CANNACEA™

Activated 40 Full Spectrum Hemp Oil

Lot ID: **AC4M21A**

Ingredients: Macadamia Nut Oil*, Full Spectrum Hemp Extract*, Hemp Essential Oil*. (*Organic)

ISO/IEC 17025 Laboratory Results

CLICK FOR Supplement Monograph

https://quality.cannacea.life/SM.FSHO.EN.pdf

Sapient Organics LLC – 30262 Crown Valley Parkway B525, Laguna Niguel, CA 92677, USA
email: support@cannacea.life web: www.cannacea.life

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Quality Assurance Summary Report

Product Name: Activated 40 Full Spectrum Hemp Oil
Lot ID: **AC4M21A**
Mass Density: 919.5 mg/mL (milligrams per milliliter)

Production Date: April 29, 2021
Best-By Date: May 2024*
Total Detections: > 98% of Weight

*Stability of core Potency and Purity reverified 8/2023.

Third-party **ISO/IEC 17025 Laboratory Certificates of Analysis** are attached at end of Summary Report.

1 milligram (mg) = 1,000 micrograms (ug) 0.0001% = 1 part(s)-per-milllion (ppm) = 1,000 parts-per-billion (ppb)

POTENCY

PHYTOCANNABINOIDS	Result [a]	per mL [b]	Target	Outcome [c]	per Max. Serving [d]	per Drop [d]	CBD:X
TOTAL* (9 detected)	**4.8%**	**44.2 mg**	≥ 44 mg/mL	**VERIFIED**	**22.1 mg**	**1.1 mg**	**0.89:1**
Cannabidiol* (CBD)	**4.3%**	**39.5 mg**	40 mg/mL	**VERIFIED**	**19.7 mg**	**0.99 mg**	-
Other Phytocannabinoids* (below)	**0.51%**	**4.7 mg**	≥ 4 mg/mL	**VERIFIED**	**2.3 mg**	**0.12 mg**	8.5:1
Total THC* [e]	**0.053%**	**0.49 mg**	≤ 0.2%	**VERIFIED**	**0.24 mg**	**12 ug**	**81:1**
Cannabichromene* (CBC)	0.21%	2.0 mg			0.98 mg	49 ug	20:1
Cannabigerol* (CBG)	0.095%	0.87 mg			0.44 mg	22 ug	45:1
Δ9-Tetrahydrocannabinol* (THC)	**0.053%**	**0.49 mg**	≤ 0.2%	**VERIFIED**	**0.24 mg**	**12 ug**	**81:1**
Cannabicitran* (CBT)	0.047%	0.43 mg			0.21 mg	11 ug	92:1
Cannabielsoin* (CBE)	0.034%	0.31 mg			0.16 mg	8.0 ug	126:1
Cannabidivarin* (CBDV)	0.031%	0.29 mg			0.14 mg	7.1 ug	138:1
Cannabinol* (CBN)	0.025%	0.23 mg			0.11 mg	5.7 ug	172:1
Cannabicyclol* (CBL)	0.009%	86 ug			43 ug	2.1 ug	460:1
CBD:THC Ratio*	**81:1**		> 25:1	**VERIFIED [f]**			
Phytocannabinoids* - 12mL | 25mL	**530 mg**	**1,104 mg**	480+ | 1000+	**VERIFIED**			

PHYTOTERPENES	Result	per mL [b]	Target	Outcome [c]	per Max. Serving [d]	per Drop [d]	% of Fraction
TOTAL*	**0.17%**	**1.6 mg**	≥ 2 mg/mL	**EDGE**	**0.78 mg**	**39 ug**	-
Sesquiterpenes/terpenoids*	0.12%	1.1 mg			0.54 mg	27 ug	69.0%
Monoterpenes/terpenoids*	0.053%	0.48 mg			0.24 mg	12 ug	31.0%
β-Caryophyllene*	0.053%	0.49 mg	Sesquiterpene		0.24 mg	12 ug	31.1%
Humulene*	0.023%	0.21 mg	Sesquiterpene		0.10 mg	5.2 ug	13.3%
β-Myrcene*	0.019%	0.18 mg	Monoterpene		88 ug	4.4 ug	11.3%

[a] Phytocannabinoid % result is an average of results in attached Certificates of Analysis when analyte is quantified by more than one laboratory.
[b] "Mass per mL" results calculated by multiplying analyte result (%, ppm, or ppb) **x** product mass density (Specific Gravity by Columbia Labs).
[c] For Potency target/limit, outcome is "**VERIFIED**" within ±10% (USP) or "**EDGE**" within ±20% (FDA: 21 CFR §101.9.g by §101.36.f.1).
[d] Maximum Suggested Serving Size is 0.5 mL (approximately 20 drops at Room Temperature, hence "per Drop" results are approximate).
[e] "Total THC" sums Δ9-THC, Δ9-THCA (decarboxylated THCA: result x 0.877), and THC/A isomers/homologs (Δ8-THC, Δ9-THCV…) detected.
[f] Variance from target for ratio of 2 analytes is **82% - 122%** by USP limit (90%/110% to 110%/90%), or **67% - 150%** by FDA limit (80%/120% to 120%/80%).

Approved by: Basil Shaaban
Head of Science & QA/QC

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Quality Assurance Summary Report

Lot ID: AC4M21A

PHYTOTERPENES (cont.)	Result	per mL[b]		per Max. Serving[d]	per Drop[d]	% of Fraction
α-Pinene*	0.011%	99 ug	Monoterpene	50 ug	2.5 ug	6.4%
α-Maaliene*	0.010%	94 ug	Sesquiterpene	47 ug	2.3 ug	6.0%
Selinadiene*	0.0080%	74 ug	Sesquiterpene	37 ug	1.8 ug	4.7%
Terpinolene*	0.0073%	67 ug	Monoterpene	34 ug	1.7 ug	4.3%
Geranyl Acetate	0.0055%	51 ug	Monoterpenoid	25 ug	1.3 ug	3.2%
trans-α-Bergamotene*	0.0051%	47 ug	Sesquiterpene	23 ug	1.2 ug	3.0%
α-Bisabolene*	0.0046%	42 ug	Sesquiterpene	21 ug	1.1 ug	2.7%
α-Bisabolol*	0.0045%	41 ug	Sesquiterpenoid	21 ug	1.0 ug	2.7%
cis-β-Farnesene*	0.0044%	40 ug	Sesquiterpene	20 ug	1.0 ug	2.6%
α-Cedrene	0.0044%	40 ug	Sesquiterpene	20 ug	1.0 ug	2.6%
β-Ocimene*	0.0041%	38 ug	Monoterpene	19 ug	0.9 ug	2.4%
α-Phellandrene*	0.0041%	38 ug	Monoterpene	19 ug	0.9 ug	2.4%
Valencene	0.0039%	36 ug	Sesquiterpene	18 ug	0.9 ug	2.3%
β-Maaliene*	0.0037%	34 ug	Sesquiterpene	17 ug	0.9 ug	2.2%
β-Pinene	0.0030%	28 ug	Monoterpene	14 ug	0.7 ug	1.4%
Limonene	0.0018%	17 ug	Monoterpene	8.3 ug	0.4 ug	0.9%
cis-Nerolidol	0.0015%	14 ug	Sesquiterpenoid	6.9 ug	0.3 ug	0.7%
α-Terpinene	0.0013%	12 ug	Monoterpene	6.0 ug	0.3 ug	0.6%
Guaiol	0.0009%	8.0 ug	Sesquiterpenoid	4.0 ug	0.2 ug	0.4%
Eucalyptol	0.0008%	7.4 ug	Monoterpenoid	3.7 ug	0.2 ug	0.4%
trans-Nerolidol	0.0005%	4.1 ug	Sesquiterpenoid	2.1 ug	0.1 ug	0.2%
Fenchone	0.0004%	3.7 ug	Monoterpene	1.8 ug	0.1 ug	0.2%

Phytocannabinoid:Phytoterpene Ratio* (PC:PT)	**28:1**		15:1 – 25:1	**EDGE[f]**
Phytoterpenes* - 12mL | 25mL	**19 mg**	**40 mg**	24+ | 50+	**EDGE**

FLAVONOIDS and PHYTOSTEROLS	Result	per mL[b]		per Max. Serving[d]	per Drop[d]	% of Fraction
TOTAL (4 detected)	**0.140%**	**1.29 mg**		**0.65 mg**	**32 ug**	-
Phytosterols	0.131%	1.21 mg		0.60 mg	30 ug	93.5%
Flavonoids	0.0091%	84 ug		42 ug	2.1 ug	6.5%
β-Sitosterol	0.131%	1.21 mg	Phytosterol	0.60 mg	30 ug	93.5%
Cannflavin A	0.0048%	44 ug	Flavonoid	22 ug	1.1 ug	3.4%
Cannflavin B	0.0024%	22 ug	Flavonoid	11 ug	0.6 ug	1.7%
Cannflavin C	0.0019%	17 ug	Flavonoid	8.7 ug	0.4 ug	1.3%

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FATTY ACIDS	Result [g]	per mL [b]	Target	Outcome [c]	per Max. Serving [d]	per Drop [d]	% of Fraction
TOTAL FAT (12 Fatty Acids detected)	**93.0%**	**855 mg**			**428 mg**	**21 mg**	-
Monounsaturated Fatty Acid (MUFA)	**71.4%**	**656 mg**	> 500 mg/mL	VERIFIED	**328 mg**	**16 mg**	**80.2%**
Omega-9 (ω-9) MUFA	52.4%	482 mg			241 mg	12 mg	58.8%
Omega-7 (ω-7) MUFA	19.0%	175 mg			87 mg	4.4 mg	21.3%
Saturated Fatty Acid (SFA)	15.0%	138 mg			69 mg	3.5 mg	16.9%
Polyunsaturated Fatty Acid (PUFA)	2.6%	24 mg			12 mg	0.60 mg	3.0%
Omega-6 (ω-6) PUFA	2.6%	24 mg			12 mg	0.60 mg	3.0%
Trans Fat	**0.00%**	**0.00 mg**			**0.00 mg**	**0.0 ug**	**0.0%**
C18:1 ω-9 - Oleic Acid	49.9%	459 mg		ω-9 MUFA	229 mg	12 mg	56.0%
C16:1 ω-7 - Palmitoleic Acid	15.6%	143 mg		ω-7 MUFA	72 mg	3.6 mg	17.5%
C16:0 - Palmitic Acid	7.5%	69 mg		SFA	35 mg	1.7 mg	8.4%
C18:1 ω-7 - Vaccenic Acid	3.4%	31 mg		ω-7 MUFA	16 mg	0.78 mg	3.8%
C18:0 - Stearic Acid	3.3%	30 mg		SFA	15 mg	0.76 mg	3.7%
C18:2 ω-6 - Linoleic Acid	2.6%	24 mg		ω-6 PUFA	12 mg	0.60 mg	3.0%
C20:0 - Arachidic Acid	2.5%	23 mg		SFA	12 mg	0.58 mg	2.8%
C20:1 ω-9 - Gondoic Acid	2.3%	21 mg		ω-9 MUFA	10 mg	0.52 mg	2.5%
C22:0 - Behenic Acid	0.78%	7.2 mg		SFA	3.6 mg	0.18 mg	0.9%
C14:0 - Myristic Acid	0.61%	5.6 mg		SFA	2.8 mg	0.14 mg	0.7%
C24:0 - Lignoceric Acid	0.32%	2.9 mg		SFA	1.5 mg	74 ug	0.4%
C22:1 ω-9 - Erucic Acid	0.20%	1.8 mg		ω-9 MUFA	0.92 mg	46 ug	0.2%

NUTRITIONAL MINERALS [h]	Result	per mL [b]	per Max. Serving [d]	per Drop [d]	% of Fraction
TOTAL (9 detected)	**0.012%**	**113 ug**	**56 ug**	**2.8 ug**	-
Phosphorus (P)	66 ppm	61 ug	30 ug	1.5 ug	53.7%
Potassium (K)	32 ppm	29 ug	15 ug	0.7 ug	26.1%
Magnesium (Mg)	18 ppm	16 ug	8.1 ug	0.4 ug	14.5%
Zinc (Zn)	2.0 ppm	1.8 ug	0.9 ug	0.05 ug	1.6%
Calcium (Ca)	2.0 ppm	1.8 ug	0.9 ug	0.05 ug	1.6%
Manganese (Mn)	1.4 ppm	1.2 ug	0.6 ug	0.03 ug	1.1%
Iron (Fe)	1.0 ppm	0.9 ug	0.4 ug	0.02 ug	0.8%
Aluminum (Al)	0.5 ppm	0.5 ug	0.2 ug	0.01 ug	0.4%
Copper (Cu)	0.2 ppm	0.2 ug	0.1 ug	0.004 ug	0.1%

[g] "Total Fat" result represents total triglycerides, while "Fatty Acid" results represent the fatty acid fraction alone (separate from bound glycerols).
[h] As identified by the Food and Nutrition Board (FNB), Institute of Medicine (IOM), U.S. National Academy of Sciences (NAS).

