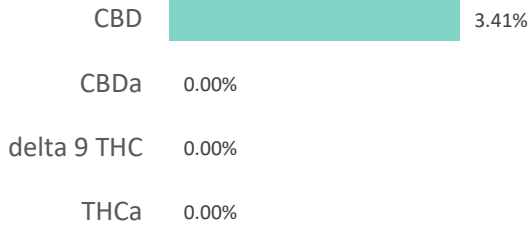
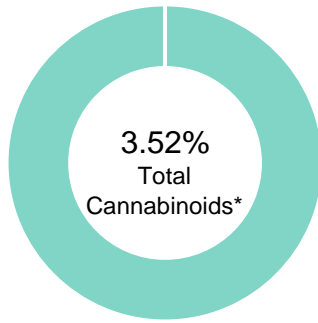


K10006

Batch ID:	K10006	Test ID:	4648115.0030
Reported:	4-Feb-2020	Method:	TM14
Type:	Concentrate		
Test:	Potency		

CANNABINOID PROFILE


Compound	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.07	0.00	0.0
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.03	0.00	0.0
Cannabidiolic acid (CBDA)	0.05	0.00	0.0
Cannabidiol (CBD)	0.03	3.41	34.1
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.04	0.00	0.0
Cannabinolic Acid (CBNA)	0.09	0.00	0.0
Cannabinol (CBN)	0.04	0.00	0.0
Cannabigerolic acid (CBGA)	0.06	0.00	0.0
Cannabigerol (CBG)	0.03	0.00	0.0
Tetrahydrocannabivarinic Acid (THCVA)	0.06	0.00	0.0
Tetrahydrocannabivarin (THCV)	0.03	0.00	0.0
Cannabidivarinic Acid (CBDVA)	0.04	0.00	0.0
Cannabidivarin (CBDV)	0.02	0.03	0.3
Cannabichromenic Acid (CBCA)	0.05	0.00	0.0
Cannabichromene (CBC)	0.06	0.08	0.8
Total Cannabinoids		3.52	35.20
Total Potential THC**		0.00	0.00
Total Potential CBD**		3.41	34.10

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.

$$\text{Total THC} = \text{THC} + (\text{THCa} * (0.877)) \text{ and Total CBD} = \text{CBD} + (\text{CBDa} * (0.877))$$
FINAL APPROVAL


Daniel Weidensaul
4-Feb-2020
4:58 PM

PREPARED BY / DATE



Greg Zimpfer
4-Feb-2020
9:11 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



Certificate #4329.02

K10006

Batch ID:	K10006	Test ID:	T000057325
Reported:	3-Feb-2020	Method:	Concentrate - Test Methods: TM05, TM06
Type:	Concentrate		
Test:	Microbial Contaminants		

MICROBIAL CONTAMINANTS

Contaminant	Result (CFU/g)*
Total Aerobic Count**	None Detected
Total Coliforms**	None Detected
Total Yeast and Molds**	None Detected
<i>E. coli</i>	None Detected
<i>Salmonella</i>	None Detected

* CFU/g = Colony Forming Unit 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: $10^2 = 100$ CFU
 $10^3 = 1,000$ CFU
 $10^4 = 10,000$ CFU
 $10^5 = 100,000$ CFU

NOTES:

Free from visual mold, mildew, and foreign matter

TYM: None Detected

Total Aerobic: None Detected

Coliforms: None Detected

FINAL APPROVAL

	Sarah Henning 3-Feb-2020 3:02 PM		Greg Zimpfer 3-Feb-2020 6:11 PM
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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 4329.03



Certificate #4329.03

Certificate of Analysis

Elixinol, LLC

555 Burbank St. Unit J
Broomfield Colorado 80020 United States

Sample Name:	960056	Eurofins Sample:	8562576
Project ID	ELIXINOL-20190621-0046	Receipt Date	21-Jun-2019
PO Number		Receipt Condition	Ambient temperature
Lot Number	960056	Login Date	21-Jun-2019
Sample Serving Size		Date Started	22-Jun-2019
		Online Order	13484-11CF9D12

Analysis

Result

E.coli and Coliforms (Petrifilm)

