


Certificate ID: **113446**      Received: **2/8/23**  
 Client Sample ID: **CBD Distillate 2021**  
 Lot Number: **50\_2021\_00000131\_D**  
 Matrix: **Concentrates/Extracts-Distillate**

Scan QR Code  
for authenticity



**Sunset Lake Enterprises**  
**25 Brewer Parkway**  
**South Burlington, VT 05403-7326**

Authorization: <b>Andrew Aubin, Lab Director</b>	Signature: 	Date: <b>2/14/2023</b>
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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.




**CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]**

Analyst: *SD*

Test Date: *2/9/2023*

The client sample was analyzed for plant-based cannabinoids by Liquid Chromatography (LC). The collected data was compared to data collected for certified reference standards at known concentrations.

**113446-CN**

ID	Weight %	Concentration (mg/g)			
<b>Δ9-THC</b>	<b>3.17</b>	<b>31.7</b>			
THCV	ND	ND			
CBD	76.2	762			
CBDV	0.465	4.65			
CBG	1.65	16.5			
CBC	0.0599	0.599			
CBN	0.231	2.31			
THCA	ND	ND			
CBDA	ND	ND			
CBGA	ND	ND			
CBDVA	ND	ND			
Δ8-THC	ND	ND			
exo-THC	ND	ND			
<b>Total</b>	<b>81.8</b>	<b>818</b>	0%	<b>Cannabinoids (wt%)</b>	<b>76.2%</b>
Max THC	3.17	31.7		Limit of Quantitation (LOQ) = 0.0464 wt%	
Max CBD	76.2	762		Limit of Detection (LOD) = 0.0155 wt%	

**Ratio of Total CBD to THC 24.0:1**

Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation:  $MAX\ THC = (0.877 \times THCA) + THC$ . This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND=None detected above the limits of detection (LOD), which is one third of Limit of Quantification (LOQ). For values reported as "<LOQ", the estimated value is included in the calculated Total.

**MA: Water Activity [WI-10-25]**

Analyst: ALF

Test Date: 2/9/2023

**113446 (-)MA**Water Activity (Aw): **0.350**

The water activity was recorded with a dew point moisture analyzer. Water activity, Aw, is the partial vapor pressure of water in a substance divided by the partial vapor pressure of pure water at the same temperature.

**EA: Elemental Analysis [WI-10-13]**

Analyst: ZDV

Test Date: 2/10/2023

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.

**113446-EA**

Symbol	Metal	Conc. <sup>1</sup> (µg/kg)	RL (µg/kg)	Limits <sup>2</sup> (µg/kg)	Status
Al	Aluminum	418	50	-	
As	Arsenic	ND	50	200	PASS
Cd	Cadmium	ND	50	200	PASS
Ca	Calcium	46,100	500	-	
Cr	Chromium	ND	50	300	PASS
Co	Cobalt	ND	50	300	PASS
Cu	Copper	ND	50	3,000	PASS
Fe	Iron	1,290	50	-	
Pb	Lead	53.0	50	500	PASS
Mg	Magnesium	57,800	50	-	
Mn	Manganese	4,140	50	-	
Hg	Mercury	ND	50	100	PASS
Ni	Nickel	ND	50	500	PASS
P	Phosphorus	18,100	500	-	
K	Potassium	1,300,000	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	700	PASS
S	Sulfur	220,000	500	-	
Sn	Tin	ND	500	6,000	PASS
Zn	Zinc	2,560	50	-	

1) ND = None detected to the Limit of Detection (LOD)

2) USP recommended maximum daily limits for inhalational drug product.

**MB2: Pathogenic Bacterial Contaminants [WI-10-10]**

Analyst: AEH

Test Date: 2/9/2023

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**113446-MB2**

Test ID	Analysis	Results	Units	Limits*	Status
113446-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
113446-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

**MY: Mycotoxin Testing [WI-10-05]**

Analyst: KM/BB

Test Date: 2/10/2023

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**113446-MY**

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	2/10/2023	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	2/10/2023	< MDL	3 ppb	< 20 ppb	PASS

**PST: Pesticide Analysis [WI-10-11]**

Analyst: CJR

Test Date: 2/8/2023

The client sample was analyzed for pesticides using Liquid Chromatography with Mass Spectrometric detection (LC/MS/MS). The method used for sample prep was based on the European method for pesticide analysis (EN 15662).