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Head of Science & QA/QC

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PURITY

PESTICIDES	Result	Limit of Resolution [i]	Target	Outcome [j]
467 Pesticides	**Not Detected**	10 - 100 ppb [k]	Not Detected	**VERIFIED**
57 Common Pesticides (2nd screening)	**Not Detected**	1 ppb	Not Detected	**VERIFIED**

GLYPHOSATE and common HERBICIDES	Result	Limit of Resolution [i]	Target	Outcome [j]
Glyphosate	**Not Detected**	24 ppb	Not Detected	**VERIFIED**
Diquat	**Not Detected**	24 ppb	Not Detected	**VERIFIED**
Paraquat	**Not Detected**	24 ppb	Not Detected	**VERIFIED**

SOLVENTS	Result	Limit of Resolution [i]	Target	Outcome [j]
41 Solvents	**Not Detected**	1 - 163 ppm [k]	Not Detected	**VERIFIED**
16 Common Solvents (2nd screening)	**Not Detected**	1 - 2,500 ppm [k]	Not Detected	**VERIFIED**

MICROBIOLOGY	Result	Limit of Resolution [i]	Target	Outcome [j]
Total Aerobic Bacteria Plate Count*	**Not Detected**	10 CFU/g [l]	Not Detected	**VERIFIED**
Bile-Tolerant Gram-Negative Bacteria* (BTGN)	**Absent**	0 CFU/g	Absent	**VERIFIED**
Coliforms	**Not Detected**	10 CFU/g	Not Detected	**VERIFIED**
E. coli* (tested 2x)	**Absent**	0 CFU/g	Absent	**VERIFIED**
Salmonella* (tested 2x)	**Absent**	0 CFU/g	Absent	**VERIFIED**
Staphylococcus aureus	**Absent**	0 CFU/10g	Absent	**VERIFIED**
Pseudomonas aeruginosa	**Absent**	0 CFU/10g	Absent	**VERIFIED**
Yeast* (tested 2x)	**Absent**	0 CFU/g	Absent	**VERIFIED**
Mold* (tested 2x)	**Absent**	0 CFU/g	Absent	**VERIFIED**

[i] Lowest of *Lower Limit of Detection* (LOD/LLOD/MDL), *Lower Limit of Quantification* (LOQ/LLOQ), or *Reporting Limit* (RL) in Certificate(s).
[j] For Purity target/limit, outcome is "**VERIFIED**" if result adheres to the target/limit.
[k] Analyte-specific resolution limits, which are declared in attached Certificate(s).
[l] "CFU/g" = Colony-Forming Units per Gram.

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MYCOTOXINS	Result	Limit of Resolution [i]	Target	Outcome [j]
Aflatoxins* (B1, B2, G1, G2) and **Ochratoxin A***	**Not Detected**	10 ppb (each)	Not Detected	VERIFIED

TOXIC METALS	Result	Limit of Resolution [i]	Target	Outcome [j]
Arsenic* (As) (tested 2x)	**Not Detected**	50 ppb	Not Detected	VERIFIED
Cadmium* (Cd) (tested 2x)	**Not Detected**	50 ppb	Not Detected	VERIFIED
Lead* (Pb) (tested 2x)	**Not Detected**	50 ppb	Not Detected	VERIFIED
Mercury* (Hg) (tested 2x)	**Not Detected**	50 ppb	Not Detected	VERIFIED

WATER ACTIVITY	Result	Target	Outcome [j]
Water Activity*	**0.44 a_w**	< 0.6 a_w [m]	VERIFIED

OIL QUALITY - OXIDATION	Result	Limit of Resolution [i]	Target	Outcome [j]
Peroxide Value* (PV)	**3.2 meq O_2/kg fat**	1.0 meq O_2/kg fat	< 15 meq O_2/kg fat [n]	VERIFIED
para-Anisidine Value* (pAV)	**0.8 pAV**	0.5 pAV	< 20 pAV [o]	VERIFIED

OIL QUALITY - HYDROLYSIS	Result	Limit of Resolution [i]	Target	Outcome [j]
Free Fatty Acids* (FFA)	**0.98 % Oleic Acid**	0.1% Oleic Acid	< 2.0% Oleic Acid [p]	VERIFIED

CANNACEA is committed to these ultimate quality standards
for your well-being, enjoyment, and peace of mind!

[m] USP <1112> "Application of Water Activity Determination to Nonsterile Pharmaceutical Products" safety limit for preventing microbial growth.
[n] FAO CODEX-STAN 210-1999 for virgin & cold-pressed vegetable oils. (meq O_2/kg fat = milliequivalent of active oxygen per kilogram of fat)
[o] GOED Monograph (2021) for omega-3 polyunsaturated oils.
[p] EEC No. 2568/91 for virgin olive oils.

Approved by: Basil Shaaban
Head of Science & QA/QC

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Activated 40 Full Spectrum Hemp Oil

Lot ID: **AC4M21A**

Core Potency & Purity

Stability Reverification

Certificates of Analysis

August 2023

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 23-009343/D004.R000
Report Date: 08/17/2023
Purchase Order:
Received: 08/08/23 10:35 AM

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Sample ID: AC4M21A-SR27
Sample Matrix: Cannabinoid Tincture
Laboratory ID: 23-009343-0001-00
Evidence of Cooling: No
Temp: 25 °C
Relinquished by: Shipping

Sample Results

Microbiology

Micro Profile B-Rapid

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
Aerobic Plate Count	< LOQ	cfu/g	10	08/11/23	AOAC 990.12 (Petrifilm)þ	
Mold (RAPID Petrifilm)	< LOQ	cfu/g	10	08/11/23	AOAC 2014.05 (RAPID)þ	
Yeast (RAPID Petrifilm)	< LOQ	cfu/g	10	08/11/23	AOAC 2014.05 (RAPID)þ	

Potency

Potency Cannabis (Basic+Expanded)

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
CBC	0.219	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBC-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBC-Total	0.219	%	0.0062	08/17/23	J AOAC 2015 V98-6 (mod)þ	
CBD	4.40	%	0.0328	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBD-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBD-Total	4.40	%	0.0357	08/17/23	J AOAC 2015 V98-6 (mod)þ	
CBDV	0.0316	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBDV-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBDV-Total	0.0316	%	0.0061	08/17/23	J AOAC 2015 V98-6 (mod)þ	
CBE	0.0342	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBG	0.0995	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBG-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBG-Total	0.0995	%	0.0061	08/17/23	J AOAC 2015 V98-6 (mod)þ	
CBL	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBL-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBL-Total	< LOQ	%	0.0062	08/17/23	J AOAC 2015 V98-6 (mod)þ	
CBN	0.0273	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
CBT	0.0467	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
Δ10-THC-9R	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
Δ10-THC-9S	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
Δ10-THC-Total	< LOQ	%	0.0066	08/17/23	J AOAC 2015 V98-6 (mod)þ	
Δ8-THC	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 23-009343/D004.R000
Report Date: 08/17/2023
Purchase Order:
Received: 08/08/23 10:35 AM

Potency

Potency Cannabis (Basic+Expanded)

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
Δ8-THCV	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
Δ9-THC	0.0663	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
delta-9-THCP	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
exo-THC	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
THC-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
THC-Total	0.0663	%	0.0062	08/17/23	J AOAC 2015 V98-6 (mod)þ	
THCV	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
THCV-A	< LOQ	%	0.0033	08/10/23	J AOAC 2015 V98-6 (mod)þ	
THCV-Total	< LOQ	%	0.0061	08/17/23	J AOAC 2015 V98-6 (mod)þ	
Total Cannabinoids	4.92	%		08/17/23	J AOAC 2015 V98-6 (mod)þ	

1) Cannabis Potency by HPLC/UV

Abbreviations

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

þ = ISO/IEC 17025:2017 accredited method.

Units of Measure

cfu/g = Colony forming units per gram

% = Percentage of sample

Approved Signatory

Derrick Tanner
General Manager

Revision: 4 Document ID: 7148
Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6 **Batch ID: 2309908**

Laboratory Control Sample

Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDVA	2	0.0319	0.0311	%	103	80.0 - 120	Acceptable	
CBDV	2	0.0316	0.0307	%	103	80.0 - 120	Acceptable	
CBE	2	0.0356	0.0349	%	102	80.0 - 120	Acceptable	
CBDA	1	0.0339	0.0336	%	101	90.0 - 110	Acceptable	
CBGA	1	0.0337	0.0336	%	100	80.0 - 120	Acceptable	
CBG	1	0.0347	0.0344	%	101	80.0 - 120	Acceptable	
CBD	1	0.0356	0.0352	%	101	90.0 - 110	Acceptable	
THCV	2	0.0232	0.0222	%	104	80.0 - 120	Acceptable	
d8THCV	2	0.0275	0.0272	%	101	80.0 - 120	Acceptable	
THCVA	2	0.0319	0.0310	%	103	80.0 - 120	Acceptable	
CBN	1	0.0354	0.0351	%	101	80.0 - 120	Acceptable	
exo-THC	2	0.0319	0.0311	%	102	80.0 - 120	Acceptable	
d9THC	1	0.0347	0.0345	%	101	90.0 - 110	Acceptable	
d8THC	1	0.0330	0.0325	%	102	90.0 - 110	Acceptable	
9S-d10THC	1	0.0356	0.0354	%	101	80.0 - 120	Acceptable	
CBL	2	0.0323	0.0311	%	104	80.0 - 120	Acceptable	
9R-d10THC	1	0.0322	0.0323	%	99.7	80.0 - 120	Acceptable	
CBC	2	0.0322	0.0319	%	101	80.0 - 120	Acceptable	
THCA	1	0.0330	0.0331	%	99.7	90.0 - 110	Acceptable	
CBCA	2	0.0333	0.0325	%	102	80.0 - 120	Acceptable	
CBLA	2	0.0510	0.0500	%	102	80.0 - 120	Acceptable	
d9THCP	2	0.0330	0.0323	%	102	80.0 - 120	Acceptable	
CBT	2	0.0323	0.0314	%	103	80.0 - 120	Acceptable	

Method Blank

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Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 23-009343/D004.R000
Report Date: 08/17/2023
Purchase Order:
Received: 08/08/23 10:35 AM

Revision: 4 Document ID: 7148
Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6 **Batch ID: 2309908**

Sample Duplicate Sample ID: **23-009343-0001**

Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBDV	0.0318	0.0316	0.00329	%	0.428	< 20	Acceptable	
CBE	0.0358	0.0342	0.00329	%	4.54	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBG	0.0968	0.0995	0.00329	%	2.71	< 20	Acceptable	
CBD	4.43	4.40	0.00329	%	0.588	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBN	0.0272	0.0273	0.00329	%	0.359	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
d9THC	0.0657	0.0663	0.00329	%	0.962	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
9S-d10THC	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBL	0.00365	<LOQ	0.00329	%	NA	< 20	Acceptable	R2
9R-d10THC	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBC	0.217	0.219	0.00329	%	0.762	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00329	%	NA	< 20	Acceptable	
CBT	0.0462	0.0467	0.00329	%	1.16	< 20	Acceptable	

Abbreviations

ND - None Detected at or above MRL
RPD - Relative Percent Difference
LOQ - Limit of Quantitation

Units of Measure:

% - Percent

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Confidence Analytics

Cannabis Analytical Chemistry Laboratory

WSLCB License # 0003 | 14797 NE 95th St, Redmond, WA 98052 | (206) 743-8843 | info@conflabs.com

Certified For: Cannabinoids | Microbiologicals | Mycotoxins | Foreign Matter
Pesticides| Heavy Metals | Terpenes | Residual Solvents | Moisture

Research and Development Certificate of Analysis

Official Test Results for Laboratory Sample # WA-230809-061

Origination:
Sapient Organics LLC
Address:
30262 Crown Valley Pkwy B525
Laguna Niguel, CA 92677
Sample Name:
Activated 40 Hemp Oil 27 mo.
Type:
Oil Tincture

License #:
n/a
UBI #:
n/a

Inventory #:
AC4M21A-SR27
QA #:
WA-230809-061

Approved By:
T. Sasaki, Ph.D., CSO
S. Stevens, LDR
Date of Harvest:
(not provided)
Date of Reciept:
2023-08-08
Date of Testing:
2023-08-14

Pass/Fail Summary

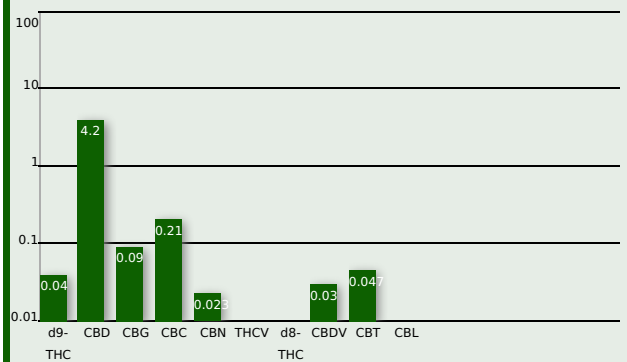
Foreign Matter + Seeds: *NE*
Microbes: *PASS*
Pesticides: *NE*
Water Activity: *PASS*
Mycotoxins: *PASS*
Heavy Metals: *PASS*
Residual Solvents: *NE*

