

## Hemp Oil

Company Name: Utah Cannabis Company      Sample Received: 10/22/220  
Company Lot Number: N/A      Release Date: 10/28/2020  
Sample Matrix: Distillate      APRC Lot Number: UCC201022A



Total THC  
0.27 %

Total CBD  
43.01 %

Cannabinoids  
61.79 %

Pesticides  
Tested

Microbial  
Tested

Residual  
Solvents  
Tested

Heavy Metals  
Tested

Terpene  
Analysis  
Tested

Prepared By: Cierra Gunn

Reviewed By: Alec Anderson

## Quantitative Terpene Analysis Report

### Certificate of Analysis

#### Hemp Oil

Company Name: Utah Cannabis Company      Sample Received: 10-22-2020  
Company Lot Number: NA      APRC Lot Number: UCC201022A  
Sample Matrix: Distillate      Release Date: 10-27-2020

Compound	Total % (w/w)	Total (mg/g)	Compound	Total % (w/w)	Total (mg/g)
$\alpha$ -Pinene	ND	ND	Terpinolene	ND	ND
Camphene	ND	ND	Linolool	ND	ND
$\beta$ -Pinene	ND	ND	Isopulegol	ND	ND
$\beta$ -Myrcene	<LOQ	<LOQ	Geraniol	ND	ND
$\Delta$ -3-Carene	ND	ND	$\beta$ -Caryophyllene	ND	ND
$\alpha$ -Terpinene	ND	ND	$\alpha$ -Humulene	ND	ND
p-Cymene	ND	ND	cis-Nerolidol	ND	ND
Limonene	ND	ND	trans-Nerolidol	ND	ND
$\alpha$ -Ocimene	ND	ND	Caryophyllene oxide	ND	ND
Eucalyptol	ND	ND	Guaiol	<LOQ	<LOQ
$\beta$ -Ocimene	ND	ND	$\alpha$ -Bisabolol	<LOQ	<LOQ
$\gamma$ -Terpinene	ND	ND	<b>Total Terpenes</b>	<b>ND</b>	<b>ND</b>

Prepared By: A. Anderson

Reviewed By: C. Gunn

## Residual Solvents Analysis Report

### Certificate of Analysis

#### Hemp Oil

Company Name: Utah Cannabis Company      Sample Received: 10-22-2020  
 Company Lot Number: NA      APRC Lot Number: UCC201022A  
 Sample Matrix: Distillate      Release Date: 10-27-2020

Analyte	Limit (µg/g) <sup>†</sup>	Concentration (µg/g)	Disposition
1,2 Dimethoxyethane	100	ND	Pass
1,4 Dioxane	380	ND	Pass
1-Butanol	5000	ND	Pass
1-Pentanol	5000	ND	Pass
1-Propanol	5000	ND	Pass
2-Butanol	5000	ND	Pass
2-Butanone	5000	ND	Pass
2-Ethoxyethanol	160	ND	Pass
2-methylbutane	5000	ND	Pass
2-Propanol (Isopropyl Alcohol)	5000	ND	Pass
Acetone	5000	ND	Pass
Acetonitrile	410	ND	Pass
Benzene	2	ND	Pass
Butane	5000	ND	Pass
Cumene	70	ND	Pass
Cyclohexane	3880	ND	Pass
Dichloromethane (Methylene Chloride)	600	ND	Pass
2,2-dimethylbutane	290	ND	Pass
2,3-dimethylbutane	290	ND	Pass
1,2-dimethylbenzene ( <i>o</i> -Xylene)	See Xylenes	ND	Pass
1,3-dimethylbenzene ( <i>m</i> -Xylene)	See Xylenes	ND	Pass
1,4-dimethylbenzene ( <i>p</i> -Xylene)	See Xylenes	ND	Pass
Dimethyl Sulfoxide (DMSO)	5000	ND	Pass
Ethanol	5000	ND	Pass

