




STRAIGHT HEMP

CERTIFICATE OF ANALYSIS

PRODUCT: Straight Hemp Vape Oil
BATCH/LOT: VA015
INGREDIENTS: Full Spectrum Hemp Extract, Terpene Blend (Hemp-derived)
ADDITIVES: none
EXCIPIENTS: none

PRODUCTION DATE: 10/2020
BEST BY/EXP DATE: 10/2022

TEST	METHOD	SPECIFICATION	RESULTS
Strength & Composition			
Total Cannabidiol (CBD) ⁱ	UPLC/UV	48 – 58%	48.58%
Total minor cannabinoids	UPLC/UV	n/e	11.39%
Total Tetrahydrocannabinol (THC) ⁱⁱ	UPLC/UV	NMT 0.3%	0.19%
Total Cannabinoids	UPLC/UV	n/e	60.16%
Terpene assay ⁱⁱⁱ	HS-GC/MS	n/e	15.3%
Microbiological^{iv}			
Total Plate Count	USP 42	NMT 1,000 cfu/g	PASS
Total Coliforms	USP 42	NMT 100 cfu/g	PASS
Total Yeast & Mold	USP 42	NMT 100 cfu/g	PASS
<i>E. coli</i>	USP 42	Absent	PASS
<i>Salmonella</i>	USP 42	Absent	PASS
Heavy Metals^v			
Arsenic (As)	ICP/MS	NMT 0.2 ppm	PASS
Cadmium (Cd)	ICP/MS	NMT 0.2 ppm	PASS
Lead (Pb)	ICP/MS	NMT 0.5 ppm	PASS
Mercury (Hg)	ICP/MS	NMT 0.1 ppm	PASS
Residual Solvents			
Multi-residue panel	GC-HS-MSD	Below CCR Limits ^{vi}	PASS
Pesticides			
Multi-residue panel	UPLC-MS/MS	Below MRL ^{vii}	PASS


David Cole
Director of Quality


Date

ⁱ Total CBD = CBD + (0.877*CBDA) to account for loss of acid group during decarboxylation

ⁱⁱ Total THC = THC + (0.877*THCA) to account for loss of acid group during decarboxylation

ⁱⁱⁱ Sum of terpene assay (n=22)

^{iv} Microbiological limits based on USP, WHO, and/or NSF/ANSI.

^v Limits for As and Pb set below CA Prop 65 *no significant risk level*; Cd and Hg set below USP permitted daily exposure for 110lb body weight. Complies with 1 CCR 212-3

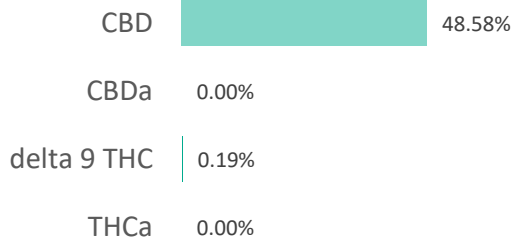
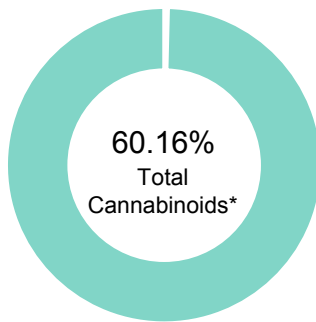
^{vi} 11 solvent panel: Propane, Butanes, Methanol, Pentane, Ethanol, Acetone, Isopropyl Alcohol, Hexane, Benzene, Heptanes, Toluene, Xylenes. Individual limits: 1 CCR 212-3

^{vii} 50 residue panel

NMT = Not More Than
MRL = Method Reporting Limit
n/e = not established

Vape Oil

Batch ID:	VA015	Test ID:	T000103268
Type:	Concentrate	Submitted:	10/14/2020 @ 04:52 PM
Test:	Potency	Started:	10/15/2020
Method:	TM14	Reported:	10/16/2020