Cannabinoid Profile (units of measure are by weight)

LABEL INFO	
d9-THC max	**CBD max**
0.04%, 0.4mg/g	**4.2%, 42mg/g**
0.4mg/unit	**42mg/unit**

Total Canna. (raw sum): 4.6%, 46mg/g, 46mg/unit

***Calculated with a default Unit Size of 1 gram.**



Total Active by Cannabinoid

ANALYTE	%	MG/G	MG/UNIT*
cbc	0.21	2.1	2.1
cbca	ND	ND	ND
cbd	4.2	42	42
cbda	ND	ND	ND
cbdv	0.03	0.3	0.3
cbdva	ND	ND	ND
cbg	0.09	0.9	0.9
cbga	ND	ND	ND
cbl	0.0093	0.093	0.093
cbn	0.023	0.23	0.23
cbna	ND	ND	ND
cbt	0.047	0.47	0.47
d8-thc	ND	ND	ND
d9-thc	0.04	0.4	0.4
d9-thca	ND	ND	ND
d9-thcv	ND	ND	ND
d9-thcva	ND	ND	ND

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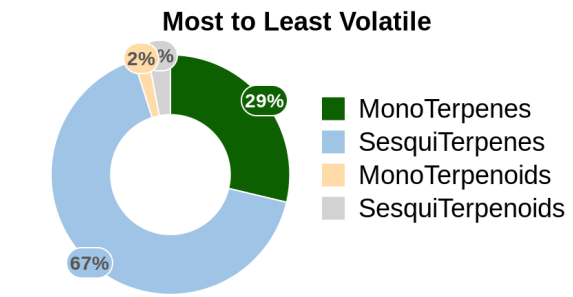
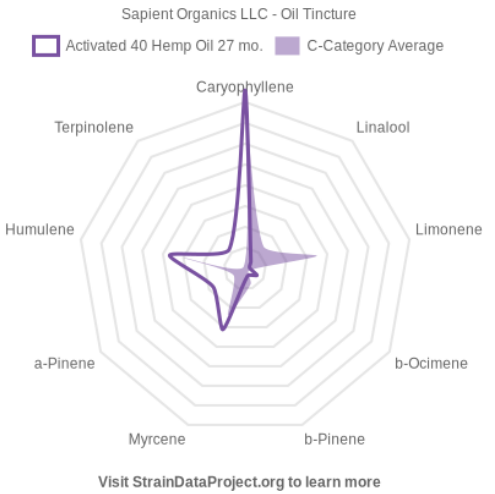
Date of Reciept: 2023-08-08, **Date of Testing:** 2023-08-14 , **Amended:** 2023-08-29

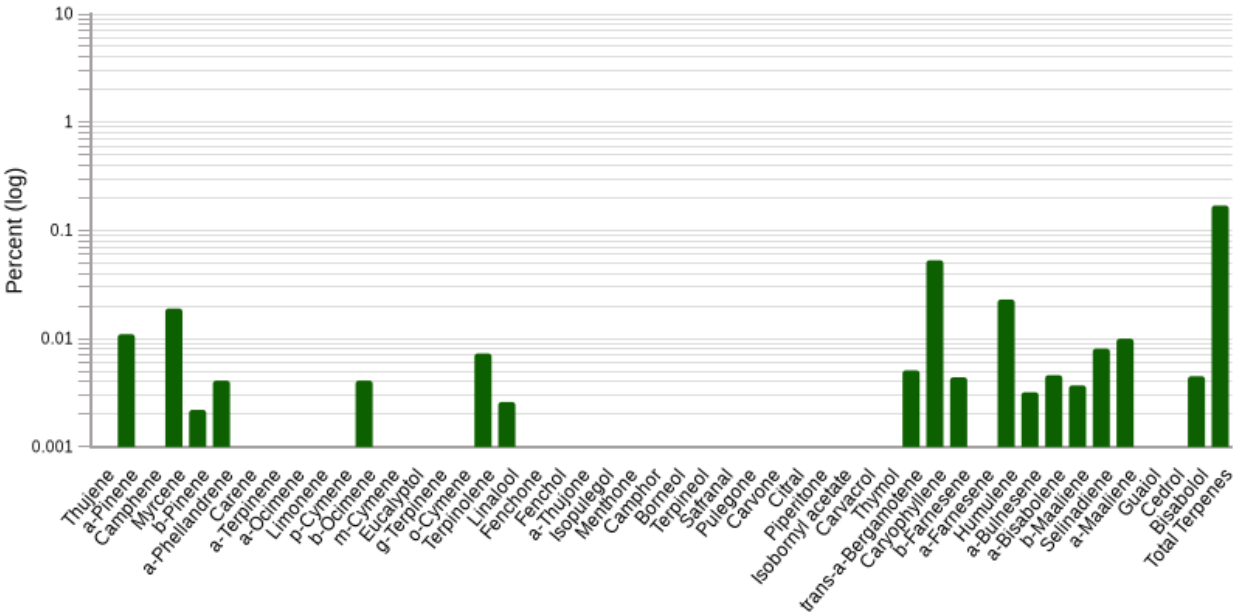
Terpene Analysis

Top Three Most Abundant Terpenes:

caryophyllene	**0.053%**
humulene	**0.023%**
myrcene	**0.019%**
total terpenes	**0.17%**







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Date of Reciept: 2023-08-08, **Date of Testing:** 2023-08-14 , **Amended:** 2023-08-29

Analytes

Analyte Name	Analytical Method	Concentration	Action Limit	Units	MRL	LOQ	Pass/Fail	Test Date
cbc	Cannabinoids	0.21	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbca	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbd	Cannabinoids	4.2	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbda	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbdv	Cannabinoids	0.03	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbdva	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbg	Cannabinoids	0.09	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbga	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbl	Cannabinoids	0.0093	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbn	Cannabinoids	0.023	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbna	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
cbt	Cannabinoids	0.047	N/A	%	0.0089	0.0089	PASS	2023-08-14
d8-thc	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
d9-thc	Cannabinoids	0.04	N/A	%	0.0089	0.0089	PASS	2023-08-14
d9-thca	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
d9-thcv	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
d9-thcva	Cannabinoids	< MRL	N/A	%	0.0089	0.0089	PASS	2023-08-14
raw total cannabinoids	Cannabinoids	4.6	N/A	%			PASS	2023-08-14
total active cbd	Cannabinoids	4.2	N/A	%			PASS	2023-08-14
total active d9-thc	Cannabinoids	0.04	N/A	%			PASS	2023-08-14
btgn	Microbes	< MRL	10000	CFU/g	500	500	PASS	2023-08-14
e coli	Microbes	< MRL	N/A	CFU/g	0	0	PASS	2023-08-14
salmonella	Microbes	< MRL	N/A	CFU/g	0	0	PASS	2023-08-14
water activity	Water Activity	0.44	N/A	aw	0	0	PASS	2023-08-14
aflatoxin b1	Mycotoxins	< MRL	20	ppb	5	5	PASS	2023-08-14
aflatoxin b2	Mycotoxins	< MRL	20	ppb	5	5	PASS	2023-08-14
aflatoxin g1	Mycotoxins	< MRL	20	ppb	5	5	PASS	2023-08-14
aflatoxin g2	Mycotoxins	< MRL	20	ppb	5	5	PASS	2023-08-14
ochratoxin a	Mycotoxins	< MRL	20	ppb	10	10	PASS	2023-08-14
total aflatoxins	Mycotoxins	< MRL	20	ppb			PASS	2023-08-14
a-bisabolene[3]	Terpenes	46	N/A	ppm	18	36	PASS	2023-08-14
a-bulnesene[3]	Terpenes	32[1]	N/A	ppm	18	36	PASS	2023-08-14
a-farnesene[3]	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
a-maaliene[3]	Terpenes	100	N/A	ppm	18	36	PASS	2023-08-14
a-ocimene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
a-phellandrene	Terpenes	41	N/A	ppm	18	36	PASS	2023-08-14
a-pinene	Terpenes	110	N/A	ppm	18	36	PASS	2023-08-14
a-terpinene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14

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Sample: Activated 40 Hemp Oil 27 mo., Oil Tincture, **Inv #:** AC4M21A-SR27, **QA #:** WA-230809-061
Date of Reciept: 2023-08-08, **Date of Testing:** 2023-08-14 , **Amended:** 2023-08-29

Analytes

Analyte Name	Analytical Method	Concentration	Action Limit	Units	MRL	LOQ	Pass/Fail	Test Date
a-thujone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
b-farnesene	Terpenes	44	N/A	ppm	18	36	PASS	2023-08-14
b-maaliene[3]	Terpenes	37	N/A	ppm	18	36	PASS	2023-08-14
b-ocimene	Terpenes	41	N/A	ppm	18	36	PASS	2023-08-14
b-pinene	Terpenes	22[1]	N/A	ppm	18	36	PASS	2023-08-14
bisabolol	Terpenes	45	N/A	ppm	18	36	PASS	2023-08-14
borneol	Terpenes	< MRL	N/A	ppm	140	280	PASS	2023-08-14
camphene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
camphor	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
carene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
carvacrol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
carvone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
caryophyllene	Terpenes	530	N/A	ppm	18	36	PASS	2023-08-14
cedrol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
citral	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
eucalyptol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
fenchol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
fenchone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
g-terpinene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
guaiol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
humulene	Terpenes	230	N/A	ppm	18	36	PASS	2023-08-14
isobornyl acetate	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
isopulegol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
limonene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
linalool	Terpenes	26[1]	N/A	ppm	18	36	PASS	2023-08-14
m-cymene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
menthone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
myrcene	Terpenes	190	N/A	ppm	18	36	PASS	2023-08-14
o-cymene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
p-cymene	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
piperitone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
pulegone	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
safranal	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
selinadiene[3]	Terpenes	81	N/A	ppm	18	36	PASS	2023-08-14
terpineol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
terpinolene	Terpenes	73	N/A	ppm	18	36	PASS	2023-08-14
thujene[3]	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14
thymol	Terpenes	< MRL	N/A	ppm	18	36	PASS	2023-08-14

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Origination: Sapient Organics LLC (Lic#: n/a), 30262 Crown Valley Pkwy B525, Laguna Niguel, CA 92677
Sample: Activated 40 Hemp Oil 27 mo., Oil Tincture, **Inv #:** AC4M21A-SR27, **QA #:** WA-230809-061
Date of Reciept: 2023-08-08, **Date of Testing:** 2023-08-14 , **Amended:** 2023-08-29

Analytes

Analyte Name	Analytical Method	Concentration	Action Limit	Units	MRL	LOQ	Pass/Fail	Test Date
total terpenes[3]	Terpenes	1700	N/A	ppm			PASS	2023-08-14
trans-a-bergamotene[3]	Terpenes	51	N/A	ppm	18	36	PASS	2023-08-14
as	Heavy Metals	< MRL	2	ppm	0.2	0.2	PASS	2023-08-14
cd	Heavy Metals	< MRL	0.82	ppm	0.1	0.1	PASS	2023-08-14
hg	Heavy Metals	< MRL	0.4	ppm	0.1	0.1	PASS	2023-08-14
pb	Heavy Metals	< MRL	1.2	ppm	0.2	0.2	PASS	2023-08-14

[END OF ANALYTE TABLE]

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These testing results are certified by scientific examination of a single sample provided by the Producer/Processor. Confidence Analytics and its agents did not observe or participate in the sample selection process, and cannot confirm the authenticity of the sample or its representativeness of the associated lot/batch. The sample, as received, was homogenized before subsamples were drawn for specific analyses. Pass/Fail criteria are defined in WAC 314-55-102.

This report is supplemental to any other reports with the same analytic sample number.

THCmax (a.k.a. Total THC) = d9-THC + (THC-A * 0.877)
CBDmax (a.k.a. Total CBD) = CBD + (CBD-A * 0.877)
Total Cannabinoid is a raw sum of all measured cannabinoids.
In Traceability, Total Cannabinoid is a sum of THCmax and CBDmax.
Figures may differ slightly from traceability due to rounding.

[1]Less than LOQ
[2]Greater than ULOQ
[3]Not included in ISO scope

ND = Not Detected
NE = Not Examined
MRL = Reporting Limit
<MRL = Not detected, or concentration below the MRL
LOD = Detection Limit
LOQ = Quantification Limit
ULOQ = Upper Quantification Limit

Analytical Methods Used

- Terpenes by HS-GC-FID
- Heavy Metals by ICP-MS
- Mycotoxins by LC-MS/MS
- Residual Solvents by HS-GC-MS
- Cannabinoids by UHPLC-DAD
- Foreign Material by Macroscopic Inspection
- Microbes by Plate Counting
- Moisture Content (Loss on Drying) by Loss on Drying
- LC Pesticides by LC-MS/MS
- GC Pesticides by GC-MS/MS
- Water Activity by HYDROMETER

This certificate contains the following amendments:

Date	Note
2023-08-29:	Version 2 updated from Version 1. Water Activity result amended.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 23-009343/D005.R000
Report Date: 08/17/2023
Purchase Order:
Received: 08/08/23 10:35 AM

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Sample ID: AC4M21A-SR27
Sample Matrix: Cannabinoid Tincture
Laboratory ID: 23-009343-0002-00
Evidence of Cooling: No
Temp: 25 °C
Relinquished by: Shipping

Sample Results

Nutrition

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
p-Anisidine Value	0.80	p-A.V.	0.50	08/11/23	AOCS Cd 18-90 (mod.)	