**113446-PST**

Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin	71751-41-2	ND	ppb	0.20	10	PASS
Azoxystrobin	131860-33-8	ND	ppb	0.10	100	PASS
Bifenazate	149877-41-8	ND	ppb	0.10	100	PASS
Bifenthrin	82657-04-3	ND	ppb	0.20	3000	PASS
Cyfluthrin	68359-37-5	ND	ppb	0.50	2000	PASS
Dichlorvos	62-73-7	ND	ppb	3.00	10	PASS
Etoxazole	153233-91-1	ND	ppb	0.10	100	PASS
Fenoxycarb	72490-01-8	ND	ppb	0.10	10	PASS
Imazalil	35554-44-0	ND	ppb	0.10	10	PASS
Imidacloprid	138261-41-3	ND	ppb	0.10	5000	PASS
Myclobutanil	88671-89-0	ND	ppb	0.10	100	PASS
Paclobutrazol	76738-62-0	ND	ppb	0.10	10	PASS
Piperonyl butoxide	51-03-6	ND	ppb	0.10	3000	PASS
Pyrethrin	8003-34-7	ND	ppb	0.10	10	PASS
Spinosad	168316-95-8	ND	ppb	0.10	10	PASS
Spiromesifen	283594-90-1	ND	ppb	0.10	100	PASS
Spirotetramat	203313-25-1	ND	ppb	0.10	100	PASS
Trifloxystrobin	141517-21-7	ND	ppb	0.10	100	PASS

\* Pesticide results reported against action limits established by the State of California Bureau of Cannabis Control, California Code of Regulations Title 16, Division 42. ND indicates "none detected" above the lower limit of detection (LLD). Analytes marked with (\*) indicate analytes for which no recovery was observed for a pre-spiked matrix sample due to matrix interference.

**TP: Terpenes Profile [WI-10-37]**

*Analyst: CS*

*Test Date: 2/9/2023*

The sample was analyzed for terpenes (WI-10-37) utilizing solvent extraction followed by Gas Chromatography (GC) utilizing flame ionization detection (FID). Chromatographic data were processed by quantitatively comparing the analytical peak areas against calibration curves prepared from certified reference standards.

**113446-TP**

Compound	CAS	Conc. (wt%)	Conc. (ppm)	Qualitative Profile
alpha-pinene	80-56-8	ND	ND	
camphene	79-92-5	ND	ND	
sabinene	3387-41-5	ND	ND	
beta-pinene	127-91-3	ND	ND	
beta-myrcene	123-35-3	ND	ND	
alpha-phellandrene	99-83-2	ND	ND	
delta-3-carene	13466-78-9	ND	ND	
alpha-terpinene	99-86-5	ND	ND	
p-cymene	99-87-6	ND	ND	
D-limonene	5989-27-5	ND	ND	
eucalyptol	470-82-6	ND	ND	
alpha-ocimene	502-99-8	ND	ND	
beta-ocimene	13877-91-3	ND	ND	
gamma-terpinene	99-85-4	ND	ND	
terpinolene	586-62-9	ND	ND	
L-fenchone	7787-20-4	ND	ND	
linalool	78-70-6	ND	ND	
isopulegol	89-79-2	ND	ND	
menthol	89-78-1	ND	ND	
geraniol	106-24-1	ND	ND	
beta-caryophyllene	87-44-5	0.0645	645	
alpha-humulene	6753-98-6	0.0461	461	
cis-nerolidol	3790-78-1	ND	ND	
trans-nerolidol	40716-66-3	0.0441	441	
caryophyllene oxide	1139-30-6	0.0580	580	
guaial	489-86-1	0.197	1,970	
alpha-bisabolol	23089-26-1	0.387	3,870	

Total Terpene: 0.8 wt%

\* Certified reference standard not available for this compound. Concentration is estimated using the response factor from alpha-pinene. ND = None Detected. RL = Reporting Limit of 5 ppm.



**VC: Analysis of Volatile Organic Compounds [WI-10-28]**

Analyst: KAS

Test Date: 2/9/2023

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

**113446-VC**

Compound	CAS	Amount <sup>1</sup>	Limit <sup>2</sup>	RL	Status
Propane	74-98-6	ND	1,000 ppm	4	PASS
Isobutane	75-28-5	ND	1,000 ppm	4	PASS
Butane	106-97-8	ND	1,000 ppm	4	PASS
Methanol	67-56-1	ND	3,000 ppm	100	PASS
Pentane	109-66-0	ND	5,000 ppm	100	PASS
Ethanol	64-17-5	ND	5,000 ppm	100	PASS
Acetone	67-64-1	ND	5,000 ppm	100	PASS
Isopropanol	67-63-0	ND	5,000 ppm	100	PASS
Acetonitrile	75-05-8	ND	410 ppm	100	PASS
Hexane	110-54-3	ND	290 ppm	100	PASS
Heptane	142-82-5	ND	5,000 ppm	100	PASS

1) ND = Not detected at a level greater than the Reporting Limit (RL).

2) In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health for cannabis concentrates and extracts on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

(\*) For ethanol, as many formulations contain flavorings based on ethanol extracts of natural products, no status has been assigned.

**END OF REPORT**