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CERTIFICATE OF ANALYSIS

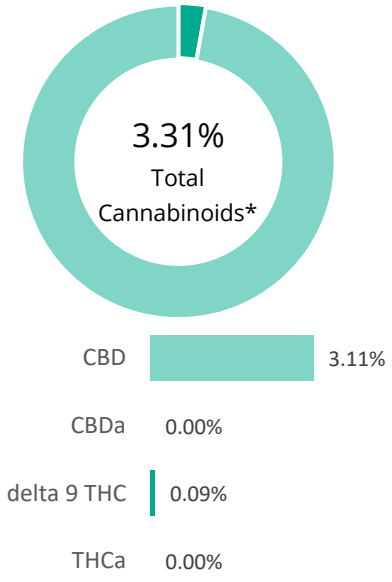
prepared for: Beak and Skiff Research

4473 Cherry Valley Tpke
Lafayette, NY 13084

O_CBD_DOIL_ORG_900

Batch ID:	T0040	**Test ID:**	T000158835
Type:	Concentrate	**Submitted:**	08/20/2021 @ 01:46 PM
Test:	Potency	**Started:**	8/23/2021
Method:	TM14 (HPLC-DAD)	**Reported:**	8/25/2021

CANNABINOID PROFILE



Compound	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.01	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.01	0.09	0.9
Cannabidiolic acid (CBDA)	0.02	ND	ND
Cannabidiol (CBD)	0.02	3.11	31.1
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.02	ND	ND
Cannabinolic Acid (CBNA)	0.01	ND	ND
Cannabinol (CBN)	0.00	ND	ND
Cannabigerolic acid (CBGA)	0.01	ND	ND
Cannabigerol (CBG)	0.00	0.05	0.5
Tetrahydrocannabivarinic Acid (THCVA)	0.01	ND	ND
Tetrahydrocannabivarin (THCV)	0.00	ND	ND
Cannabidivarinic Acid (CBDVA)	0.01	ND	ND
Cannabidivarin (CBDV)	0.00	0.01	0.1
Cannabichromenic Acid (CBCA)	0.00	ND	ND
Cannabichromene (CBC)	0.01	0.05	0.5
Total Cannabinoids		**3.31**	**33.1**
Total Potential THC**		0.09	0.9
Total Potential CBD**		3.11	31.1

% = % (w/w) = Percent (Weight of Analyte / Weight of Product)
* Total Cannabinoids result reflects the absolute sum of all cannabinoids detected.
** Total Potential THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during decarboxylation step.
Total THC = THC + (THCa *(0.877)) and
Total CBD = CBD + (CBDa *(0.877))
ND = None Detected (Defined by Dynamic Range of the method)

NOTES:
N/A

FINAL APPROVAL

Daniel Weidensaul
25-Aug-2021
3:13 PM
PREPARED BY / DATE

Ryan Weems
25-Aug-2021
3:17 PM
APPROVED BY / DATE

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CERTIFICATE OF ANALYSIS

Prepared for:

O_CBD_DOIL_ORG_900

Beak and Skiff Research

Batch ID or Lot Number:	Test:	Reported:	Location:
T0040	**Pesticides**	**8/26/21**	4473 Cherry Valley Tpke Lafayette, NY 13084

Matrix:	Test ID:	Started:	USDA License:
Concentrate	T000158836	8/24/21	N/A

Status:	Method:	Received:	Sampler ID:
N/A	TM17(LC-QQQ LC MS/MS):	08/20/2021 @ 01:46 PM	N/A

PESTICIDE DETERMINATION

Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)	Compound	LOQ (ppb)	Result (ppb)
Acephate	28	ND	**Fenoxycarb**	41	ND	**Paclobutrazol**	43	ND
Acetamiprid	30	ND	**Fipronil**	55	ND	**Permethrin**	309	ND
Avermectin	273	ND	**Flonicamid**	58	ND	**Phosmet**	28	ND
Azoxystrobin	38	ND	**Fludioxonil**	370	ND	**Prophos**	370	ND
Bifenazate	42	ND	**Hexythiazox**	28	ND	**Propoxur**	34	ND
Boscalid	41	ND	**Imazalil**	293	ND	**Pyridaben**	291	ND
Carbaryl	31	ND	**Imidacloprid**	31	ND	**Spinosad A**	30	ND
Carbofuran	33	ND	**Kresoxim-methyl**	150	ND	**Spinosad D**	60	ND
Chlorantraniliprole	16	ND	**Malathion**	308	ND	**Spiromesifen**	226	ND
Chlorpyrifos	500	ND	**Metalaxyl**	39	ND	**Spirotetramat**	334	ND
Clofentezine	287	ND	**Methiocarb**	42	ND	**Spiroxamine 1**	21	ND
Diazinon	292	ND	**Methomyl**	29	ND	**Spiroxamine 2**	22	ND
Dichlorvos	300	ND	**MGK 264 1**	175	ND	**Tebuconazole**	339	ND
Dimethoate	39	ND	**MGK 264 2**	138	ND	**Thiacloprid**	36	ND
E-Fenpyroximate	274	ND	**Myclobutanil**	13	ND	**Thiamethoxam**	34	ND
Etofenprox	40	ND	**Naled**	42	ND	**Trifloxystrobin**	35	ND
Etoxazole	301	ND	**Oxamyl**	1500	ND			