Fatty Acid Profile - Expanded

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
C04:0 - Butyric Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C06:0 - Caproic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C08:0 - Caprylic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C10:0 - Capric Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C11:0 - Undecylic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C12:0 - Lauric Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C14:0 - Myristic Acid	0.63	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C14:1 c-9 - Myristoleic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C15:0 - Pentadecylic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C15:1 c-10 - Pentadecenoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C16:0 - Palmitic Acid	7.33	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C16:1 c-9 (omega-7) - Palmitoleic Acid	15.0	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C16:2 c-9,12 (omega-4) - Hexadecadienoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C17:0 - Margaric Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C17:1c-10 (omega-7) - Heptadecenoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:0 - Stearic Acid	3.20	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:1 c-11 (omega-7) - Vaccenic Acid	3.36	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:1 c-12 (omega-6) - Octadecenoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:1 c-9 (omega-9) - Oleic Acid	48.5	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:1 Trans Isomers - Elaidic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:2 c-9,12 (omega-6) - Linoleic Acid	2.56	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	

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Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 23-009343/D005.R000
Report Date: 08/17/2023
Purchase Order:
Received: 08/08/23 10:35 AM

Nutrition

Fatty Acid Profile - Expanded

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
C18:2 t-9,12 - Linoelaidic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:3 c-6,9,12 (omega-6) - gamma-Linolenic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:3 c-9,12,15 (omega-3) - alpha-Linolenic Acid	0.17	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C18:4 c-6,9,12,15 (omega-3) - Stearidonic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:0 - Arachidic Acid	2.48	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:1 c-11 (omega-9) - Gondoic Acid	2.10	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:2 c-11,14 (omega-6) - Eicosadienoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:3 c-11,14,17 (omega-3) - Eicosatrienoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:3 c-8,11,14 (omega-6) - DGLA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:4 c-5,8,11,14 (omega-6) - Arachidonic Acid	0.22	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:4 c-8,11,14,17 (omega-3) - ETA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C20:5 c-5,8,11,14,17 (omega-3) - EPA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C22:0 - Behenic Acid	0.76	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C22:1 c-13 (omega-9) - Erucic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C22:2 c-13,16 (omega-6) - Docosadienoic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C22:5 c-7,10,13,16,19 (omega-3) - DPA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C22:6 c-4,7,10,13,16,19 (omega-3) - DHA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C24:0 - Lignoceric Acid	0.32	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
C24:1 c-15 (omega-9) - Nervonic Acid	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Monounsaturated Fat	68.9	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Omega-3 Fat	0.19	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Omega-6 Fat	2.81	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Omega-9 Fat	50.6	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Polyunsaturated Fat	2.98	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Saturated Fat	14.8	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Total CLA	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Total Fat	90.5	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Trans Fat	< LOQ	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	
Unknown Components	1.18	%	0.10	08/14/23	AOCS Ce 1h-05 (mod.)	

Quality and Trade

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
Free Fatty Acids in oil	0.98	% Oleic	0.10	08/11/23	ISO 660(mod.)[þ]	
Peroxide Value in oils	3.2	meq O2/kg fat	1.0	08/10/23	ISO 3960 (mod.)[þ]	

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A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number:	23-009343/D005.R000
Report Date:	08/17/2023
Purchase Order:	
Received:	08/08/23 10:35 AM

Abbreviations

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

ᵇ = ISO/IEC 17025:2017 accredited method.

Units of Measure

meq O2/kg fat = meq O2 Per kg fat
p-A.V. = p-Anisidine Value
% Oleic = Percentage as Oleic Acid
% = Percentage of sample

Approved Signatory

Derrick Tanner
General Manager

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CANNACEA™

Activated 40 Full Spectrum Hemp Oil

Lot ID: **AC4M21A**

Potency & Purity
Original Manufacturing
Certificates of Analysis

May 2021

Confidence Analytics

Cannabis Analytical Chemistry Laboratory

WSLCB License # 0003 | 14797 NE 95th St, Redmond, WA 98052 | (206) 743-8843 | info@conflabs.com

Certified For: Cannabinoids | Microbiologicals | Mycotoxins | Foreign Matter
Pesticides| Heavy Metals | Terpenes | Residual Solvents | Moisture

Research and Development Certificate of Analysis

Official Test Results for Laboratory Sample # 8051938

Origination: CANNACEA
UBI #: N/A
Inventory #: AC4M21A
Strain: Activated 40 Hemp Oil
License #: N/A
QA #: 20210518LW009
Type: Oil Tincture
Harvest Date: Unknown
Address: 30262 Crown Valley Pkwy B525 Laguna Niguel, CA 92677
Date of Receipt: 2021-05-18
Date of Testing: 2021-05-20
Approved By: T. Sasaki, Ph.D., CSO
S. Stevens, LDR

PASS/FAIL

Microbiological *PASS*
Mycotoxins *PASS*
Residual Solvents *PASS*
Pesticides *PASS*
Heavy Metals *PASS*

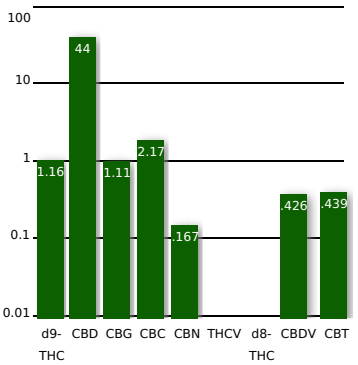
Shelf Stability

Loss-On-Drying NE
Water Activity: 0.37 a_w

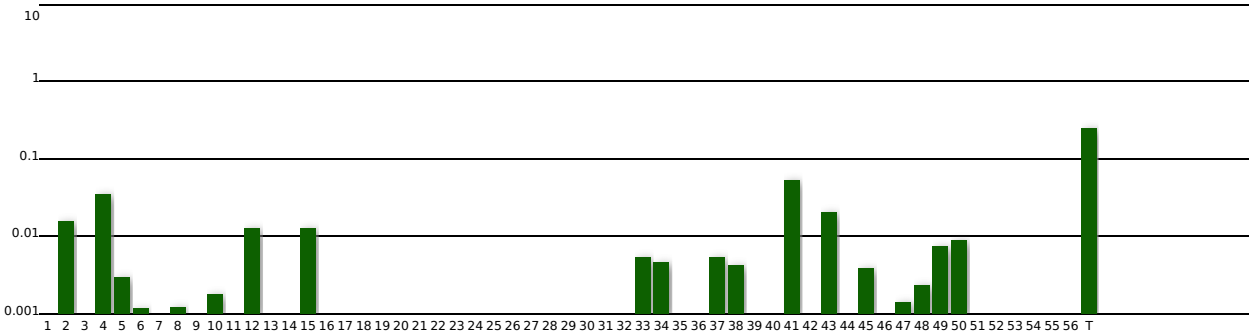
Cannabinoid Profile (units of measure are by weight)

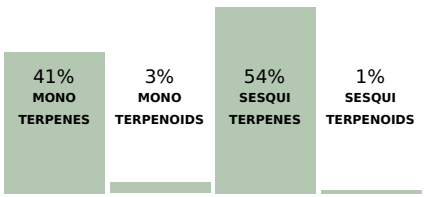
THC max 0.116% 1.16mg/g			CBD max 4.4% 44mg/g		
	%	mg/g		%	mg/g
THCA	*ND*	*ND*	d9-THC	0.116	1.16
CBDA	*ND*	*ND*	CBD	4.4	44
CBGA	*ND*	*ND*	CBG	0.111	1.11
CBC	0.217	2.17	CBN	0.0167	0.167
THCVA	*ND*	*ND*	THCV	*ND*	*ND*
CBDVA	*ND*	*ND*	CBDV	0.0426	0.426
CBT	0.0439	0.439	d8-THC	*ND*	*ND*

Total Canna. (raw sum): 4.95%, 49.5mg/g



Terpene Fingerprint (units in percent by weight)





ref#	Name	%	ref#	Name	%	ref#	Name	%
41	Caryophyllene	0.055	34*	cis-b-Farnesene	0.0048	13	Eucalyptol	0.00081
4	Myrcene	0.037	38*	a-Cedrene	0.0044	56*	trans-Nerolidol	0.00045
43	Humulene	0.021	45*	Valencene	0.0039	19	Fenchone	0.0004
2	a-Pinene	0.016	5	b-Pinene	0.003	**T**	**Total**	**0.21**
12	b-Ocimene	0.013	48*	b-Maaliene	0.0024			
15	Terpinolene	0.013	10	Limonene	0.0018			
50*	a-Maaliene	0.0093	47*	cis-Nerolidol	0.0015			
49*	Selinadiene	0.0076	8	a-Terpinene	0.0013			
33*	GeranylAcetate	0.0055	6	a-Phellandrene	0.0012			
37*	trans-a-Bergamotene	0.0054	51*	Guaiol	0.00087			

*Not yet included in ISO scope of accreditation.

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*THCmax (a.k.a. Total THC) = d9-THC + (THC-A * 0.877)*
*CBDmax (a.k.a. Total CBD) = CBD + (CBD-A * 0.877)*
Total Cannabinoid is a raw sum of all measured cannabinoids
In Traceability, Total Cannabinoid is a sum of THCmax and CBDmax
Figures may differ slightly from traceability due to rounding

ND = Not Detected
NE = Not Examined
Unk = Unknown

2021-06-03 11:09

Analytical Methods Used
Cannabinoids: HPLC-UV
Microbial: Plate Counting
Terpenes: HS-GC-FID
Solvents: HS-GC-MS

Trace Residue: UHPLC-MSMS
Water Activity: HYGROMER®

ilac-MRA
A2LA ACCREDITED CERT #5382.01

Confidence Analytics

Cannabis Analytical Chemistry Laboratory
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Certified For: Cannabinoids | Microbiologicals | Mycotoxins | Foreign Matter
Pesticides| Heavy Metals | Terpenes | Residual Solvents | Moisture

Research and Development Certificate of Analysis

Official Test Results for Laboratory Sample # 8051938

Origination: CANNACEA
Strain: Activated 40 Hemp Oil
Type: Oil Tincture
Address: 30262 Crown Valley Pkwy B525
Laguna Niguel, CA 92677

UBI #: N/A
License #: N/A
Harvest Date: Unknown
Date of Receipt: 2021-05-18
Date of Testing: 2021-05-20

Inventory #: AC4M21A
QA #: 20210518LW009
Approved By: T. Sasaki, Ph.D., CSO
S. Stevens, LDR

Quantitative Impurities Report

Concentrations of analytes used to determine pass/fail status of individual tests.

* Greater than lower limit of detection (>LLOD) and less than lower limit of quantification (<LLOQ) . Applies to instances when the analyte has been detected and positively identified, but the concentration is lower than we can accurately quantify. Literally: signal to noise ratio greater than 3 and signal less than calibration. LLOD is ~0.001 ppm for most analytes, LLOQ is ~0.01 for most analytes. Number shown is lower end of calibration (LLOQ).

** Greater than upper limit of quantification (>ULOQ). Applies to instances when the analyte concentration in the sample is greater than we can accurately measure without additional testing. Number shown is upper end of calibration (ULOQ).

