

Prepared for:

Calm Dog Chews - 210109
Elixinol LLC


Batch ID or Lot Number: 210109	Test: Potency	Reported: 12/3/21	Location: 10170 Church Ranch Way, Ste 400 Westminster, CO 80021
--	-------------------------	-----------------------------	---

Matrix: Unit	Test ID: T000179397	Started: 12/2/21	USDA License: N/A
-----------------	------------------------	---------------------	----------------------

Status: N/A	Method: TM14 (HPLC-DAD): Potency - Standard Cannabinoid Analysis (Colorado Panel)	Received: 12/01/2021 @ 10:57 AM	Sampler ID: N/A
----------------	--	------------------------------------	--------------------

CANNABINOID PROFILE

Compound	LOD (mg)	LOQ (mg)	Result (mg)	Result (mg/g)	Notes
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.786	2.340	ND	ND	# of Servings = 1 Sample Weight=4.767g
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.887	2.642	ND	ND	
Cannabidiolic acid (CBDA)	0.858	2.691	ND	ND	
Cannabidiol (CBD)	0.837	2.623	7.902	1.66	
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.976	2.909	ND	ND	
Cannabinolic Acid (CBNA)	0.559	1.666	ND	ND	
Cannabinol (CBN)	0.256	0.762	ND	ND	
Cannabigerolic acid (CBGA)	0.819	2.441	ND	ND	
Cannabigerol (CBG)	0.196	0.584	1.452	0.30	
Tetrahydrocannabivarinic Acid (THCVA)	0.693	2.064	ND	ND	
Tetrahydrocannabivarin (THCV)	0.178	0.531	ND	ND	
Cannabidivarinic Acid (CBDVA)	0.358	1.122	ND	ND	
Cannabidivarin (CBDV)	0.198	0.620	ND	ND	
Cannabichromenic Acid (CBCA)	0.316	0.941	ND	ND	
Cannabichromene (CBC)	0.345	1.029	ND	ND	
Total Cannabinoids			9.354	1.96	
Total Potential THC**			ND	ND	
Total Potential CBD**			7.902	1.66	



Jacob Miller
03-Dec-2021
03:50 PM



Karen Winternheimer
3-Dec-21
4:38 PM

PREPARED BY / DATE

APPROVED BY / DATE

Definitions

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

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

** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.

$$\text{Total THC} = \text{THC} + (\text{THCa} * (0.877)) \text{ and}$$

$$\text{Total CBD} = \text{CBD} + (\text{CBDa} * (0.877))$$

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.



CDPHE Certified



Certificate #4329.02

Calm Dog Chews Lot 213108

Batch ID:	213108	Test ID:	T000161731
Matrix:	Finished Product	Received:	09/03/2021 @ 01:54 PM
Test:	Microbial Contaminants	Started:	9/7/2021
Method:	TM25 (qPCR) TM24, TM26, TM27, TM28 (Culture Plating)	Reported:	9/10/2021

MICROBIAL CONTAMINANTS

Contaminant	Method	LOD	LLOQ	ULOQ	Result
Total Aerobic Count*	TM-26 Culture Plating	10 ² CFU/g	10 ³ CFU/g	1.5x10 ⁵ CFU/g	<LLOQ
Total Coliforms*	TM-27 Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	None Detected
Total Yeast and Molds*	TM-24 Culture Plating	10 ¹ CFU/g	10 ² CFU/g	1.5x10 ⁴ CFU/g	<LLOQ
E. coli	TM-28 Culture Plating	1 CFU/g	NA	NA	Absent
E. coli (STEC)	TM-25 PCR	1 CFU/g	NA	NA	Absent
Salmonella	TM-25 PCR	1 CFU/g	NA	NA	Absent

* Values recorded in scientific notation, a common microbial practice of expressing numbers that are too large to be conveniently written in decimal form.

Examples: 10² = 100 CFU
 10³ = 1,000 CFU
 10⁴ = 10,000 CFU
 10⁵ = 100,000 CFU

NOTES:

Free from visual mold, mildew, and foreign matter

DEFINITIONS:


CFU/g = Colony Forming Units per Gram.

LOD = Limit of Detection

ULOQ = Upper Limit of Quantitation

LLOQ = Lower Limit of Quantitation

FINAL APPROVAL


 Brett Hudson
 9/10/2021
 11:23:00 AM

PREPARED BY / DATE


 Brianne Maillot
 9/10/2021
 11:45:00 AM

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. Testing associated with this certificate of analysis performed by an external ISO17025 accredited provider.