CANNABINOID PROFILE


Compound	LOQ (%)	Result (%)	Result (mg/g)
Delta 9-Tetrahydrocannabinolic acid (THCA-A)	0.31	ND	ND
Delta 9-Tetrahydrocannabinol (Delta 9THC)	0.15	0.19	1.9
Cannabidiolic acid (CBDA)	0.10	ND	ND
Cannabidiol (CBD)	0.22	48.58	485.8
Delta 8-Tetrahydrocannabinol (Delta 8THC)	0.16	ND	ND
Cannabinolic Acid (CBNA)	0.43	ND	ND
Cannabinol (CBN)	0.19	0.33	3.3
Cannabigerolic acid (CBGA)	0.27	ND	ND
Cannabigerol (CBG)	0.15	8.02	80.2
Tetrahydrocannabivarinic Acid (THCVA)	0.26	ND	ND
Tetrahydrocannabivarin (THCV)	0.13	ND	ND
Cannabidivarinic Acid (CBDVA)	0.10	ND	ND
Cannabidivarin (CBDV)	0.05	3.04	30.4
Cannabichromenic Acid (CBCA)	0.24	ND	ND
Cannabichromene (CBC)	0.27	ND	ND
Total Cannabinoids		60.16	601.6
Total Potential THC**		0.19	1.9
Total Potential CBD**		48.58	485.8

% = % (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

 Mara Miller 16-Oct-2020 12:16 PM	 Greg Zimpfer 16-Oct-2020 1:59 PM
PREPARED BY / DATE	APPROVED BY / DATE

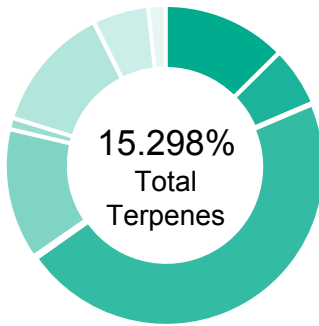
Testing results are based solely upon the sample submitted to Botanacor Laboratories, LLC, in the condition it was received. Botanacor Laboratories, LLC warrants that all analytical work is conducted professionally in accordance with all applicable standard laboratory practices using validated methods. 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 4329.02



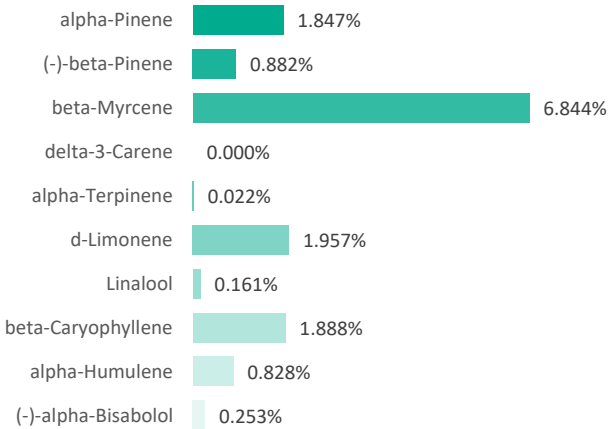
prepared for: Straight Hemp
 5135 W 58th Ave, Unit 5
 Arvada, CO 80002

Vape Oil

Batch ID:	VA015	Test ID:	T000103271
Type:	Concentrate	Submitted:	10/14/2020 @ 04:52 PM
Test:	Terpenes	Started:	10/20/2020
Method:	TM10	Reported:	10/21/2020

TERPENE PROFILE


Compound	%(w/w)	mg/g
(-)-alpha-Bisabolol	0.253	2.53
Camphene	0.054	0.54
delta-3-Carene	0.000	0
beta-Caryophyllene	1.888	18.88
(-)-Caryophyllene Oxide	0.000	0
p-Cymene	0.000	0
Eucalyptol	0.287	2.87
Geraniol	0.000	0
alpha-Humulene	0.828	8.28
(-)-Isopulegol	0.000	0
d-Limonene	1.957	19.57
Linalool	0.161	1.61
beta-Myrcene	6.844	68.44
cis-Nerolidol	0.000	0
trans-Nerolidol	0.000	0
Ocimene	0.008	0.08
beta-Ocimene	0.000	0
alpha-Pinene	1.847	18.47
(-)-beta-Pinene	0.882	8.82
alpha-Terpinene	0.022	0.22
gamma-Terpinene	0.030	0.3
Terpinolene	0.237	2.37
	15.298%	152.98

PREDOMINANT TERPENES

 NOTES:
 0

FINAL APPROVAL

 Michelle Gagnon 21-Oct-2020 3:41 PM	 Ben Minton 21-Oct-2020 4:08 PM
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APPROVED BY / DATE