Findings

Alkanes

Analyte	Concentration	Action Level
Hexane	< RL	290 ppm
Cyclohexane	< RL	3880 ppm
Butane	< RL	5000 ppm
Pentane	< RL	5000 ppm
Heptane	< RL	5000 ppm
Propane	< RL	5000 ppm

**Reporting Limit (RL) = 10 ppm*

Allowed Ingredients

Analyte	Concentration
Ethanol	< RL

**Reporting Limit (RL) = 500 ppm*

Impurities

Analytes	Concentration	Action Level
Acetone	< RL	5000 ppm
Benzene	< RL	2 ppm
Chloroform	< RL	2 ppm
Dichloromethane	< RL	600 ppm
Ethyl_Acetate	< RL	5000 ppm
Xylene	< RL	2170 ppm
Isopropanol	< RL	5000 ppm
Methanol	< RL	3000 ppm
Toluene	< RL	890 ppm

**Reporting Limit (RL) = Half Action Level*

Mycotoxins

Analyte	Concentration	Action Level*
Aflatoxin B1	< LLOQ	20 ppb
Aflatoxin B2	< LLOQ	20 ppb
Aflatoxin G1	< LLOQ	20 ppb
Aflatoxin G2	< LLOQ	20 ppb
Ochratoxin A	< LLOQ	20 ppb

**Action Level is Sum of Aflatoxins*

Microbiologicals

Organism	CFU/g	Action Level
BTGN Bacteria	0	10000
Yeast / Mold	0	N/A
E. coli	0	1
Salmonella	0	1

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*THCmax (a.k.a. Total THC) = d9-THC + (THC-A * 0.877)*
*CBDmax (a.k.a. Total CBD) = CBD + (CBD-A * 0.877)*
Total Cannabinoid is a raw sum of all measured cannabinoids
In Traceability, Total Cannabinoid is a sum of THCmax and CBDmax
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2021-06-03 11:09

Analytical Methods Used
Cannabinoids: HPLC-UV
Microbial: Plate Counting
Terpenes: HS-GC-FID
Solvents: HS-GC-MS

Trace Residue: UHPLC-MSMS
Water Activity: HYGROMER®

ACCREDITED CERT #53382.01

Confidence Analytics

Cannabis Analytics and Research Specialists
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Certified For: Cannabinoids | Microbiologicals | Mycotoxins | Foreign Matter | Moisture | Terpenes | Residual Solvents | Pesticides

Chemical Residue Screen

Official Test Results for Laboratory Sample # 8051938

Origination: CANNACEA
Strain: Activated 40 Hemp Oil
Type: Oil Tincture
Address: 30262 Crown Valley Pkwy B525 Laguna Niguel, CA 92677

UBI #: N/A
License #: N/A
Harvest Date: Unknown
Date of Receipt: 2021-05-18
Date of Testing: 2021-05-20

Inventory #: AC4M21A
QA #: 20210518LW009
Approved By: T. Sasaki, Ph.D., CSO
S. Stevens, LDR

Chemical Residue Screen - Test Report

Cannabis samples were homogenized and extracted using a custom protocol. Instrumental analysis was performed with UHPLC-MS/MS (tandem quadrupole). Target compounds were identified by matching to Certified Reference Materials. Ion-selective detection (multiple reaction monitoring, or MRM) was used to ensure that precursor and product ions of the correct masses co-eluted and were observed in ratios matching those for the reference materials.

Dozens of compounds representing many different classes of fungicides, herbicides, and plant growth regulators were screened for. This document lists all analytes detected in the Chemical Residue Screen.

Findings

Analyte Name	CAS #	PPM In Sample	PASS/FAIL	WA State Action Level	Analyte Name	CAS #	PPM In Sample	PASS/FAIL	WA State Action Level
(sum) Spinosads	NA	*Not Detected*	***PASS***	0.20 ppm	Dichlorvos	62-73-7	*Not Detected*	***PASS***	0.10 ppm
(sum) Permethrins	NA	*Not Detected*	***PASS***	0.20 ppm	Dimethoate	60-51-5	*Not Detected*	***PASS***	0.20 ppm
Abamectin B1a	71751-41-2	*Not Detected*	***PASS***	0.50 ppm	Ethoprophos	13194-48-4	*Not Detected*	***PASS***	0.20 ppm
Acephate	30560-19-1	*Not Detected*	***PASS***	0.40 ppm	Etofenprox	80844-07-1	*Not Detected*	***PASS***	0.40 ppm
Acetamiprid	135410-20-7	*Not Detected*	***PASS***	0.20 ppm	Etoxazole	153233-91-1	*Not Detected*	***PASS***	0.20 ppm
Aldicarb	116-06-3	*Not Detected*	***PASS***	0.40 ppm	Fenoxycarb	72490-01-8	*Not Detected*	***PASS***	0.20 ppm
Azoxystrobin	131860-33-8	*Not Detected*	***PASS***	0.20 ppm	Fenpyroximate	134098-61-6	*Not Detected*	***PASS***	0.40 ppm
Bifenazate	149877-41-8	*Not Detected*	***PASS***	0.20 ppm	Fipronil	120068-37-3	*Not Detected*	***PASS***	0.40 ppm
Bifenthrin	82657-04-3	*Not Detected*	***PASS***	0.20 ppm	Flonicamid	158062-67-0	*Not Detected*	***PASS***	1.00 ppm
Boscalid	188425-85-6	*Not Detected*	***PASS***	0.40 ppm	Fludioxonil	131341-86-1	*Not Detected*	***PASS***	0.40 ppm
Carbaryl	63-25-2	*Not Detected*	***PASS***	0.20 ppm	Hexythiazox	78587-05-0	*Not Detected*	***PASS***	1.00 ppm
Carbofuran	1563-66-2	*Not Detected*	***PASS***	0.20 ppm	Imazalil	35554-44-0	*Not Detected*	***PASS***	0.20 ppm
Chlorantraniliprole	500008-45-7	*Not Detected*	***PASS***	0.20 ppm	Imidacloprid	138261-41-3	*Not Detected*	***PASS***	0.40 ppm
Chlormequat	7003-89-6	*Not Detected*	***PASS***	0.10 ppm	Kresoxim-methyl	143390-89-0	*Not Detected*	***PASS***	0.40 ppm
Chlorpyrifos	2921-88-2	*Not Detected*	***PASS***	0.20 ppm	Malathion	121-75-5	*Not Detected*	***PASS***	0.20 ppm
Clofentezine	74115-24-5	*Not Detected*	***PASS***	0.20 ppm	Metalaxyl	57837-19-1	*Not Detected*	***PASS***	0.20 ppm
Daminozide	1596-84-5	*Not Detected*	***PASS***	1.00 ppm	Methiocarb	2032-65-7	*Not Detected*	***PASS***	0.20 ppm
Diazinon	333-41-5	*Not Detected*	***PASS***	0.20 ppm	Methomyl	16752-77-5	*Not Detected*	***PASS***	0.40 ppm

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2021-06-03 11:09

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Microbial: Plate Counting
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Solvents: HS-GC-MS

Trace Residue: UHPLC-MSMS
Water Activity: HYGROMER®

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Chemical Residue Screen

Official Test Results for Laboratory Sample # 8051938

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Strain: Activated 40 Hemp Oil
Type: Oil Tincture
Address: 30262 Crown Valley Pkwy B525
Laguna Niguel, CA 92677

UBI #: N/A
License #: N/A
Harvest Date: Unknown
Date of Receipt: 2021-05-18
Date of Testing: 2021-05-20

Inventory #: AC4M21A
QA #: 20210518LW009
Approved By: T. Sasaki, Ph.D., CSO
S. Stevens, LDR

Chemical Residue Screen - Test Report

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Findings

Analyte Name	CAS #	PPM In Sample	PASS/FAIL	WA State Action Level	Analyte Name	CAS #	PPM In Sample	PASS/FAIL	WA State Action Level
Myclobutanil	88671-89-0	*Not Detected*	***PASS***	0.20 ppm	Thiamethoxam	153719-23-4	*Not Detected*	***PASS***	0.20 ppm
Naled	300-76-5	*Not Detected*	***PASS***	0.50 ppm	Trifloxystrobin	141517-21-7	*Not Detected*	***PASS***	0.20 ppm
Oxamyl	23135-22-0	*Not Detected*	***PASS***	1.00 ppm	Uniconazole	83657-22-1	*Not Detected*	***PASS***	0.10 ppm
Paclobutrazol	76738-62-0	*Not Detected*	***PASS***	0.40 ppm	cis-Permethrin	52645-53-1	*Not Detected*	***PASS***	0.20 ppm
Phosemet (Imidan)	732-11-6	*Not Detected*	***PASS***	0.20 ppm	trans-Permethrin	52645-53-2	*Not Detected*	***PASS***	0.20 ppm
Piperonyl Butoxide	51-03-6	*Not Detected*	***PASS***	2.00 ppm					
Prallethrin	23031-36-9	*Not Detected*	***PASS***	0.20 ppm					
Propiconazole	60207-90-1	*Not Detected*	***PASS***	0.40 ppm					
Propoxur	114-26-1	*Not Detected*	***PASS***	0.20 ppm					
Pyrethrin I	8003-34-7	*Not Detected*	***PASS***	1.00 ppm					
Pyridaben	96489-71-3	*Not Detected*	***PASS***	0.20 ppm					
Spinosad A	168316-95-8	*Not Detected*	***PASS***	0.20 ppm					
Spinosad D	168316-95-9	*Not Detected*	***PASS***	0.20 ppm					
Spiromesifen	283594-90-1	*Not Detected*	***PASS***	0.20 ppm					
Spirotetramat	203313-25-1	*Not Detected*	***PASS***	0.20 ppm					
Spiroxamine	118134-30-8	*Not Detected*	***PASS***	0.40 ppm					
Tebuconazole	80443-41-0	*Not Detected*	***PASS***	0.40 ppm					
Thiacloprid	111988-49-9	*Not Detected*	***PASS***	0.20 ppm					

* Greater than lower limit of detection (>LLOD) and less than lower limit of quantification (<LLOQ) . Applies to instances when the analyte has been detected and positively identified, but the concentration is lower than we can accurately quantify. Specifically: signal to noise ratio greater than 3 and signal less than calibration. LLOD is ~0.001 ppm for most analytes, LLOQ is ~0.01 for most analytes. Number shown is lower end of calibration (LLOQ).

** Greater than upper limit of quantification (>ULOQ). Applies to instances when the analyte concentration in the sample is greater than we can accurately measure without additional testing. Number shown is upper end of calibration (ULOQ).

These testing results are certified by scientific examination of a single sample provided by the Producer/Processor. Confidence Analytics and its agents did not observe or participate in the sample selection process, and cannot confirm the authenticity of the sample or its representativeness of the associated lot/batch. The sample, as received, was homogenized before subsamples were drawn for specific analyses. This report is supplemental to any other reports with the same analytic sample number. Pass/Fail criteria are defined in WAC 314-55-102.

*THCmax (a.k.a. Total THC) = d9-THC + (THC-A * 0.877)*
*CBDmax (a.k.a. Total CBD) = CBD + (CBD-A * 0.877)*
Total Cannabinoid is a raw sum of all measured cannabinoids
In Traceability, Total Cannabinoid is a sum of THCmax and CBDmax
Figures may differ slightly from traceability due to rounding

ND = Not Detected
NE = Not Examined
Unk = Unknown

2021-06-03 11:09

Analytical Methods Used
Cannabinoids: HPLC-UV
Microbial: Plate Counting
Terpenes: HS-GC-FID
Solvents: HS-GC-MS

Trace Residue: UHPLC-MSMS
Water Activity: HYGROMER®

Confidence Analytics

Cannabis Analytical Chemistry Laboratory

WSLCB License # 0003 | 14797 NE 95th St, Redmond, WA 98052 | (206) 743-8843 | info@conflabs.com

Certified For: Cannabinoids | Microbiologicals | Mycotoxins | Foreign Matter Pesticides| Heavy Metals | Terpenes | Residual Solvents | Moisture

Research and Development Certificate of Analysis

Official Test Results for Laboratory Sample # 8051938

Origination: CANNACEA
Strain: Activated 40 Hemp Oil
Type: Oil Tincture
Address: 30262 Crown Valley Pkwy B525 Laguna Niguel, CA 92677

UBI #: N/A
License #: N/A
Harvest Date: Unknown
Date of Receipt: 2021-05-18
Date of Testing: 2021-05-20

Inventory #: AC4M21A
QA #: 20210518LW009
Approved By: T. Sasaki, Ph.D., CSO
S. Stevens, LDR

Heavy Metals Report

Heavy metals are tested via ICP-MS.

Concentrations of analytes used to determine pass/fail status of individual elements.

* Less than the lower limit of quantitation. The method LLOQ is 0.05 ug/g. The LOQ is .05 ug/g for all metals.

** Greater than the upper limit of quantification (>ULOQ), applies to instances when the analyte concentration in the sample is greater than we can accurately measure without additional testing. The ULOQ for all metals is 2.5 ug/g

Findings

Heavy metals

Analyte	Element	Concentration	Action Level	Pass/Fail
Arsenic	As	<LLOQ* ug/g	2 ug/g	PASS
Cadmium	Cd	<LLOQ* ug/g	0.82 ug/g	PASS
Mercury	Hg	<LLOQ* ug/g	0.4 ug/g	PASS
Lead	Pb	<LLOQ* ug/g	1.2 ug/g	PASS

These testing results are certified by scientific examination of a single sample provided by the Producer/Processor. Confidence Analytics and its agents did not observe or participate in the sample selection process, and cannot confirm the authenticity of the sample or its representativeness of the associated lot/batch. The sample, as received, was homogenized before subsamples were drawn for specific analyses. This report is supplemental to any other reports with the same analytic sample number. Pass/Fail criteria are defined in WAC 314-55-102.

*THCmax (a.k.a. Total THC) = d9-THC + (THC-A * 0.877)*
*CBDmax (a.k.a. Total CBD) = CBD + (CBD-A * 0.877)*
Total Cannabinoid is a raw sum of all measured cannabinoids
In Traceability, Total Cannabinoid is a sum of THCmax and CBDmax
Figures may differ slightly from traceability due to rounding

ND = Not Detected
NE = Not Examined
Unk = Unknown

2021-06-03 11:09

Analytical Methods Used
Cannabinoids: HPLC-UV
Microbial: Plate Counting
Terpenes: HS-GC-FID
Solvents: HS-GC-MS

Trace Residue: UHPLC-MSMS
Water Activity: HYGROMER®

ACCREDITED CERT #53821.01

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D010.R003
Report Date: 06/24/2021
ORELAP#: OR100028
Purchase Order:
Received: 05/18/21 10:45

This is an amended version of report# 21-005483/D010.R02.

