


Certificate ID: **64331**  
 Received: **9/16/19**  
 Client Sample ID: **Special Sauce Hemp**  
 Lot Number: **SS090919-2**  
 Matrix: **Flowers/Bud - Dry Flower**



**VRTT Hemp LLC**  
**732 Deans Cove**  
**Collierville, TN 38017**  
**Attn: William Miller**

Authorization: Jon Podgorni, Lead Research Chemist	Signature: 	Date: 9/24/2019
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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: JSG      Test Date: 9/18/2019

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.

**64331-CN**

ID	Weight %	Concentration (mg/g)	
D9-THC	0.15	1.54	
THCV	ND	ND	
CBD	1.21	12.09	
CBDV	ND	ND	
CBG	ND	ND	
CBC	0.09	0.89	
CBN	ND	ND	
THCA	0.56	5.55	
CBDA	15.12	151.23	
CBGA	0.73	7.26	
D8-THC	ND	ND	
exo-THC	ND	ND	
<b>Total</b>	<b>17.86</b>	<b>178.57</b>	<b>0%      Cannabinoids (wt%)      15.1%</b>
Max THC	0.64	6.41	
Max CBD	14.47	144.72	

**Ratio of Total CBD to THC 22.6:1**

**Limit of Quantitation (LOQ) = 0.007 wt%**

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 x 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 half of LOQ.

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

Analyst: JFD

Test Date: 9/19/2019

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**64331-EA**

Symbol	Metal	Conc. <sup>1</sup> (µg/kg)	RL (µg/kg)	Limits <sup>2</sup> (µg/kg)	Status
Al	Aluminum	69,460	50	-	
As	Arsenic	72	50	1,500	PASS
Cd	Cadmium	636	50	500	FAIL
Ca	Calcium	1,434,372	500	-	
Cr	Chromium	661	50	1,100,000	PASS
Co	Cobalt	246	50	5,000	PASS
Cu	Copper	27,406	50	300,000	PASS
Fe	Iron	268,343	50	-	
Pb	Lead	255	50	500	PASS
Mg	Magnesium	3,563,268	50	-	
Mn	Manganese	223,843	50	-	
Hg	Mercury	ND	50	3,000	PASS
Mo	Molybdenum	288	50	300,000	PASS
Ni	Nickel	8,396	50	20,000	PASS
P	Phosphorus	21,868,721	500	-	
K	Potassium	16,746,239	500	-	
Se	Selenium	99	50	-	
Ag	Silver	ND	50	15,000	PASS
S	Sulfur	25,042	500	-	
Sn	Tin	1,189	500	600,000	PASS
Zn	Zinc	73,346	50	-	

1) ND = None detected to the Method Detection Limit (MDL)

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

**MB1: Microbiological Contaminants [WI-10-09]**

Analyst: MJC

Test Date: 9/17/2019

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**64331-MB1**

Symbol	Analysis	Results	Units	Limits*	Status
AC	Total Aerobic Bacterial Count	=370,000	CFU/g	100,000 CFU/g	FAIL
CC	Total Coliform Bacterial Count	=91,000	CFU/g	1,000 CFU/g	FAIL
EB	Total Bile Tolerant Gram Negative Count	=110,000	CFU/g	1,000 CFU/g	FAIL
YM	Total Yeast & Mold	=19,000	CFU/g	10,000 CFU/g	FAIL

Note: Total Aerobic Bacterial Count failed established limits. Total Coliform Bacterial Count failed established limits. Total Bile Tolerant Gram Negative Count failed established limits. Total Yeast & Mold failed established limits.

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

Analyst: LabAdmin

Test Date: 9/18/2019

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.

**64331-MB2**

Test ID	Analysis	Results	Units	Limits*	Status
64331-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
64331-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

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

Analyst: AKR

Test Date: 9/19/2019

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**64331-MY**

Test ID	Date	Results	MDL	Limits	Status*
Total Aflatoxin	9/19/2019	< MDL	2 ppb	< 20 ppb	PASS
Total Ochratoxin	9/19/2019	4.0	3 ppb	< 20 ppb	PASS

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

Analyst: RAS

Test Date: 9/24/2019

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).

**64331-PST**

Analyte	CAS	Result	Units	LLD	Limits (ppb)	Status
Abamectin	71751-41-2	ND	ppb	0.2	300	PASS
Azoxystrobin	131860-33-8	103	ppb	0.10	40000	PASS
Bifenazate	149877-41-8	ND	ppb	0.10	5000	PASS
Bifenthrin	82657-04-3	ND	ppb	0.20	500	PASS
Cyfluthrin	68359-37-5	ND	ppb	0.50	1000	PASS
Daminozide	1596-84-5	ND	ppb	10.00	10	*
Etoxazole	153233-91-1	ND	ppb	0.10	1500	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	3000	PASS
Myclobutanil	88671-89-0	ND	ppb	0.10	9000	PASS
Paclobutrazol	76738-62-0	ND	ppb	0.10	10	PASS
Piperonyl butoxide	51-03-6	ND	ppb	0.10	8000	PASS
Pyrethrin	8003-34-7	ND	ppb	0.1	1000	PASS
Spinosad	168316-95-8	ND	ppb	0.1	3000	PASS
Spiromesifen	283594-90-1	ND	ppb	0.10	12000	PASS
Spirotetramat	203313-25-1	ND	ppb	0.10	13000	PASS
Trifloxystrobin	141517-21-7	ND	ppb	0.10	30000	PASS

\* Testing limits for ingestion established by the State of California: CCR, Title 16, Division 42, Chapter 5, Section 5313. 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.