Total coliforms	<10 CFU/mL
Escherichia Coli	<10 CFU/mL

Multi-Residue Analysis for hemp products - 60+ compounds

Matrix Type - To Determine Limit of Quantification (LOQ)	High-Fat Food Matrices
Abamectin	<0.05 mg/kg
Aldicarb	<0.05 mg/kg
Aldicarb sulfone (Aldoxycarb)	<0.05 mg/kg
Aldicarb sulfoxide	<0.05 mg/kg
Azoxystrobin	<0.05 mg/kg
Bifenazate	<0.05 mg/kg
Bifenthrin	<0.05 mg/kg
Carbaryl	<0.05 mg/kg
Carbofuran	<0.05 mg/kg
Carbofuran-3-hydroxy-	<0.05 mg/kg
Chlorantraniliprole	<0.05 mg/kg
Chlordane, cis-	<0.05 mg/kg
Chlordane, trans-	<0.05 mg/kg
Chlorfenapyr	<0.05 mg/kg
Chlorpyrifos	<0.05 mg/kg
Coumaphos	<0.05 mg/kg
Cyfluthrin	<0.05 mg/kg
Cypermethrin	<0.05 mg/kg
Cyproconazole (2 diastereoisomers)	<0.05 mg/kg
Cyprodinil	<0.05 mg/kg
Dichlorvos	<0.05 mg/kg
Diclobutrazol	<0.05 mg/kg
Dipropetryn	<0.05 mg/kg
Disulfoton	<0.05 mg/kg
Endosulfan I (alpha-isomer)	<0.05 mg/kg

* This analysis or component is not ISO accredited.

Certificate of Analysis

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Broomfield Colorado 80020 United States

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Project ID	ELIXINOL-20190621-0046	Receipt Date	21-Jun-2019
PO Number		Receipt Condition	Ambient temperature
Lot Number	960056	Login Date	21-Jun-2019
Sample Serving Size		Date Started	22-Jun-2019
		Online Order	13484-11CF9D12

Analysis

Result

Multi-Residue Analysis for hemp products - 60+ compounds

Endosulfan II (beta-isomer)	<0.05 mg/kg
Endosulfan sulfate	<0.05 mg/kg
Epoxiconazole	<0.05 mg/kg
Ethiofencarb	<0.05 mg/kg
Etofenprox	<0.05 mg/kg
Etoxazole	<0.05 mg/kg
Fenoxycarb	<0.05 mg/kg
Fenpropathrin	<0.05 mg/kg
Fenvalerate/Esfenvalerate (sum of isomers)	<0.05 mg/kg
Fipronil	<0.05 mg/kg
Fipronil desulfinyl	<0.05 mg/kg
Fipronil sulfone	<0.05 mg/kg
Imazalil	<0.05 mg/kg
Imidacloprid	<0.05 mg/kg
Malathion	<0.05 mg/kg
Methiocarb	<0.05 mg/kg
Methiocarb sulfone	<0.05 mg/kg
Methiocarb sulfoxide	<0.05 mg/kg
Methomyl	<0.05 mg/kg
Mevinphos (E- and Z-isomers)	<0.05 mg/kg
Myclobutanil	<0.05 mg/kg
Naled (Dibrom)	<0.05 mg/kg
Paclobutrazol	<0.05 mg/kg
Permethrin (sum of isomers)	<0.05 mg/kg
Propoxur	<0.05 mg/kg
Spinetoram (spinosyns J and L)	<0.05 mg/kg
Spinosad (spinosyns A and D)	<0.05 mg/kg
Spirodiclofen	<0.05 mg/kg
Spiromesifen	<0.05 mg/kg

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Lot Number	960056	Login Date	21-Jun-2019
Sample Serving Size		Date Started	22-Jun-2019
		Online Order	13484-11CF9D12

Analysis

Result

Multi-Residue Analysis for hemp products - 60+ compounds

Spiromesifen enol	<0.05 mg/kg
Spirotetramat	<0.05 mg/kg
Spiroxamine (2 diastereoisomers)	<0.05 mg/kg
Tebuconazole	<0.05 mg/kg
Thiabendazole	<0.05 mg/kg
Thiabendazole-5-hydroxy-	<0.05 mg/kg
Thiacloprid	<0.05 mg/kg
Trifloxystrobin	<0.05 mg/kg
Metolachlor	<0.05 mg/kg
Pyrethrum (total)	<0.50 mg/kg