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Product identity: AC4M21A
Client/Metrc ID: .
Sample Date:
Laboratory ID: 21-005483-0001
Evidence of Cooling: No
Temp: 21 °C
Relinquished by: UPS

Sample Results

Potency **Method** J AOAC 2015 V98-6 (mod) **Units** % **Batch:** 2104559 **Analyze:** 5/21/21 10:59:00 AM

Analyte	As Received	Dry weight	LOQ	Notes
CBC	0.224		0.0031	
CBC-A†	< LOQ		0.0031	
CBC-Total†	0.224		0.0059	
CBD	4.48		0.0315	
CBD-A	< LOQ		0.0031	
CBD-Total	4.48		0.0342	
CBDV†	0.0311		0.0031	
CBDV-A†	< LOQ		0.0031	
CBDV-Total†	0.0311		0.0059	
CBG†	0.0985		0.0031	
CBG-A†	< LOQ		0.0031	
CBG-Total	0.0985		0.0059	
CBL†	0.00399		0.0031	
CBL-A†	< LOQ		0.0031	
CBL-Total†	0.00399		0.0059	
CBN	0.0218		0.0031	
CBT†	0.0566		0.0031	
Δ8-THC†	< LOQ		0.0031	
Δ8-THCV	< LOQ		0.0031	
Δ9-THC	0.111		0.0031	
exo-THC	< LOQ		0.0031	
THC-A	< LOQ		0.0031	
THC-Total	0.111		0.0059	
THCV†	< LOQ		0.0031	
THCV-A†	< LOQ		0.0031	
THCV-Total†	< LOQ		0.0059	
Total Cannabinoids†	5.03			

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.
Testing in accordance with: OAR 333-007-0430

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D010.R003
Report Date: 06/24/2021
ORELAP#: OR100028
Purchase Order:
Received: 05/18/21 10:45

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyze	Method	Notes
Specific Gravity	0.9195		-	0.1000	2104698	05/26/21	DMA 35™	

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Testing in accordance with: OAR 333-007-0430

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number:	21-005483/D010.R003
Report Date:	06/24/2021
ORELAP#:	OR100028
Purchase Order:	
Received:	05/18/21 10:45

Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

† = Analyte not NELAP accredited.

Units of Measure

- = Not Applicable

% = Percentage of sample

% wt = µg/g divided by 10,000

Approved Signatory

Derrick Tanner
General Manager

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Testing in accordance with: OAR 333-007-0430

Steep Hill Arkansas

11711 HERMITAGE ROAD, SUITE #5, LITTLE ROCK, AR 72211 LICENSE #: BL157155

CERTIFICATE OF ANALYSIS

Sample Name: Activated 40 Hemp Oil
Steep Hill ID: AR102359
Batch ID: AC4M21A
State ID:
Sample Type: Concentrate
Date Received: 5/18/2021

Customer: **CANNACEA**
30262 Crown Valley Pkwy B525
Laguna Niguel, AR 92677

Cannabinoid Results **5/21/2021**

Standard potency analysis utilizing Ultra High Performance Liquid Chromatography (UHPLC; SOP-068-AR)

Analyte	%	mg/g	LOD mg/g	LOQ mg/g
CBC	0.193	1.93	0.255	0.764
CBD	4.50	45.0	0.382	1.18
CBDA	ND	ND	0.204	0.624
CBDV	< LOQ	< LOQ	0.255	0.764
CBG	< LOQ	< LOQ	0.433	1.32
CBGA	ND	ND	0.191	0.560
CBN	ND	ND	0.242	0.713
THC	0.149	1.49	0.941	1.35
delta-8-THC	ND	ND	0.229	0.675
THCA	ND	ND	0.191	0.611
THCV	ND	ND	0.395	1.17
Total	4.84	48.4		

Total THC	Total CBD
0.149 %	4.50 %
1.49 mg/g	45.0 mg/g

ND: Not Detected NT: Not Tested LOQ: Limit of Quantitation LOD: Limit of Detection

Brandon Thornton
Pharm D. Co-Owner & CEO
Date: 5/22/2021

Determination of Pass/Fail is based on RULES AND REGULATIONS GOVERNING MEDICAL MARIJUANA REGISTRATION, TESTING, AND LABELING IN ARKANSAS. Steep Hill Arkansas does not use Measurement Uncertainty when determining results. Measurement Uncertainty information is available upon request.

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PJLA Testing
Accreditation # 97338

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721 Cortaro Dr.
Sun City Center, FL 33573
www.acslabcannabis.com

License No. 800025015
FL License # CMTL-0003
CLIA No. 10D1094068

Activated 40 Hemp Oil
Sample Matrix: CBD/HEMP Derivative Products (Ingestion)

Certificate of Analysis

Compliance Test

CANNACEA
30262 CROWN VALLEY PKWY
B525
LAGUNA NIGUEL, CA 92677

Batch # AC4M21A
Batch Date: 2021-04-20
Extracted From: Hemp and Macadamia Nuts
Test Reg State: Utah

Order # SAP210421-040006
Order Date: 2021-04-21
Sample # AABG061

Sampling Date: 2021-05-18
Lab Batch Date: 2021-05-18
Completion Date: 2021-05-21
Initial Gross Weight: 42.751 g

Flavonoids

Tested
(LCMS)

Specimen Weight: 20.600 mg

Dilution Factor: 10.000

Analyte	Dilution (1:n)	LOQ (ppm)	Result (ppm)	Analyte	Dilution (1:n)	LOQ (ppm)	Result (ppm)
Apigenin	0.100	4	<LOQ	Baicalin	0.100	8	<LOQ
beta sitosterol	10.000	5	1313.000	Cannflavin A	0.100	3.91	47.970
Cannflavin B	0.100	4.84	24.370	Cannflavin C	0.100	2.36	18.910
Chrysin	0.100	2.5	<LOQ	Fisetin	0.100	5	<LOQ
Kaempferol	0.100	1	<LOQ	Luteolin	0.100	2.5	<LOQ
Orientin	0.100	5	<LOQ	Quercetin	0.100	2.23	<LOQ
Rutin	0.100	7.81	<LOQ	Vitexin	0.100	4	<LOQ
Wogonin	0.100	0.5	<LOQ				

Xueli Gao, Ph.D., DABT — Lab Toxicologist

Aixia Sun, D.H.Sc., M.Sc., B.Sc., MT (AAB) — Lab Director/Principal Scientist

Definitions and Abbreviations used in this report: *Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THCV + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A, *Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (mg/ml) = Milligrams per Milliliter, LOQ = Limit of Quantitation, LOD = Limit of Detection, Dilution = Dilution Factor (ppb) = Parts per Billion, (%) = Percent, (cfu/g) = Colony Forming Unit per Gram (cfu/g) = Colony Forming Unit per Gram, , LOD = Limit of Detection, (µg/g) = Microgram per Gram (ppm) = Parts per Million, (ppm) = (µg/g), (aw) = aw (area ratio) = Area Ratio, (mg/Kg) = Milligram per Kilogram

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Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D008.R00
Report Date: 06/02/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Sample ID: AC4M21A
Sample Matrix: Tincture
Laboratory ID: 21-005483-0001-00
Evidence of Cooling: No
Temp: 21 °C
Relinquished by: UPS

Sample Results

Nutrition

Fatty Acid Profile - Expanded

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
C04:0 - Butyric Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C06:0 - Caproic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C08:0 - Caprylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C10:0 - Capric Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C11:0 - Undecylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C12:0 - Lauric Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C13:0 - Tridecylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C14:0 - Myristic Acid	0.61	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C14:1 c-9 - Myristoleic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C15:0 - Pentadecylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C15:1 c-10 - Pentadecenoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C16:0 - Palmitic Acid	7.52	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C16:1 c-9 (omega-7) - Palmitoleic Acid	15.6	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C16:2 c-9,12 (omega-4) - Hexadecadienoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C17:0 - Margaric Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C17:1c-10 (omega-7) - Heptadecenoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:0 - Stearic Acid	3.30	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:1 c-11 (omega-7) - Vaccenic Acid	3.41	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:1 c-12 (omega-6) - Octadecenoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:1 c-9 (omega-9) - Oleic Acid	49.9	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:1 Trans Isomers - Elaidic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:2 c-9,12 (omega-6) - Linoleic Acid	2.63	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:2 t-9,12 - Linoelaidic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:3 c-6,9,12 (omega-6) - gamma-Linolenic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D008.R00
Report Date: 06/02/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Nutrition

Fatty Acid Profile - Expanded

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
C18:3 c-9,12,15 (omega-3) - alpha-Linolenic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C18:4 c-6,9,12,15 (omega-3) - Stearidonic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C19:0 - Nonadecylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:0 - Arachidic Acid	2.51	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:1 c-11 (omega-9) - Gondoic Acid	2.27	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:2 c-11,14 (omega-6) - Eicosadienoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:3 c-11,14,17 (omega-3) - Eicosatrienoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:3 c-8,11,14 (omega-6) - DGLA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:4 c-5,8,11,14 (omega-6) - Arachidonic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:4 c-8,11,14,17 (omega-3) - ETA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C20:5 c-5,8,11,14,17 (omega-3) - EPA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C21:0 - Heneicosylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C22:0 - Behenic Acid	0.78	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C22:1 c-13 (omega-9) - Erucic Acid	0.20	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C22:2 c-13,16 (omega-6) - Docosadienoic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C22:5 c-7,10,13,16,19 (omega-3) - DPA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C22:6 c-4,7,10,13,16,19 (omega-3) - DHA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C23:0 - Tricosylic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C24:0 - Lignoceric Acid	0.32	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
C24:1 c-15 (omega-9) - Nervonic Acid	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Monounsaturated Fat	71.4	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Omega-3 Fat	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Omega-6 Fat	2.63	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Omega-9 Fat	52.4	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Polyunsaturated Fat	2.63	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Saturated Fat	15.0	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Total CLA	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Total Fat	93.0	g/100g	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Trans Fat	< LOQ	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	
Unknown Components	0.77	%	0.10	05/26/21	AOCS Ce 1h-05 (mod.)	

Abbreviations

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D008.R00
Report Date: 06/02/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Units of Measure
g/100g = Grams per 100 Grams
% = Percentage of sample

Approved Signatory

Derrick Tanner
General Manager

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

PROVERDE LABORATORIES

Test Certificate

Certificate ID: **94137** Received: **5/18/21**

Client Sample ID: **Activated 40 Hemp Oil**

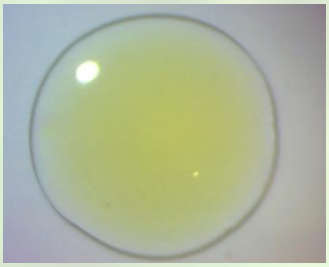
Lot Number: **AC4M21A**

Matrix: **Tincture/Infused Oil - Macadamia Nut Oi**

Scan QR Code for authenticity

CANNACEA™
www.cannacea.life

Authorization:	Signature:	Date:
Chris Hudalla, Chief Science Officer	Christopher Hudalla	5/27/2021



PJLA Testing
Accreditation
80585

The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

EA: Elemental Analysis [WI-10-13]

Analyst: CJS *Test Date: 5/21/2021*

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

94137-EA

Symbol	Metal	Conc.[1] (µg/kg)	RL (µg/kg)	Limits[2] (µg/kg)	Status
Al	Aluminum	499	50	-	
As	Arsenic	ND	50	1,500	PASS
Cd	Cadmium	ND	50	500	PASS
Ca	Calcium	1,970	500	-	
Cr	Chromium	ND	50	1,100,000	PASS
Co	Cobalt	ND	50	5,000	PASS
Cu	Copper	178	50	300,000	PASS
Fe	Iron	968	50	-	
Pb	Lead	ND	50	500	PASS
Mg	Magnesium	17,700	50	-	
Mn	Manganese	1,350	50	-	
Hg	Mercury	ND	50	3,000	PASS
Ni	Nickel	ND	50	20,000	PASS
P	Phosphorus	65,800	500	-	
K	Potassium	32,000	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	15,000	PASS
S	Sulfur	ND	500	-	
Sn	Tin	ND	500	600,000	PASS
Zn	Zinc	1,980	50	-	

1) ND = None detected to the Method Detection Limit (MDL)
2) USP recommended maximum daily limits for oral drug product.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D006.R00
Report Date: 06/14/2021
Purchase Order:
Received: 05/18/21 10:45 AM

This is an amended version of report# 21-005483/D006.R00.
Reason: Corrected P2220 Compound list

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Sample ID: AC4M21A
Sample Matrix: Tincture
Laboratory ID: 21-005483-0001-03
Evidence of Cooling: No
Temp: 21 °C
Relinquished by: UPS