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Certificate #4329.02

Vape Oil


Batch ID:	VA015	Test ID:	T000103273
Type:	Other	Submitted:	10/14/2020 @ 04:52 PM
Test:	Metals	Started:	10/19/2020
Method:	TM19	Reported:	10/20/2020

HEAVY METALS


Analyte	Dynamic Range (ppm)	Result (ppm)
Arsenic	0.073 - 7.32	ND
Cadmium	0.070 - 6.99	ND
Mercury	0.069 - 6.94	ND
Lead	0.074 - 7.43	ND

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

FINAL APPROVAL


Ryan Weems
20-Oct-2020
2:38 PM

PREPARED BY / DATE


Ben Minton
20-Oct-2020
4:24 PM

APPROVED BY / DATE

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Vape Oil

Batch ID:	VA015	Test ID:	T000103270
Type:	Concentrate	Submitted:	10/14/2020 @ 04:52 PM
Test:	Residual Solvents	Started:	10/19/2020
Method:	TM04	Reported:	10/19/2020

RESIDUAL SOLVENTS


Solvent	Dynamic Range (ppm)	Result (ppm)
Propane	91 - 1812	*ND
Butanes (Isobutane, n-Butane)	177 - 3540	*ND
Methanol	57 - 1143	*ND
Pentane	92 - 1845	*ND
Ethanol	91 - 1813	*ND
Acetone	94 - 1875	*ND
Isopropyl Alcohol	99 - 1982	*ND
Hexane	6 - 113	*ND
Ethyl Acetate	93 - 1868	*ND
Benzene	0.2 - 3.7	*ND
Heptanes	91 - 1828	*ND
Toluene	17 - 334	*ND
Xylenes (m,p,o-Xylenes)	121 - 2415	*ND

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

NOTES:
N/A

FINAL APPROVAL


Ryan Weems
 19-Oct-2020
 5:31 PM
 PREPARED BY / DATE


Greg Zimpfer
 19-Oct-2020
 7:12 PM
 APPROVED BY / DATE

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Certificate #4329.02

Vape Oil

Batch ID:	VA015	Test ID:	T000103272
Type:	Concentrate	Submitted:	10/14/2020 @ 04:52 PM
Test:	Pesticides	Started:	10/19/2020
Method:		Reported:	10/20/2020


PESTICIDE RESIDUE


Compound	Dynamic Range (ppb)	Result (ppb)	Compound	Dynamic Range (ppb)	Result (ppb)
Acephate	40 - 2464	ND*	Malathion	294 - 2464	ND*
Acetamiprid	40 - 2464	ND*	Metalaxyl	46 - 2464	ND*
Abamectin	>328	ND*	Methiocarb	42 - 2464	ND*
Azoxystrobin	48 - 2464	ND*	Methomyl	42 - 2464	ND*
Bifenazate	45 - 2464	ND*	MGK 264 1	148 - 2464	ND*
Boscalid	49 - 2464	ND*	MGK 264 2	114 - 2464	ND*
Carbaryl	41 - 2464	ND*	Myclobutanil	43 - 2464	ND*
Carbofuran	41 - 2464	ND*	Naled	48 - 2464	ND*
Chlorantraniliprole	52 - 2464	ND*	Oxamyl	38 - 2464	ND*
Chlorpyrifos	40 - 2464	ND*	Paclobutrazol	43 - 2464	ND*
Clofentezine	287 - 2464	ND*	Permethrin	261 - 2464	ND*
Diazinon	287 - 2464	ND*	Phosmet	47 - 2464	ND*
Dichlorvos	>282	ND*	Prophos	297 - 2464	ND*
Dimethoate	39 - 2464	ND*	Propoxur	42 - 2464	ND*
E-Fenpyroximate	274 - 2464	ND*	Pyridaben	294 - 2464	ND*
Etofenprox	41 - 2464	ND*	Spinosad A	27 - 2464	ND*
Etoxazole	290 - 2464	ND*	Spinosad D	80 - 2464	ND*
Fenoxycarb	>44	ND*	Spiromesifen	>264	ND*
Fipronil	54 - 2464	ND*	Spirotetramat	>316	ND*
Flonicamid	46 - 2464	ND*	Spiroxamine 1	18 - 2464	ND*
Fludioxonil	>295	ND*	Spiroxamine 2	24 - 2464	ND*
Hexythiazox	39 - 2464	ND*	Tebuconazole	308 - 2464	ND*
Imazalil	284 - 2464	ND*	Thiacloprid	39 - 2464	ND*
Imidacloprid	38 - 2464	ND*	Thiamethoxam	36 - 2464	ND*
Kresoxim-methyl	46 - 2464	ND*	Trifloxystrobin	43 - 2464	ND*