Certificate #4329.03

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Sample Name:	Calm Pet Chew - Lot 213108	Eurofins Sample:	10923106
Project ID	ELIXINOL-20210903-0028	Receipt Date	07-Sep-2021
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	Lot 213108	Login Date	03-Sep-2021
Sample Serving Size	1 Chew	Date Started	08-Sep-2021
		Sampled	Sample results apply as received
		Online Order	13484-15F4EB28

Analysis	Result
Calculated Sample Weight *	
Entity Weight	4.2095 g
Elements by ICP Mass Spectrometry	
Arsenic	13.3 ppb
Cadmium	20.9 ppb
Lead	18.4 ppb
Mercury	<5.00 ppb
Enterobacteriaceae Plate Count *	
Enterobacteriaceae	<10 CFU/g
Glyphosate and AMPA	
Glyphosate	232 ng/g
AMPA	<100 ng/g

Analysis	Limit	Result	Pass/Fail
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	

* This analysis or component is not ISO accredited.

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Sample Name:	Calm Pet Chew - Lot 213108	Eurofins Sample:	10923106
Project ID	ELIXINOL-20210903-0028	Receipt Date	07-Sep-2021
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	Lot 213108	Login Date	03-Sep-2021
Sample Serving Size	1 Chew	Date Started	08-Sep-2021
		Sampled	Sample results apply as received
		Online Order	13484-15F4EB28

Analysis	Limit	Result	Pass/Fail
Multi-Residue Analysis for hemp products - 60+ compounds			
Chlorantraniliprole		<0.10 mg/kg	
Chlordane, cis-		<0.10 mg/kg	
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	

* This analysis or component is not ISO accredited.

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Sample Name:	Calm Pet Chew - Lot 213108	Eurofins Sample:	10923106
Project ID	ELIXINOL-20210903-0028	Receipt Date	07-Sep-2021
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	Lot 213108	Login Date	03-Sep-2021
Sample Serving Size	1 Chew	Date Started	08-Sep-2021
		Sampled	Sample results apply as received
		Online Order	13484-15F4EB28

Analysis	Limit	Result	Pass/Fail
----------	-------	--------	-----------

Multi-Residue Analysis for hemp products - 60+ compounds

Methiocarb		<0.10 mg/kg	
Methiocarb sulfone		<0.10 mg/kg	
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		non-analyzable	
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
----------	-----	-------	--------	-----------

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

* This analysis or component is not ISO accredited.

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Sample Name:	Calm Pet Chew - Lot 213108	Eurofins Sample:	10923106
Project ID	ELIXINOL-20210903-0028	Receipt Date	07-Sep-2021
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	Lot 213108	Login Date	03-Sep-2021
Sample Serving Size	1 Chew	Date Started	08-Sep-2021
		Sampled	Sample results apply as received
		Online Order	13484-15F4EB28

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

* This analysis or component is not ISO accredited.

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Sample Name:	Calm Pet Chew - Lot 213108	Eurofins Sample:	10923106
Project ID	ELIXINOL-20210903-0028	Receipt Date	07-Sep-2021
PO Number	CVD	Receipt Condition	Ambient temperature
Lot Number	Lot 213108	Login Date	03-Sep-2021
Sample Serving Size	1 Chew	Date Started	08-Sep-2021
		Sampled	Sample results apply as received
		Online Order	13484-15F4EB28

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

Method References	Testing Location
-------------------	------------------

Calculated Sample Weight (PREP)

Food Integrity Innovation-Madison
6304 Ronald Reagan Ave Madison, WI 53704 USA

Elements by ICP Mass Spectrometry (ICP_MS_S)

Food Integrity Innovation-Madison
6304 Ronald Reagan Ave 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).

* This analysis or component is not ISO accredited.

Printed: 21-Sep-2021 12:12 pm

Page 5 of 7

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Method References

Testing Location

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.

Glyphosate and AMPA (GLY_AMPA_S)

Food Integrity Innovation-Madison

6304 Ronald Reagan Ave 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

6304 Ronald Reagan Ave 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

6304 Ronald Reagan Ave 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

6304 Ronald Reagan Ave Madison, WI 53704 USA

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

* This analysis or component is not ISO accredited.

Printed: 21-Sep-2021 12:12 pm

Page 6 of 7

Certificate of Analysis

Elixinol, LLC

10170 Church Ranch
Westminster Colorado 80021 United States

Testing Location(s)

Released on Behalf of Eurofins by

Food Integrity Innovation-Madison

Eurofins Food Chemistry Testing Madison, Inc.
6304 Ronald Reagan Ave
Madison WI 53704
800-675-8375

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



2918.01

These results apply only to the items tested. This certificate of analysis shall not be reproduced, except in its entirety, without the written approval of Eurofins. Measurement uncertainty for individual analyses can be obtained upon request.