Sample Results

Pesticides

Multi-Residue Pesticide Profile

Analyte	Result	Units	Analyzed	Method	Notes
Multi-Residue Pesticide Profile	< LOQ for all analytes	mg/kg	05/25/21	AOAC 2007.01 & EN 15662 (mod)	

Abbreviations

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

Units of Measure

mg/kg = Milligram per kilogram = parts per million (ppm)

Approved Signatory

Derrick Tanner
General Manager

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Report Number: 21-005483/D006.R00
Report Date: 06/14/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Columbia Laboratories, Inc
P2220 Multi-Residue Profile, Limits of Quantitation (MDL Sheet)

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
2,4,5-T	0.010	Butachlor	0.010	Cymoxanil	0.010
2,4,5-TP	0.010	Butralin	0.020	Cypermethrin	0.010
2,4-D	0.010	Butylate	0.010	Cyprodinil	0.010
2,4-DB	0.010	Cadusafos	0.010	Cyromazine	0.010
2,4-DP (Dichlorprop)	0.010	Captafol	0.100	DCPMU	0.010
Abamectin (Avermectin)	0.010	Captan	0.020	DDD, o,p'-	0.010
Acephate	0.020	Carbaryl	0.010	DDD, p,p'-	0.010
Acequinocyl	0.010	Carbendazim	0.010	DDE, o,p'-	0.010
Acetamiprid	0.010	Carbofuran	0.010	DDE, p,p'-	0.010
Acetochlor	0.020	Carbofuran, 3-hydroxy	0.010	DDT, o,p'-	0.010
Acifluorfen	0.010	Carbophenothion	0.010	DDT, p,p'-	0.010
Acrinathrin	0.010	Carbophenothion methyl	0.010	DEF (Tribufos)	0.010
Alachlor	0.020	Carboxin	0.010	Deltamethrin	0.010
Aldicarb	0.010	Carfentrazone-ethyl	0.010	Demeton-S	0.020
Aldicarb sulfone (Aldoxycarb)	0.010	Chlorantraniliprole	0.010	Demeton-S methyl-sulfone	0.020
Aldicarb-sulfoxide	0.010	Chlordane, cis-	0.010	Demeton-s-methyl	0.020
Aldrin	0.010	Chlordane, trans-	0.010	Desmedipham	0.010
Ametoctradin	0.010	Chlordimeform	0.010	Diallate	0.010
Ametryn	0.010	Chlorfenapyr	0.020	Diazinon	0.010
Aminocyclopyrachlor	0.010	Chlorfenson (Ovex)	0.010	Diazoxon	0.010
Anilazine	0.030	Chlorfenvinphos	0.010	Dicamba (Banvel)	0.010
Aspon	0.010	Chlorimuron-ethyl	0.010	Dichlobenil	0.010
Asulam	0.010	Chlornitrofen (CNP)	0.020	Dichlofenthion	0.010
Atrazine	0.010	Chlorobenzilate	0.010	Dichlofluanid	0.010
Atrazine-desethyl	0.010	Chloroneb	0.010	Dichlorobenzamide	0.010
Azinphos-ethyl	0.010	Chlorothalonil	0.040	Dichlorvos	0.010
Azinphos-methyl	0.010	Chlorpropham (CIPC)	0.010	Diclobutrazol	0.010
Azoxystrobin	0.010	Chlorpyrifos (ethyl)	0.010	Diclofop (acid)	0.010
Benalaxyl	0.010	Chlorpyrifos-methyl	0.010	Diclofop-methyl	0.010
Bendiocarb	0.010	Chlorsulfuron	0.010	Dicloran	0.040
Benfluralin	0.010	Chlorthal-dimethyl (Dacthal)	0.010	Dicofol, p,p'-/o,p'-	0.020
Benoxacor	0.010	Chlorthion	0.020	Dicrotophos	0.010
Bensulide	0.010	Chlorthiophos	0.010	Dieldrin	0.010
Bentazon	0.010	Clethodim	0.010	Diethofencarb	0.010
BHC alpha isomer	0.010	Clethodim sulfone	0.010	Diethyltoluamide (DEET)	0.010
BHC beta isomer	0.010	Clethodim sulfoxide	0.010	Difenoconazole	0.010
BHC delta isomer	0.010	Clofentezine	0.010	Diflubenzuron	0.010
Bifenazate	0.010	Clomazone	0.010	Diflufenzopyr	0.010
Bifenox	0.010	Clopyralid	0.010	Dimethenamid	0.010
Bifenthrin	0.010	Clothianidin	0.010	Dimethoate	0.010
Binapacryl	0.040	Coumaphos	0.010	Dimethomorph	0.010
Bitertanol	0.020	Crotoxyphos	0.010	Diniconazole	0.010
Boscalid	0.010	Cyanazine	0.010	Dinocap	0.010
Bromacil	0.020	Cyanofenphos	0.010	Dinoseb (Dinitro)	0.010
Bromophos-methyl	0.010	Cyanophos	0.040	Dinotefuran	0.010
Bromophos-ethyl	0.020	Cyantraniliprole	0.010	Dioxathion	0.010
Bromopropylate	0.010	Cyazofamid	0.010	Diphenamid	0.010
Bromoxynil	0.010	Cycloate	0.010	Diphenylamine (DPA)	0.010
Bromuconazole	0.010	Cycloxydim	0.010	Disulfoton	0.020
Bupirimate	0.010	Cyfluthrin	0.030	Disulfoton sulfone	0.010
Buprofezin	0.010	Cyhalothrin, lambda	0.010	Disulfoton sulfoxide	0.010

LOQ = Limit of Quantitation, mg/kg: If an amount below this level is detected (and the identity confirmed), it may be reported as "Trace".
MDL = Method Detection Limit = LOQ

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Report Number: 21-005483/D006.R00
Report Date: 06/14/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Columbia LABORATORIES A Tentamus Company

Columbia Laboratories, Inc

P2220 Multi-Residue Profile, Limits of Quantitation (MDL Sheet)

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Dithianon	0.010	Flufenacet	0.010	Isoxaflutole	0.010
Diuron	0.010	Flumioxazin	0.010	Kresoxim-methyl	0.010
DNOC	0.010	Fluometuron	0.010	Lactofen	0.020
Edifenphos	0.010	Fluopicolide	0.010	Lenacil	0.010
Endosulfan (α isomer)	0.020	Fluopyram	0.010	Lindane	0.010
Endosulfan (β isomer)	0.020	Fluoxastrobin	0.010	Linuron	0.010
Endosulfan sulfate	0.010	Flupyradifurone	0.010	Malaoxon (Malathion-o-analog)	0.010
Endrin	0.020	Fluridone	0.010	Malathion	0.010
Endrin aldehyde	0.020	Fluroxypyr (free acid)	0.010	Mandipropamid	0.010
EPN	0.010	Flusilazol	0.010	MCPA	0.010
EPTC	0.010	Fluthiacet Methyl	0.010	MCPB	0.010
Esfenvalerate/Fenvalerate	0.020	Flutolanil	0.010	MCPP (Mecoprop)	0.010
Etaconazole	0.010	Flutriafol	0.010	Mecarbam	0.010
Ethalfluralin	0.010	Fluvalinate -tau	0.010	Mepanipyrim	0.010
Ethiofencarb	0.010	Fluxapyroxad	0.010	Mesosulfuron Methyl	0.010
Ethion	0.010	Folpet	0.020	Mesotrione	0.010
Ethirimol	0.010	Fomesafen	0.010	Metalaxyl/Mefenoxam	0.010
Ethofumesate	0.010	Fonofos	0.010	Metconazole	0.010
Ethoprophos	0.010	Foramsulfuron	0.010	Methacrifos	0.010
Ethoxyquin	0.010	Forchlorfenuron	0.010	Methamidophos	0.010
Etofenprox	0.010	Formetanate	0.010	Methidathion	0.010
Etoxazole	0.010	Furathiocarb	0.010	Methiocarb	0.010
Etridiazole	0.010	Halosulfuron-methyl	0.010	Methiocarb sulfone	0.010
Etrimfos	0.010	Haloxyfop (free acid)	0.010	Methiocarb sulfoxide	0.010
Famoxadone	0.020	Heptachlor & Heptachlor epoxide	0.010	Methomyl	0.010
Famphur	0.010	Hexachlorobenzene (HCB)	0.010	Methoxychlor	0.010
Fenamidone	0.010	Hexaconazole	0.010	Methoxyfenozide	0.010
Fenamiphos	0.010	Hexazinone (Velpar)	0.010	Metobromuron	0.010
Fenamiphos Sulfone	0.010	Hexythiazox	0.010	Metolachlor	0.010
Fenamiphos Sulfoxide	0.010	Hydroprene	0.010	Metolcarb	0.010
Fenarimol	0.010	Imazalil	0.010	Metrafenone	0.010
Fenazaquin	0.010	Imazamox	0.010	Metribuzin	0.010
Fenbuconazole	0.010	Imazapic	0.010	Metsulfuron-methyl	0.010
Fenbutatin oxide	0.010	Imazapyr	0.010	Mevinphos	0.010
Fenchlorphos	0.010	Imazaquin	0.010	Mexacarbate	0.010
Fenhexamid	0.010	Imazethapyr	0.010	MGK-264	0.010
Fenitrothion	0.010	Imidacloprid	0.010	Mirex	0.010
Fenobucarb (Baycarb)	0.010	Imidoxone (Phosmet-Oxon)	0.010	Molinate	0.010
Fenoxaprop-P-Ethyl	0.010	Indaziflam	0.010	Monocrotophos	0.010
Fenoxycarb	0.010	Indoxacarb	0.010	Monolinuron	0.010
Fenpropathrin	0.010	Iprobenfos	0.010	Myclobutanil	0.010
Fenpyroximate	0.010	Iprodione	0.020	Naled	0.010
Fenson	0.020	Isazophos	0.010	Napropamide	0.010
Fensulfothion	0.010	Isobenzan	0.010	Neburon	0.010
Fenthion	0.010	Isocarbophos	0.010	Nicosulfuron	0.010
Fenuron	0.010	Isodrin	0.010	Nitrapyrin	0.020
Fipronil	0.010	Isofenphos	0.010	Nitrofen	0.020
Flonicamid	0.010	Isofenphos-methyl/ OA	0.010	Norflurazon	0.010
Fluazifop	0.010	Isoprocarb	0.010	Novaluron	0.010
Fluazinam	0.010	Isopropalin	0.010	Nuarimol	0.020
Fluchloralin	0.010	Isoprothiolane	0.010	Omethoate	0.010
Flucythrinate	0.030	Isoproturon	0.010	O-Phenylphenol	0.010
Fludioxonil	0.010	Isoxaben	0.010	Oryzalin	0.010

LOQ = Limit of Quantitation, mg/kg: If an amount below this level is detected (and the identity confirmed), it may be reported as "Trace".
MDL = Method Detection Limit = LOQ

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A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D006.R00
Report Date: 06/14/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Columbia LABORATORIES A Tentamus Company

Columbia Laboratories, Inc
P2220 Multi-Residue Profile, Limits of Quantitation (MDL Sheet)