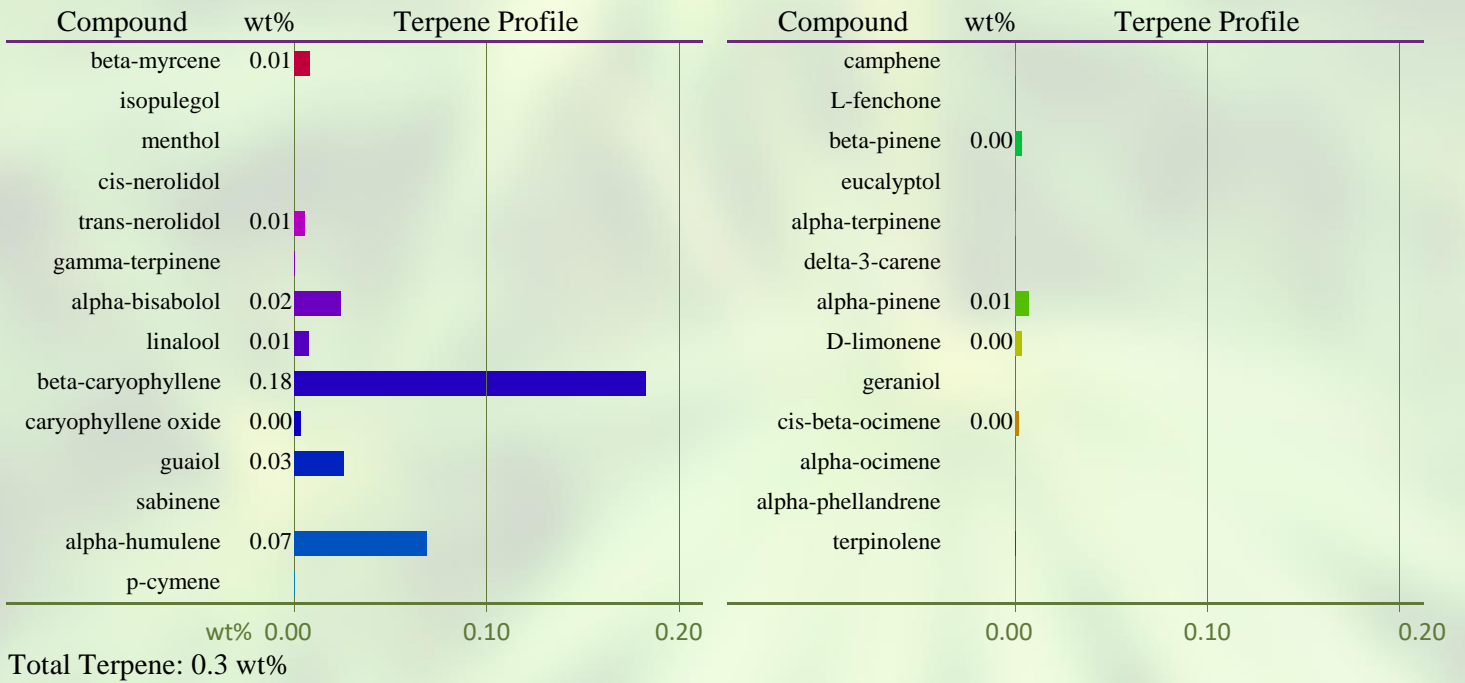
**TP: Terpenes Profile [WI-10-27]**

Analyst: CMA

Test Date: 9/18/2019

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. All values are semiquantitative estimates based on recorded peak areas relative to terpene calibration data.

**64331-TP**





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

Analyst: CMA

Test Date: 9/18/2019

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.

**64331-VC**

Compound	CAS	Amount <sup>1</sup>	Limit <sup>2</sup>	RL	Status
Propane	74-98-6	ND	1,000 ppm	100	PASS
Isobutane	75-28-5	ND	1,000 ppm	100	PASS
Butane	106-97-8	ND	1,000 ppm	100	PASS
Methanol	67-56-1	270 ppm	3,000 ppm	100	PASS
Pentane	109-66-0	ND	5,000 ppm	100	PASS
Ethanol	64-17-5	ND	5,000 ppm	100	*
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**