Analysis	LOQ	Limit	Result	Pass/Fail
Residual Solvents - Class 1, 2a, 2b and 3 *				
1,1,1-Trichloroethane	10 ppm	10 ppm	<10 ppm	Pass
1,1-Dichloroethene	8 ppm	8 ppm	<8 ppm	Pass
1,2-Dichloroethane	5 ppm	5 ppm	<5 ppm	Pass
Benzene	2 ppm	2 ppm	<2 ppm	Pass
Carbon Tetrachloride	4 ppm	4 ppm	<4 ppm	Pass
1,2-Dimethoxyethane	100 ppm	100 ppm	<100 ppm	Pass
1,4-Dioxane	380 ppm	380 ppm	<380 ppm	Pass
Acetonitrile	410 ppm	410 ppm	<410 ppm	Pass
Chlorobenzene	360 ppm	360 ppm	<360 ppm	Pass
Chloroform	60 ppm	60 ppm	<60 ppm	Pass
1,2-Dichloroethene	1870 ppm	1870 ppm	<1870 ppm	Pass
Cumene	70 ppm	70 ppm	<70.0 ppm	Pass
Cyclohexane	3880 ppm	3880 ppm	<3880 ppm	Pass
Methanol	3000 ppm	3000 ppm	<3000 ppm	Pass
Methylbutylketone	50 ppm	50 ppm	<50 ppm	Pass
Methylcyclohexane	1180 ppm	1180 ppm	<1180 ppm	Pass
Methylene Chloride	600 ppm	600 ppm	<600 ppm	Pass
n-Hexane	290 ppm	290 ppm	<290 ppm	Pass

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		Online Order	13484-11CF9D12

Analysis	LOQ	Limit	Result	Pass/Fail
Residual Solvents - Class 1, 2a, 2b and 3 *				
Nitromethane	50 ppm	50 ppm	<50 ppm	Pass
Pyridine	200 ppm	200 ppm	<200 ppm	Pass
Tetrahydrofuran	720 ppm	720 ppm	<720 ppm	Pass
Tetralin	96 ppm	96 ppm	<96.0 ppm	Pass
Toluene	890 ppm	890 ppm	<890 ppm	Pass
Trichloroethylene	80 ppm	80 ppm	<80 ppm	Pass
Xylenes(O,M,P + EB)	2170 ppm	2170 ppm	<2170 ppm	Pass
1-Butanol	200 ppm	5000 ppm	<200 ppm	Pass
1-Pentanol	200 ppm	5000 ppm	<200 ppm	Pass
1-Propanol	200 ppm	5000 ppm	<200 ppm	Pass
2-Butanol	200 ppm	5000 ppm	<200 ppm	Pass
Methylethylketone	200 ppm	5000 ppm	<200 ppm	Pass
3-Methyl-1-butanol	200 ppm	5000 ppm	<200 ppm	Pass
Acetic Acid Butyl Ester	200 ppm	5000 ppm	<200 ppm	Pass
Acetone	200 ppm	5000 ppm	<200 ppm	Pass
Anisole	200 ppm	5000 ppm	<200 ppm	Pass
Diethyl Ether	200 ppm	5000 ppm	<200 ppm	Pass
Ethanol	200 ppm	5000 ppm	<200 ppm	Pass
Ethyl Acetate	200 ppm	5000 ppm	<200 ppm	Pass
Ethyl Formate	500 ppm	5000 ppm	<500 ppm	Pass
2-Methyl-1-propanol	200 ppm	5000 ppm	<200 ppm	Pass
Isobutyl Acetate	200 ppm	5000 ppm	<200 ppm	Pass
2-Propanol	200 ppm	5000 ppm	<200 ppm	Pass
Isopropyl Acetate	200 ppm	5000 ppm	<200 ppm	Pass
Methyl Acetate	200 ppm	5000 ppm	<200 ppm	Pass
Methylisobutylketone	200 ppm	5000 ppm	<200 ppm	Pass
tert-Butylmethyl Ether	200 ppm	5000 ppm	<200 ppm	Pass
n-Heptane	200 ppm	5000 ppm	<200 ppm	Pass
n-Pentane	200 ppm	5000 ppm	<200 ppm	Pass
Propyl Acetate	200 ppm	5000 ppm	<200 ppm	Pass

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Sample Name:	960056	Eurofins Sample:	8562576
Project ID	ELIXINOL-20190621-0046	Receipt Date	21-Jun-2019
PO Number		Receipt Condition	Ambient temperature
Lot Number	960056	Login Date	21-Jun-2019
Sample Serving Size		Date Started	22-Jun-2019
		Online Order	13484-11CF9D12

Analysis	LOQ	Limit	Result	Pass/Fail
Residual Solvents - Class 1, 2a, 2b and 3 *				
Total Class 3 Residual Solvents	5000 ppm	5000 ppm	<5000 ppm	Pass

Method References

Testing Location

Aerobic Plate Count (APC)

