

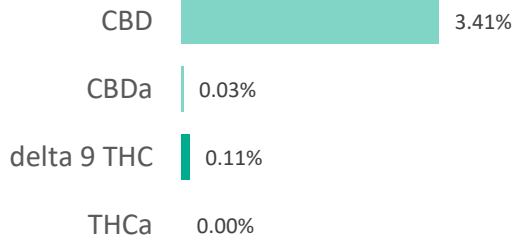
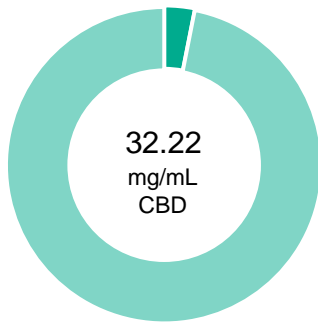


prepared for: Elixinol LLC  
10170 Church Ranch Way, Ste 400  
Westminster, CO 80021

KA0002

<b>Batch ID:</b>	KA0002	<b>Test ID:</b>	T000103795
<b>Type:</b>	Solution	<b>Submitted:</b>	10/16/2020 @ 02:29 PM
<b>Test:</b>	Potency	<b>Started:</b>	10/19/2020
<b>Method:</b>	TM14	<b>Reported:</b>	10/21/2020

### CANNABINOID PROFILE



Compound	LOQ (mg/mL)	Result (mg/mL)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.71	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.35	1.06	1.1
Cannabidiolic acid (CBDA)	0.19	0.27	0.3
Cannabidiol (CBD)	0.42	32.22	34.1
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.38	ND	ND
Cannabinolic Acid (CBNA)	0.98	ND	ND
Cannabinol (CBN)	0.43	ND	ND
Cannabigerolic acid (CBGA)	0.62	ND	ND
Cannabigerol (CBG)	0.35	0.50	0.5
Tetrahydrocannabivarinic Acid (THCVA)	0.60	ND	ND
Tetrahydrocannabivarin (THCV)	0.31	ND	ND
Cannabidivarinic Acid (CBDVA)	0.19	ND	ND
Cannabidivarin (CBDV)	0.10	ND	ND
Cannabichromenic Acid (CBCA)	0.54	ND	ND
Cannabichromene (CBC)	0.63	1.18	1.2
<b>Total Cannabinoids</b>		<b>35.23</b>	<b>37.2</b>
Total Potential THC**		1.06	1.1
Total Potential CBD**		32.46	34.3

#### NOTES:

Density = 0.946g/mL

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

	Tyler Wiese 21-Oct-2020 6:30 PM		Greg Zimpfer 21-Oct-2020 8:15 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 4329.02



Certificate #4329.02

KA0002

<b>Batch ID:</b>	KA0002	<b>Test ID:</b>	T000103796
<b>Type:</b>	Concentrate	<b>Submitted:</b>	10/16/2020 @ 02:29 PM
<b>Test:</b>	Microbial Contaminants	<b>Started:</b>	10/20/2020
<b>Method:</b>	TM24, TM25, TM26, TM27, TM28	<b>Reported:</b>	10/23/2020

**MICROBIAL CONTAMINANTS**

Contaminant	Result (CFU/g)*
<b>Total Aerobic Count**</b>	None Detected
<b>Total Coliforms**</b>	None Detected
<b>Total Yeast and Molds**</b>	None Detected
<b>E. coli</b>	Absent
<b>STEC and 0157 E. coli</b>	None Detected
<b>Salmonella</b>	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  
23-Oct-2020  
11:56 AM  
Ben Minton  
23-Oct-2020  
12:46 PM

PREPARED BY / DATE

APPROVED BY / DATE

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Certificate #4329.03

## Certificate of Analysis

### Elixinol, LLC

10170 Church Ranch  
Westminster Colorado 80021 United States

<b>Sample Name:</b>	<b>20-09-0005</b>	<b>Eurofins Sample:</b>	<b>9887746</b>
<b>Project ID</b>	ELIXINOL-20200925-0076	<b>Receipt Date</b>	28-Sep-2020
<b>PO Number</b>	CVD	<b>Receipt Condition</b>	Ambient temperature
<b>Lot Number</b>	20-09-0005	<b>Login Date</b>	25-Sep-2020
<b>Sample Serving Size</b>		<b>Date Started</b>	29-Sep-2020
		<b>Sampled</b>	Sample results apply as received
		<b>Online Order</b>	13484-1430AFAA