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Oxadiazon	0.010	Propanil	0.010	Tembotrione	0.010
Oxadixyl	0.010	Propargite	0.010	Terbacil	0.040
Oxamyl	0.010	Propazine	0.010	Terbufos	0.010
Oxamyl-oxime	0.010	Propetamphos	0.010	Terbufos sulfone	0.010
Oxychlordane	0.010	Propham	0.010	Terbufos sulfoxide	0.010
Oxydemeton-Methyl	0.010	Propiconazole	0.010	Terbuthylazine	0.010
Oxyfluorfen	0.010	Propoxur	0.010	Terbutryn	0.010
Oxythioquinox	0.020	Propoxycarbazone sodium	0.010	Tertrachlorvinphos	0.010
Paclobutrazol	0.010	Prosulfuron	0.010	Tetraconazole	0.010
Paraoxon-ethyl	0.010	Prothioconazole	0.010	Tetradifon	0.010
Paraoxon-methyl	0.010	Prothiofos	0.010	Tetramethrin	0.010
Parathion-ethyl	0.010	Pymetrozine	0.010	Tetrasul	0.010
Parathion-methyl	0.030	Pyraclostrobin	0.010	Thiabendazole	0.010
PCP (Pentachlorophenol)	0.010	Pyraflufen-ethyl	0.010	Thiabendazole, 5-hydroxy	0.010
Penconazole	0.010	Pyrazophos	0.010	Thiacloprid	0.010
Pendimethalin	0.010	Pyrethrins	0.010	Thiamethoxam	0.010
Penflufen	0.010	Pyridaben	0.010	Thifensulfuron-methyl	0.010
Pentachloroaniline (PCA)	0.010	Pyridate	0.010	Thiobencarb (benthiocarb)	0.010
Pentachloroanisole	0.010	Pyrimethanil	0.010	Thiodicarb	0.010
Pentachlorobenzene (PCB)	0.010	Pyriproxifen	0.010	Thiometon	0.020
Pentachlorothioanisole (PCTA)	0.030	Pyroxasulfone	0.010	Thionazin	0.010
Penthiopyrad	0.010	Pyroxsulam	0.010	Thiophanate-methyl	0.010
Permethrin	0.010	Quinalphos	0.010	Tolclofos-methyl	0.010
Perthane	0.010	Quinclorac	0.010	Tolfenpyrad	0.010
Phenmedipham	0.010	Quinoxyfen	0.010	Tolylfluanid	0.010
Phenothrin	0.010	Quintozene(PCNB)	0.010	Topramezone	0.010
Phenthoate	0.010	Quizalofop (free acid)	0.010	Tralkoxydim	0.010
Phorate	0.010	Resmethrin	0.010	Triadimefon	0.010
Phorate OA	0.010	Rimsulfuron	0.010	Triadimenol	0.010
Phorate Sulfone	0.010	Rotenone	0.010	Tri-allate	0.010
Phorate Sulfoxide	0.010	S-421	0.010	Triasulfuron	0.010
Phosalone	0.010	Saflufenacil	0.010	Triazophos	0.010
Phosmet	0.010	Sebuthylazine	0.010	Tribenuron-methyl	0.010
Phosphamidon	0.010	Sethoxydim	0.010	Trichlorfon	0.010
Phoxim	0.010	Simazine	0.010	Triclopyr	0.020
Phthalimide	0.020	Simetryn	0.010	Trifloxystrobin	0.010
Picloram	0.010	Spinetoram	0.010	Trifloxysulfuron -sodium	0.010
Pinoxaden	0.010	Spinosad (α, β isomers)	0.010	Triflumizole	0.010
Piperonyl Butoxide	0.010	Spirodiclofen	0.010	Trifluralin	0.010
Pirimicarb	0.010	Spiromesifen	0.010	Triflusulfuron-methyl	0.010
Pirimiphos-Ethyl	0.010	Spirotetramat	0.010	Triforin	0.010
Pirimiphos-Methyl	0.010	Spirotetramat-enol	0.010	Trinexapac (acid)	0.010
Pirimisulfuron-Methyl	0.010	Spiroxamine	0.010	Trinexapac Ethyl	0.010
Prallethrin	0.010	Sulfallate	0.010	Triticonazole	0.010
Prochloraz	0.010	Sulfentrazone	0.030	Vinclozolin	0.010
Procymidone	0.010	Sulfometuron-methyl	0.010	Zoxamide	0.010
Prodiamine	0.010	Sulfosulfuron	0.010		
Profenofos	0.010	Sulfotep	0.010		
Profluralin	0.010	Sulfoxaflor	0.010		
Promecarb	0.010	Sulprofos	0.010		
Prometon	0.010	Tebuconazole	0.010		
Prometryne	0.010	Tebufenozide	0.010		
Pronamide (Propyzamide)	0.010	Tebuthiuron	0.010		
Propachlor	0.010	Tecnazene	0.010		
Propamocarb	0.010	Tefluthrin	0.010		

mg/kg = Parts per Million (ppm)
LOQ = Limit of Quantitation, mg/kg:
If an amount below this level is detected (and the identity confirmed), it may be reported as "Trace".
MDL = Method Detection Limit = LOQ

LOQs above are typical of most analyses. Factors affecting the LOQ include instrumentation sensitivity for a particular analyte, sample size, moisture content (percent solids) of the sample, effectiveness of the cleanup on the sample extract, and especially the type of sample matrix.

3 of 3

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Sun City Center, FL 33573
www.acslabcannabis.com

License No. 800025015
FL License # CMTL-0003
CLIA No. 10D1094068

Activated 40 Hemp Oil
Sample Matrix: CBD/HEMP Derivative Products (Ingestion)

Certificate of Analysis

Compliance Test

CANNACEA
30262 CROWN VALLEY PKWY
B525
LAGUNA NIGUEL, CA 92677

Batch # AC4M21A
Batch Date: 2021-04-20
Extracted From: Hemp and Macadamia Nuts
Test Reg State: Utah

Order # SAP210421-040006
Order Date: 2021-04-21
Sample # AABG062

Sampling Date: 2021-05-18
Lab Batch Date: 2021-05-18
Completion Date: 2021-06-11
Initial Gross Weight: 42.751 g

Additional Pesticides

Passed
(LCMS)

Specimen Weight: 158.800 mg

Dilution Factor: 9.446

Analyte	LOQ (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Result (ppb)
Diquat	24	<LOQ	Glyphosate	24	<LOQ
Paraquat	24	<LOQ			

Xueli Gao, Ph.D., DABT — Lab Toxicologist

Aixia Sun, D.H.Sc., M.Sc., B.Sc., MT (AAB) — Lab Director/Principal Scientist

Definitions and Abbreviations used in this report: *Total CBD = CBD + (CBD-A * 0.877), *Total THC = THCA-A * 0.877 + Delta 9 THC, *CBG Total = (CBGA * 0.877) + CBG, *CBN Total = (CBNA * 0.877) + CBN, *Other Cannabinoids Total = CBC + CBDV + THCV + THCV-A, *Total Detected Cannabinoids = CBD Total + CBG Total + CBN Total + THC Total + CBC + CBDV + THCV + THCV-A, *Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (mg/ml) = Milligrams per Milliliter, LOQ = Limit of Quantitation, LOD = Limit of Detection, Dilution = Dilution Factor (ppb) = Parts per Billion, (%) = Percent, (cfu/g) = Colony Forming Unit per Gram (cfu/g) = Colony Forming Unit per Gram, , LOD = Limit of Detection, (µg/g) = Microgram per Gram (ppm) = Parts per Million, (ppm) = (µg/g), (aw) = aw (area ratio) = Area Ratio, (mg/Kg) = Milligram per Kilogram

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Steep Hill Arkansas

11711 HERMITAGE ROAD, SUITE #5, LITTLE ROCK, AR 72211 LICENSE #: BL157155

CERTIFICATE OF ANALYSIS

Sample Name: Activated 40 Hemp Oil
Steep Hill ID: AR102359
Batch ID: AC4M21A
State ID:
Sample Type: Concentrate
Date Received: 5/18/2021

Customer: **CANNACEA**
30262 Crown Valley Pkwy B525
Laguna Niguel, AR 92677

Residual Solvents Results **Pass** **5/22/2021**

Residual solvents and processing chemicals analysis utilizing Headspace Gas Chromatography – Mass Spectrometry (HS-GC-MS; SOP-010-AR) - **Limit units: µg/g**

Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g	Analyte	Pass/Fail	µg/g	Limit	LOD µg/g	LOQ µg/g
1-Butanol	Pass	ND	5000	58.4	195	Dimethyl Sulfoxide	Pass	ND	5000	50.6	169
1-Pentanol	Pass	ND	5000	97.4	325	Ethanol	Pass	ND	5000	70.7	236
1-Propanol	Pass	ND	5000	145	485	Ethyl Acetate	Pass	ND	5000	25.4	84.8
1,2-Dimethoxyethane	Pass	ND	100	78.0	260	Ethyl Ether	Pass	ND	5000	8.93	29.8
1,4-Dioxane	Pass	ND	380	75.8	253	Ethylene Glycol	Pass	ND	620	8.35	27.8
2-Butanol	Pass	ND	5000	73.8	246	Ethylene Oxide	Pass	ND	50	5.88	19.6
2-Butanone	Pass	ND	5000	40.9	136	n-Heptane	Pass	ND	5000	32.2	107
2-Ethoxyethanol	Pass	ND	160	54.5	182	n-Hexane	Pass	ND	290	9.30	31.0
2-Methylbutane	Pass	ND	5000	7.02	23.4	Isopropyl Acetate	Pass	ND	5000	44.2	147
2-Methylpentane	Pass	ND	290	8.34	27.8	Methanol	Pass	ND	3000	31.7	106
2-Propanol (IPA)	Pass	ND	5000	104	336	Methylpropane	Pass	ND	5000	8.44	28.1
2,2-Dimethylbutane	Pass	ND	290	15.6	52.0	N,N-Dimethylacetamide	Pass	ND	1090	59.2	197
2,3-Dimethylbutane	Pass	ND	290	6.78	22.6	N,N-Dimethylfromamide	Pass	ND	880	80.1	267
3-Methylpentane	Pass	ND	290	8.63	28.8	n-Pentane	Pass	ND	5000	7.41	24.7
Acetone	Pass	ND	5000	163	545	Propane	Pass	ND	5000	8.39	28.0
Acetonitrile	Pass	ND	410	66.2	199	Pyridine	Pass	ND	200	48.8	163
Benzene	Pass	ND	2	1.49	4.96	Sulfolane	Pass	ND	160	29.5	98.2
n-Butane	Pass	ND	5000	6.69	22.3	Tetrahydrofuran	Pass	ND	720	34.5	115
Cumene	Pass	ND	70	29.0	96.7	Toluene	Pass	ND	890	77.0	257
Cyclohexane	Pass	ND	3880	17.7	59.2	Xylenes	Pass	ND	2170	106	354
Dichloromethane	Pass	ND	600	7.48	24.9						

ND: Not Detected NT: Not Tested LOQ: Limit of Quantitation LOD: Limit of Detection

Brandon Thornton
Pharm D. Co-Owner & CEO
Date: 5/22/2021

Determination of Pass/Fail is based on RULES AND REGULATIONS GOVERNING MEDICAL MARIJUANA REGISTRATION, TESTING, AND LABELING IN ARKANSAS. Steep Hill Arkansas does not use Measurement Uncertainty when determining results. Measurement Uncertainty information is available upon request.

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PJLA Testing
Accreditation # 97338

Analytical Resource Laboratories
47-2854223
520 South 850 East, Suite B3
Lehi, UT 84043
801-847-7722
www.analyticalresource.com
info@yourqualitylab.com

Certificate of Analysis

Client Information

Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel, CA
92677 USA

Sample Information

ARL ID: 416060-2
Date Received: 6/28/2021
Description: Activated 40 Hemp Oil
Lot#: AC4M21A

Analysis	Method	†MDL / LOQ	Specification	Results	UOM	Lab ID
Complete Micro Profile Pseudomonas	USP, AOAC					24
Total Plate Count	USP <2021>	10	Record Only	None Detected	cfu's/g	24
Coliforms	AOAC 991.14	10	Record Only	None Detected	cfu's/g	24
E. coli	USP <2022>	Absent	Record Only	Absent	cfu's/10g	24
Staphylococcus aureus	USP <2022>	Absent	Record Only	Absent	cfu's/10g	24
Salmonella	USP <2022>	Absent	Record Only	Absent	cfu's/10g	24
Pseudomonas aeruginosa	USP <62>	Absent	Record Only	Absent	cfu's/10g	24
Yeast	USP <2021>	10	Record Only	None Detected	cfu's/g	24
Mold	USP <2021>	10	Record Only	None Detected	cfu's/g	24

Notes:

Revision-1: changed Client name as per Client's request.
Revision-2: Updated report formatting per client's request

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Printed on: Jun 28, 2021 4:56 PM

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Released by: Jacob Teller
Jun 28, 2021

†**Method Detection Limit (MDL)**: In microbiological testing, this is the minimum level of growth that can be detected with confidence. If a result is reported as "None detected", it means any visible growth was below this limit. **Limit of Quantitation (LOQ)**: In analytical chemistry testing, this is the minimum level of the desired analyte that can be quantified with confidence. If a result is reported as less than LOQ, it means any detected amount was too small to report an exact number.

*** ARL is an ISO/IEC 17025:2017 Accredited Laboratory. Uncertainty data for ISO-scoped methods is available upon request. Certificate and scope are also available upon request.**

This Certificate of Analysis represents data only for the sample provided and does not constitute a guarantee of quality for the entire production lot.

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
Portland, OR 97230
503-254-1794

Report Number: 21-005483/D005.R00
Report Date: 06/02/2021
Purchase Order:
Received: 05/18/21 10:45 AM

Customer: Cannacea
30262 Crown Valley Pkwy B525
Laguna Niguel 92677
United States of America (USA)

Sample ID: AC4M21A
Sample Matrix: Tincture
Laboratory ID: 21-005483-0001-01
Evidence of Cooling: No
Temp: 21 °C
Relinquished by: UPS

Sample Results

Nutrition

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
p-Anisidine Value†	< LOQ	p-A.V.	0.50	05/26/21	AOCS Cd 18-90 (mod.)	

Quality and Trade

Analyte	Result	Units	LOQ	Analyzed	Method	Notes
Free Fatty Acids in oil	0.83	% Oleic	0.10	05/26/21	ISO 660(mod.)	
Peroxide Value in oils	3.7	meq O2/kg fat	1.0	05/26/21	ISO 3960 (mod.)	

Abbreviations

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

† = Analyte not ISO accredited.

Units of Measure

meq O2/kg fat = meq O2 Per kg fat
p-A.V. = p-Anisidine Value
% Oleic = Percentage as Oleic Acid

Approved Signatory

Derrick Tanner
General Manager

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.