Analyte	Limit (µg/g) <sup>†</sup>	Concentration (µg/g)	Disposition
Ethyl Acetate	5000	ND	Pass
Ethylbenzene	See Xylenes	ND	Pass
Ethyl ether	5000	ND	Pass
Ethylene glycol	620	ND	Pass
Ethylene Oxide	50	ND	Pass
Heptane	5000	ND	Pass
Hexane	290	ND	Pass
Isopropyl acetate	5000	ND	Pass
Methanol	3000	ND	Pass
Methylpropane	5000	ND	Pass
2-Methylpentane	290	ND	Pass
3-Methylpentane	290	ND	Pass
N,N-dimethylacetamide	1090	ND	Pass
N,N-dimethylformamide	880	ND	Pass
Pentane	5000	ND	Pass
Propane	5000	ND	Pass
Pyridine	100	ND	Pass
Sulfolane	160	ND	Pass
Tetrahydrofuran	720	ND	Pass
Toluene	890	ND	Pass
Xylenes <sup>‡</sup>	2170	ND	Pass

<sup>†</sup> Per Utah state code 4-41a-701(3) Section R68-29-6

<sup>‡</sup> Total Xylenes is a combination of the following: *o*-Xylene, *m*-Xylene, *p*-Xylene, and Ethylbenzene

Overall Disposition: Pass

Prepared By: A. Anderson

Reviewed By: C. Gunn

# HPLC Analysis Report

## Cannabinoid Profile Certificate of Analysis

Client: Utah Cannabis Company      Date Received: 10-22-2020  
 Sample Name: Hemp Oil      Date Tested: 10-22-2020  
 Sample Matrix: Distillate      APRC #: UCC201022A  
 Sample Lot: N/A

ID#	Cannabinoid	Ret. Time	Conc. (µg/mL)	% (w/w)	mg/g
1	Cannabidivarin (CBDV)	2.168	199.333	1.71	17.12
2	Cannabidiolic acid (CBDA)	INT	INT	N/A	N/A
3	Cannabigerolic acid (CBGA)	INT	INT	N/A	N/A
4	Cannabigerol (CBG)	3.012	241.917	2.08	20.78
5	Cannabidiol (CBD)	3.179	5006.583	43.01	430.12
6	Tetrahydrocannabivarin (THCV)	3.491	6.242	0.05	0.54
7	Cannabinol (CBN)	4.674	663.083	5.70	56.97
8	Δ9-Tetrahydrocannabinol (Δ9-THC)	5.936	30.985	0.27	2.66
9	Δ8-Tetrahydrocannabinol (Δ8-THC)	6.167	33.825	0.29	2.91
10	Cannabichromene (CBC)	7.358	1010.667	8.68	86.83
11	Δ9-Tetrahydrocannabinolic acid (THCA-A)	INT	INT	N/A	N/A

		%	mg/g
Analyzed by:	<u>A. Anderson</u>	Total Cannabinoids	61.79
		Total THC <sup>†</sup>	0.27
Reviewed by:	<u>C. Gunn</u>	Total CBD <sup>‡</sup>	43.01
			430.12

<sup>†</sup> Total THC is calculated by Δ9-THC +(THCA-A\*0.877)

<sup>‡</sup> Total CBD is calculated by CBD + (CBDA\*0.877)

Notes: CBDA, CBGA, and THCA-A could not be determined due to interfering substances.

## PCR-Microarray Analysis Report

### Microbial Certificate of Analysis

Client: Utah Cannabis Company      Date Received: 10-22-2020  
 Sample Name: Hemp Oil      Date Tested: 10-22-2020  
 Sample Matrix: Distillate      APRC #: UCC201022A  
 Sample Lot: N/A

Total Counts			
Group	Result	Specification <sup>†</sup>	Disposition
Total Aerobic Bacteria	< 100	Report Only	Tested
Total Bile Tolerant Gram-Negative Bacteria	< 100	Report Only	Tested
Total Enterobacteria/Coliforms	< 100	Report Only	Tested
Total Yeast and Mold	< 100	Report Only	Tested

Specific Organism Identification			
Organism	Result	Specification <sup>†</sup>	Disposition
<i>Escherichia coli</i> – Non <i>shigella</i>	ND	Report Only	Tested
<i>Escherichia coli/Shigella spp.</i> <sup>‡</sup>	ND	Report Only	Tested
<i>Listeria monocytogenes</i>	ND	Report Only	Tested
<i>Salmonella</i> – Specific Gene	ND	Report Only	Tested
<i>Staphylococcus Aureus</i>	ND	Report Only	Tested
<i>Pseudomonas Aeruginosa</i>	Detected	Report Only	Tested

<sup>†</sup> - Per Utah State R68-29-8 requirements

<sup>‡</sup> - Interpretation is based on presence of *Shigella* specific genes along with positive findings of STX1 and STX2 genes.