Food Integ. Innovation-Madison NE

FDA BAM Ch. 3
AOAC 966.23
CMMEF Ch. 8

E.coli and Coliforms (Petrifilm) (ECCOLIPET)

Food Integ. Innovation-Madison NE

AOAC 991.14

Elements by ICP Mass Spectrometry (ICP_MS_S)

Food Integrity Innovation-Madison

Official Methods of Analysis, Method 2011.19 and 993.14, AOAC INTERNATIONAL, (Modified).
Pequette, L.H., Szabo, A., Thompson, J.J., "Simultaneous Determination of Chromium, Selenium, and Molybdenum in Nutritional Products by Inductively Coupled Plasma/Mass Spectrometry: Single-Laboratory Validation," Journal of AOAC International, 94(4): 1240 - 1252 (2011).

Enterobacteriaceae (Bile-Tolerant Gram-Negative Bacteria) (USPN2021)

Food Integ. Innovation-Madison NE

USP Current revision, Chapter 2021.

To satisfy the requirements of the USP, the Preparatory Test must be completed on each matrix.

**Based on the results of the preparatory test, the detection limit stipulated is adequate for the enumeration of the specified microorganisms.

Industrial Hemp Cannabinoid Profile (IHCBD_S)

Food Integrity Innovation-Boulder

Official Methods of Analysis, Method 2018.11, AOAC INTERNATIONAL, (Modified). Lukas Vaclavik, Frantisek Benes, Alex Krmela, Veronika Svobodova, Jana Hajsolva and Katerina Mastovska, "Quantification of Cannabinoids in Cannabis Dried Plant Materials, Concentrates, and Oils Liquid Chromatography-Diode Array Detection Technique with Optional Mass Spectrometric Detection," First Action Method, Journal of AOAC International, Future Issue

* This analysis or component is not ISO accredited.

Certificate of Analysis

Elixinol, LLC

555 Burbank St. Unit J
Broomfield Colorado 80020 United States

Method References	Testing Location
<p>Multi-Residue Analysis for hemp products - 60+ compounds (PEST_HEMP)</p> <p><i>Official Methods of Analysis, AOAC Official Method 2007.01</i>, Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate, AOAC INTERNATIONAL (modified).</p> <p><i>CEN Standard Method EN 15662</i>: Food of plant origin - Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE - QuEChERS method.</p> <p>List of the tested pesticides and their limits of quantification (LOQs) are available upon request.</p>	<p>Food Integ. Innovation-Greenfield</p>
<p>Preparatory Testing of Nutritional and Dietary Supplements (USPN_PT)</p>	<p>Food Integ. Innovation-Madison NE</p>
<p>Residual Solvents - Class 1, 2a, 2b and 3 (USPR_S)</p> <p>United States Pharmacopeia, 38nd Rev. - National Formulary 33th Ed., Method <467>, USP Convention, Inc., Rockville, MD (2015). (Modified).</p>	<p>Food Integrity Innovation-Madison</p>
<p>Salmonella (BAX) PCR Detection (SALBAX)</p> <p>AOAC 2003.09; DuPont Qualicon BAX System User Guide, Part Number 2CQ-049. 13-0713-V3.3, 2005-2013.</p>	<p>Food Integ. Innovation-Madison NE</p>
<p>Yeast and Mold Plate Count (YM_SPRD)</p> <p>Compendium of Methods for the Microbiological Examination of Foods, Yeasts and Molds, 4th Edition, Chapter 20, 2001, (Modified)</p>	<p>Food Integ. Innovation-Madison NE</p>

Certificate of Analysis

Elixinol, LLC

555 Burbank St. Unit J
Broomfield Colorado 80020 United States

Testing Location(s)

Released on Behalf of Eurofins by

Food Integrity Innovation-Boulder

Eurofins Food Chemistry Testing US, Inc.
2830 Wilderness Pl
Boulder CO 80301
800-675-8375

Ian Laessig - Manager



AT-1816

Food Integ. Innovation-Greenfield

Eurofins Food Chemistry Testing US, Inc.
671 S. Meridian Road
Greenfield IN 46140
800-675-8375

Karelyn Koehn - Manager



2918.06

Food Integrity Innovation-Madison

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Madison WI 53704
800-675-8375

Edward Ladwig - Director



2918.01

Food Integ. Innovation-Madison NE

Eurofins Food Chemistry Testing US, Inc.
2102 Wright Street
Madison WI 53704
800-675-8375

Richard Higby - Director



2918.05

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