Analysis	Result
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#### Elements by ICP Mass Spectrometry

Arsenic	<10.0 ppb
Cadmium	<5.00 ppb
Lead	8.60 ppb
Mercury	<5.00 ppb

#### Enterobacteriaceae Plate Count \*

Enterobacteriaceae	<10 CFU/g
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#### Glyphosate and AMPA

Glyphosate	<100 ng/g
AMPA	<100 ng/g

Analysis	Limit	Result	Pass/Fail
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#### Mycotoxins in Raw Materials

Aflatoxin B1		<0.500 ppb	
Aflatoxin B2		<0.500 ppb	
Aflatoxin G1		<0.500 ppb	
Aflatoxin G2		<0.500 ppb	
Ochratoxin A	20 ppb	<1.00 ppb	Pass
Sum of B1 B2 G1 and G2	20 ppb	<2.00 ppb	Pass

#### Multi-Residue Analysis for hemp products - 60+ compounds

Abamectin	<0.30 mg/kg
Aldicarb	<0.10 mg/kg
Aldicarb sulfone (Aldoxycarb)	<0.10 mg/kg
Aldicarb sulfoxide	<0.10 mg/kg
Azoxystrobin	<0.10 mg/kg
Bifenazate	<0.10 mg/kg
Bifenthrin	<0.10 mg/kg
Carbaryl	<0.10 mg/kg
Carbofuran	<0.10 mg/kg
Carbofuran-3-hydroxy-	<0.10 mg/kg
Chlorantraniliprole	<0.10 mg/kg
Chlordane, cis-	<0.10 mg/kg

\* This analysis or component is not ISO accredited.

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Analysis	Limit	Result	Pass/Fail
<b>Multi-Residue Analysis for hemp products - 60+ compounds</b>			
Chlordane, trans-		<0.10 mg/kg	
Chlorfenapyr		<0.10 mg/kg	
Chlorpyrifos		<0.10 mg/kg	
Coumaphos		<0.10 mg/kg	
Cyfluthrin		<0.10 mg/kg	
Cypermethrin		<0.10 mg/kg	
Cyproconazole (2 diastereoisomers)		<0.10 mg/kg	
Cyprodinil		<0.10 mg/kg	
Dichlorvos		<0.10 mg/kg	
Diclobutrazol		<0.10 mg/kg	
Dipropetryn		<0.10 mg/kg	
Disulfoton		<0.10 mg/kg	
Endosulfan I (alpha-isomer)		<0.20 mg/kg	
Endosulfan II (beta-isomer)		<0.20 mg/kg	
Endosulfan sulfate		<0.20 mg/kg	
Epoxiconazole		<0.10 mg/kg	
Ethiofencarb		<0.10 mg/kg	
Etofenprox		<0.10 mg/kg	
Etoxazole		<0.10 mg/kg	
Fenoxycarb		<0.10 mg/kg	
Fenpropathrin		<0.10 mg/kg	
Fenvalerate/Esfenvalerate (sum of isomers)		<0.20 mg/kg	
Fipronil		<0.10 mg/kg	
Fipronil desulfinyl		<0.10 mg/kg	
Fipronil sulfone		<0.10 mg/kg	
Imazalil		<0.10 mg/kg	
Imidacloprid		<0.10 mg/kg	
Malathion		<0.10 mg/kg	
Methiocarb		<0.10 mg/kg	
Methiocarb sulfone		<0.10 mg/kg	

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Analysis	Limit	Result	Pass/Fail
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#### Multi-Residue Analysis for hemp products - 60+ compounds