Analyzed by: A. Anderson      Notes:

Reviewed by: C. Gunn

**Hemp Oil\_UCC201022A\_10232020\_1214 PM\_012**

Sample ID: UCC201022A

Date acquired: 10/23/2020 3:42:37 PM

Acquired by: Admin

Data File: C:\LabSolutions\Data\Hemp Oil\_UCC201022A\_10232020\_1214 PM\_012.lcd

Vial: 22 | Inj. Volume: 1.0000uL | Tray: 1

Name	Conc.	Unit	Comment 1	Comment 2
Abamectin B1a	----	ppm	0.5 ppm limit	LOQ = 0.001 ppm
Acephate	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Acequinocyl	----	ppm	2 ppm limit	LOQ = 0.001 ppm
Acetamiprid	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Aldicarb	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Azoxystrobin	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Bfienthrin	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Bifenazate	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Boscalid	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Carbaryl	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Carbofuran	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Chlorantraniliprole	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Chlorfenapyr	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Chlorpyrifos	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Clofentezine	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Cyfluthrin	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Cypermethrin	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Daminozide	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Diazinon	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Dichlorvos	----	ppm	0.1 ppm limit	LOQ = 0.001 ppm
Dimethoate	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Ethoprophos	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Etofenprox	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Etoxazole	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Fenoxycarb	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Fenpyroximate	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Fipronil	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Flonicamid	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Fludioxonil	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Hexythiazox	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Imazalil	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Imidacloprid	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Kresoxim-methyl	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Malathion	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Metalaxyl	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Methiocarb	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Methomyl	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
MGK 264 (Pyrodone)	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Myclobutanil	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Naled	----	ppm	0.5 ppm limit	LOQ = 0.001 ppm
Oxamyl	----	ppm	1 ppm limit	LOQ = 0.001 ppm
Paclobutrazol	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Parathion methyl	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Permethrins	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Phosmet	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Piperonyl butoxide	----	ppm	2 ppm limit	LOQ = 0.001 ppm
Prallethrin	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Propiconazole	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Propoxur	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Pyrethrin I	----	ppm	0.5 ppm limit	LOQ = 0.001 ppm
Pyrethrin II	----	ppm	0.5 ppm limit	LOQ = 0.001 ppm
Pyridaben	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Spinosad A	----	ppm	0.1 ppm limit	LOQ = 0.001 ppm
Spinosad D	----	ppm	0.1 ppm limit	LOQ = 0.001 ppm
Spiromesifen	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Spirotetramat	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Spiroxamine-1	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Tebuconazole	----	ppm	0.4 ppm limit	LOQ = 0.001 ppm
Thiacloprid	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Thiamethoxam	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm
Trifloxystrobin	----	ppm	0.2 ppm limit	LOQ = 0.001 ppm

 Comment :  
 Pass

# ICP-MS Analysis Report

## Heavy Metal Certificate of Analysis

Client: Utah Cannabis Company      Date Received: 10/22/2020  
Sample Name: Hemp Oil      Date Released: 10/27/2020  
Sample Matrix: Distillate      APRC #: UCC201022A  
Sample Lot: N/A

Analyte	Conc. (ppm)	Specification <sup>†</sup> (ppm)	Disposition
Arsenic	0.088	< 2.00	Pass
Cadmium	0.039	< 0.82	Pass
Mercury	0.001	< 0.40	Pass
Lead	0.035	< 1.20	Pass

Prepared by: Cierra Gunn

<sup>†</sup> - Per Utah State Code 4-41a-701 (3) section R68-29-7

Reviewed by: Cody Wiscombe