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

N/A

FINAL APPROVAL

 **Sam Smith**
 20-Oct-2020
 2:30 PM

 **Ben Minton**
 20-Oct-2020
 4:32 PM

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APPROVED BY / DATE

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Certificate of Analysis

Straight Hemp
5135 W. 58th Ave, Ste 5
Arvada, CO 80002
Phone: 970-214-7814

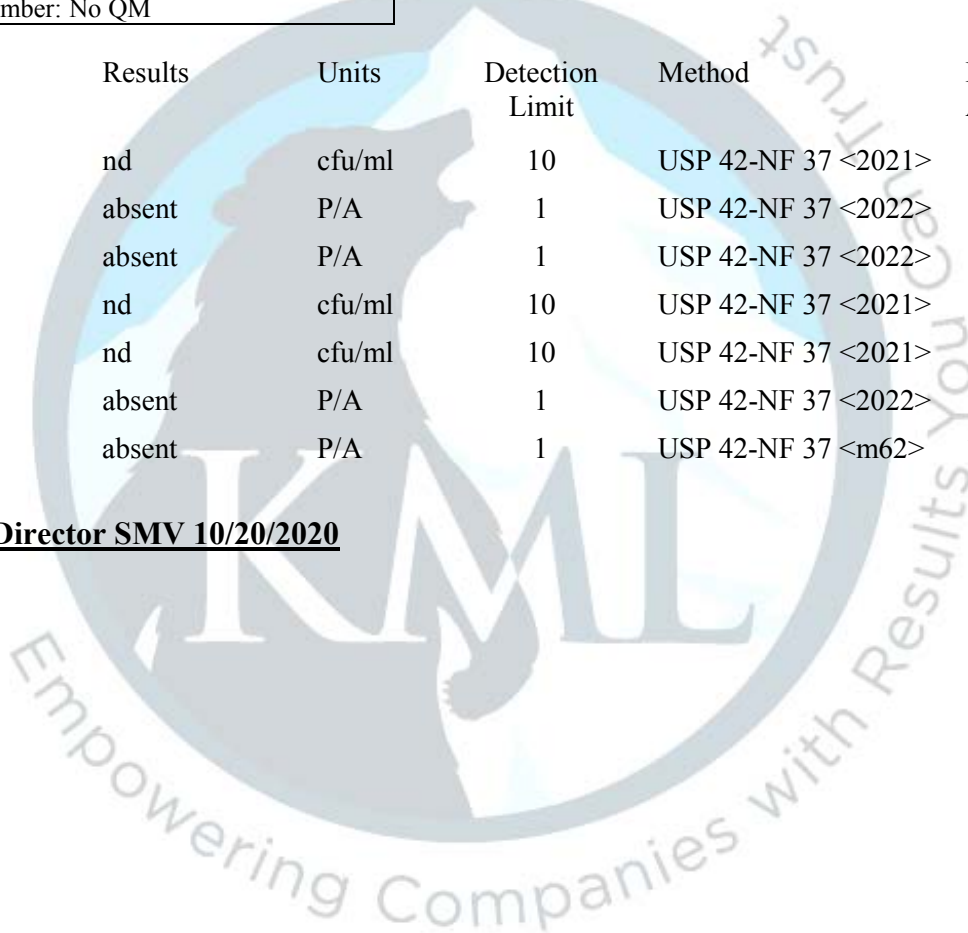
Invoice Number: 20.1552
PO Number:
Received Date: 10/15/2020
Number of Samples: 02
Project Name: Routine Testing

Microbiology Report:

Lab #: 20-9673	Sample Lot: VA015	Sample Date:
Sample Name: Vape Oil	Additional ID:	Plated Date: 10/15/2020
Qualifying Material Number: No QM		

Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/18/2020
<i>E. coli</i>	absent	P/A	1	USP 42-NF 37 <2022>	10/18/2020
<i>Staph aureus</i>	absent	P/A	1	USP 42-NF 37 <2022>	10/18/2020
Yeast	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/20/2020
Mold	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/20/2020
Salmonella	absent	P/A	1	USP 42-NF 37 <2022>	10/19/2020
<i>Pseudo. aeruginosa</i>	absent	P/A	1	USP 42-NF 37 <m62>	10/18/2020

