280-8753
www.EMSL.com www.FoodTestingLab.com www.ShelfLifeStudy.com

EMSL Order #: **932206544**
Customer ID: **SHMP75**
Customer PO:

Attn: **David Cole**
Straight Hemp
4927 SW 41st Blvd
Suite 40-50
Gainesville, FL 32608

Project: **OO22306**

Phone:
Fax: **Not Available**

Date Collected: **11/03/2022**
Date Received: **11/4/2022**
Date Analyzed: **11/9/2022**

Signature Page

Report Date

11/9/2022

Report Revision

R0

Revision Comments

Initial Report

Gerald Iannuzzi, Laboratory Manager

or other approved signatory

About us



EMSL Analytical, Inc. offers a full line of analytical solutions for over 30 years across North America. For more information about our nationally accredited locations, vast line of testing services, and our food safety solutions please visit www.EMSL.com or call (800) 220-3675.



Disclaimers

Presence / Absence (P/A) tests are enrichment-based and thus will not have a strict detection limit calculation, for the purposes of determining the sensitivity to apply, the amount of sample tested is listed. The term "None Detected" or "Absent" denotes that the microorganism / group was not recovered at or above the listed detection limit, but does not necessarily denote "zero level" or absence of that parameter.

NOTE: These results are valid only for those samples analyzed, and only for those samples collected in accordance with appropriate methodology as determined by the customer. This report is not intended for FDA Import Detention Reporting, and has not been prepared in compliance with FDA Import / Export regulations. The results herein do not denote or represent a medical or clinical diagnosis or conclusion. In the event that sample(s) were submitted in opened, used, non-sterile or otherwise adulterated condition, EMSL shall not be responsible or liable. Only data derived directly from analysis conducted by the laboratory has been validated. The results reported herein are for summary purposes only and do not represent any opinion or conclusion on the part of EMSL Analytical, Inc. "Analysis Date" represents latest date of analysis for samples included on report. Analysis dates for all samples are available upon request. Samples received in good condition, unless otherwise noted. This report may not be reproduced, except in full, without written approval by an authorized EMSL representative.