Samantha Smith

Sam Smith
8/26/2021
4:08:00 PM

PREPARED BY / DATE

K Winternheimer

Karen Winternheimer
8/26/2021
4:11:00 PM

APPROVED BY / DATE

Definitions

LOQ = Limit of Quantification

ppb = Parts per Billion

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CERTIFICATE OF ANALYSIS

Prepared for:

O_CBD_DOIL_ORG_900

Beak and Skiff Research

Batch ID or Lot Number:	Test:	Reported:	Location:
T0040	**Residual Solvents**	**8/25/21**	4473 Cherry Valley Tpke Lafayette, NY 13084

Matrix:	Test ID:	Started:	USDA License:
N/A	T000158839	8/25/21	N/A

Status:	Methods:	Received:	Sampler ID:
N/A	TM04 (GC-MS): Residual Solvents	08/20/2021 @ 01:46 PM	N/A

RESIDUAL SOLVENTS DETERMINATION

Solvent	Dynamic Range (ppm)	Result (ppm)
Propane	89 - 1781	*ND
Butanes (Isobutane, n-Butane)	170 - 3402	*ND
Methanol	69 - 1376	*ND
Pentane	97 - 1943	*ND
Ethanol	101 - 2016	*ND
Acetone	109 - 2181	*ND
Isopropyl Alcohol	114 - 2289	*ND
Hexane	7 - 133	*ND
Ethyl Acetate	111 - 2220	*ND
Benzene	0 - 4	*ND
Heptanes	104 - 2090	*ND
Toluene	20 - 400	*ND
Xylenes (m,p,o-Xylenes)	147 - 2946	*ND

Notes

Ryan Weems
25-Aug-21
5:31 PM

PREPARED BY / DATE

Sam Smith
25-Aug-21
5:34 PM

APPROVED BY / DATE

Definitions

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

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CERTIFICATE OF ANALYSIS

Prepared for:

O_CBD_DOIL_ORG_900

Beak and Skiff Research

Batch ID or Lot Number:	Test:	Reported:	Location:
T0040	**Metals**	**8/25/21**	4473 Cherry Valley Tpke Lafayette, NY 13084

Matrix:	Test ID:	Started:	USDA License:
Concentrate	T000158838	8/24/21	N/A

Status:	Method:	Received:	Sampler ID:
N/A	TM19 (ICP-MS): Heavy Metals	08/20/2021 @ 01:46 PM	N/A

HEAVY METALS DETERMINATION

Compound	Dynamic Range (ppm)	Result (ppm)
Arsenic	0.044 - 4.42	ND
Cadmium	0.043 - 4.32	ND
Mercury	0.044 - 4.35	ND
Lead	0.041 - 4.07	ND

Notes

Daniel Weidensaul
25-Aug-21
12:56 PM

PREPARED BY / DATE

Ryan Weems
25-Aug-21
12:57 PM

APPROVED BY / DATE

Definitions

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

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CERTIFICATE OF ANALYSIS

prepared for: BEAK AND SKIFF RESEARCH

4473 CHERRY VALLEY TPKE
LAFAYETTE, NY 13084

O_CBD_DOIL_ORG_900

Batch ID:	T0040	**Test ID:**	T000158837
Matrix:	Concentrate	**Received:**	08/20/2021 @ 01:46 PM
Test:	Microbial Contaminants	**Started:**	8/23/2021
Method:	TM25 (qPCR) TM24, TM26, TM27, TM28 (Culture Plating)	**Reported:**	8/26/2021

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	**None Detected**
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	**None Detected**
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: 10^2 = 100 CFU
10^3 = 1,000 CFU
10^4 = 10,000 CFU
10^5 = 100,000 CFU

NOTES:

Free from visual mold, mildew, and foreign matter

DEFINITIONS:

CFU/g = Colony Forming Units per Gram.
LOD = Limit of Detection
ULOQ = Upper Limit of Quantitation
LLOQ = Lower Limit of Quantitation

FINAL APPROVAL

Brianne Maillot
26-Aug-2021
11:07 AM

PREPARED BY / DATE

Courtney Richards
26-Aug-2021
5:09 PM

APPROVED BY / DATE

Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. Data was generated using an unbroken chain of comparison to NIST traceable Reference Standards and Certified Reference Materials. This report may not be reproduced, except in full, without the written approval of Botanacor Laboratories, LLC. ISO/IEC 17025:2005 Accredited A2LA Certificate Number 4329.03. Testing associated with this certificate of analysis performed by an external ISO17025 accredited provider.

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