Approved By: QA Director SMV 10/20/2020



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Certificate of Analysis

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 5135 W. 58th Ave, Ste 5
 Arvada, CO 80002
 Phone: 970-214-7814

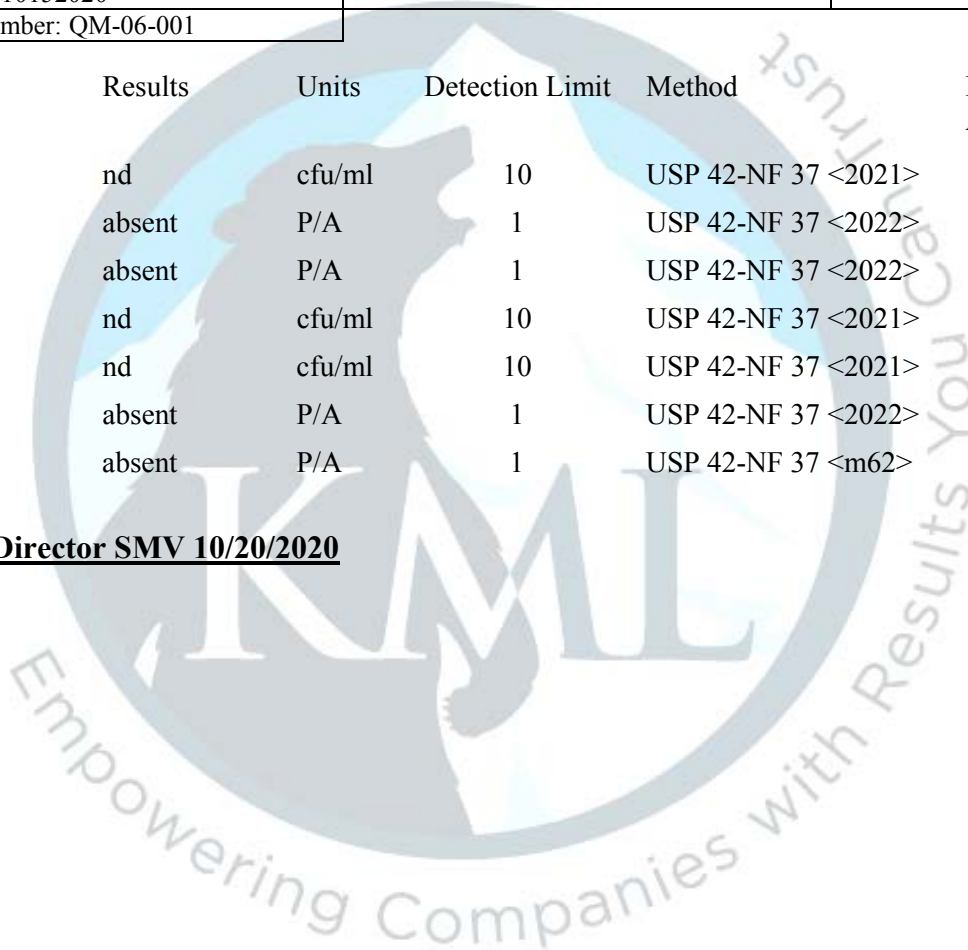
Invoice Number: 20.1552
 PO Number:
 Received Date: 10/15/2020
 Number of Samples: 02
 Project Name: Routine Testing

Microbiology Report:

Lab #: Control 10152020	Additional ID: Negative Control Purposes	Plated Date: 10/15/2020
Sample Name: Control 10152020		
Qualifying Material Number: QM-06-001		

Test Performed	Results	Units	Detection Limit	Method	Date Analyzed
Aerobic Plate Count	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/18/2020
<i>E. coli</i>	absent	P/A	1	USP 42-NF 37 <2022>	10/18/2020
<i>Staph aureus</i>	absent	P/A	1	USP 42-NF 37 <2022>	10/18/2020
Yeast	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/20/2020
Mold	nd	cfu/ml	10	USP 42-NF 37 <2021>	10/20/2020
Salmonella	absent	P/A	1	USP 42-NF 37 <2022>	10/19/2020
<i>Pseudo. aeruginosa</i>	absent	P/A	1	USP 42-NF 37 <m62>	10/18/2020

Approved By: QA Director SMV 10/20/2020



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