Methiocarb sulfoxide		<0.10 mg/kg	
Methomyl		<0.10 mg/kg	
Mevinphos (E- and Z-isomers)		<0.10 mg/kg	
Myclobutanil		<0.10 mg/kg	
Naled (Dibrom)		<0.10 mg/kg	
Paclobutrazol		<0.10 mg/kg	
Permethrin (sum of isomers)		<0.10 mg/kg	
Propoxur		<0.10 mg/kg	
Spinetoram (spinosyns J and L)		<0.10 mg/kg	
Spinosad (spinosyns A and D)		<0.10 mg/kg	
Spirodiclofen		<0.10 mg/kg	
Spiromesifen		<0.10 mg/kg	
Spirotetramat		<0.10 mg/kg	
Spiroxamine (2 diastereoisomers)		<0.10 mg/kg	
Tebuconazole		<0.10 mg/kg	
Thiabendazole		<0.10 mg/kg	
Thiabendazole-5-hydroxy-		<0.10 mg/kg	
Thiacloprid		<0.10 mg/kg	
Trifloxystrobin		<0.10 mg/kg	
Metolachlor		<0.10 mg/kg	
Pyrethrum (total)		<1.0 mg/kg	

Analysis	LOQ	Limit	Result	Pass/Fail
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#### 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

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Analysis	LOQ	Limit	Result	Pass/Fail
<b>Residual Solvents - Class 1, 2a, 2b and 3</b>				
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
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

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		<b>Sampled</b>	Sample results apply as received
		<b>Online Order</b>	13484-1430AFAA

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

### Method References

### Testing Location

#### Elements by ICP Mass Spectrometry (ICP\_MS\_S)

#### Food Integrity Innovation-Madison

3301 Kinsman Blvd Madison, WI 53704 USA

Official Methods of Analysis, Method 2011.19 and 993.14, AOAC INTERNATIONAL, (Modified).

Paquette, 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 Plate Count (EBPC)

#### EML New Berlin

2345 S 170th St New Berlin, WI 53151 USA

Compendium of Methods for the Microbiological Examination of Foods: Enterobacteriaceae, Coliforms, and Escherichia coli as Quality and Safety Indicators, Chapter 8, 4th Edition, 2001.

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Page 5 of 6

## Certificate of Analysis

### Elixinol, LLC

10170 Church Ranch  
Westminster Colorado 80021 United States

#### Method References

#### Testing Location

##### Glyphosate and AMPA (GLY\_AMP\_A\_S)

##### Food Integrity Innovation-Madison

3301 Kinsman Blvd Madison, WI 53704 USA

Monsanto Company Method ME-1466-02, "High Throughput Assay for Glyphosate and AMPA in Raw Agricultural Commodities and Processed Fractions Using LC/MS/MS".

##### Multi-Residue Analysis for hemp products - 60+ compounds (PEST\_HEMP)

##### Food Integrity Innovation-Madison

3301 Kinsman Blvd Madison, WI 53704 USA

*Official Methods of Analysis, AOAC Official Method 2007.01*, Pesticide Residues in Foods by Acetonitrile Extraction and Partitioning with Magnesium Sulfate, AOAC INTERNATIONAL (modified).

*CEN Standard Method EN 15662*: 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.

List of the tested pesticides and their limits of quantification (LOQs) are available upon request.

##### Mycotoxins in Raw Materials (MYCO\_REG\_S)

##### Food Integrity Innovation-Madison

3301 Kinsman Blvd Madison, WI 53704 USA

Varga, E., Glauner, T., Koppen, R., Mayer, K., Sulyok, M., Schumacher, R., Krska, R. and Berthiller, F., "Stable isotope dilution assay for the accurate determination of mycotoxins in maize by UHPLC-MS/MS," *Analytical and BioAnalytical Chemistry*, 402:2675-2686 (2012).

##### Residual Solvents - Class 1, 2a, 2b and 3 (USPR\_S)

##### Food Integrity Innovation-Madison

3301 Kinsman Blvd Madison, WI 53704 USA

United States Pharmacopeia, 38nd Rev. - National Formulary 33th Ed., Method <467>, USP Convention, Inc., Rockville, MD (2015). (Modified).

#### Testing Location(s)

#### Released on Behalf of Eurofins by

##### Food Integrity Innovation-Madison

Eurofins Food Chemistry Testing Madison, Inc.  
3301 Kinsman Blvd  
Madison WI 53704  
800-675-8375

##### Edward Ladwig - President Eurofins Food Chemistry Testing Madison



2918.01

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Page 6 of 6