



# Certificate of Analysis

Jan 20, 2020 | CURALEAF FLORIDA LLC

19000 SW 192 STREET  
MIAMI, FL, 33187, US

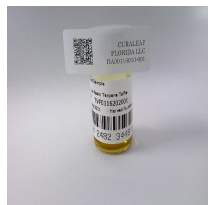


Sample: DA00116010-001  
Harvest/Lot ID: HS-TVF0116202001  
Cultivation Facility: Miami Cultivation  
Processing Facility: Homestead Processing  
Seed to Sale #1968 2482 3448 6763  
Batch Date : N/A  
Batch#: HS-TVF0116202001  
Sample Size Received: 7.0 gram  
Total Weight/Volume: 2000 gram  
Retail Product Size: 0.5 gram gram  
Ordered : 01/16/20  
sampled : 01/16/20  
Completed: 01/20/20  
Sampling Method: SOP Client Method

**PASSED**

Page 1 of 5

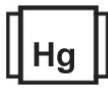
## PRODUCT IMAGE



## SAFETY RESULTS



Pesticides  
**PASSED**



Heavy Metals  
**PASSED**



Microbials  
**PASSED**



Mycotoxins  
**PASSED**



Residuals  
Solvents  
**PASSED**



Filtration  
**PASSED**



Water Activity  
**NOT TESTED**



Moisture  
**NOT TESTED**



Terpenes  
**TESTED**

## MISC.

## CANNABINOID RESULTS



Total THC

**83.380%**

THC/Container : 416.90 mg



Total CBD

**0.000%**

CBD/Container : 0.00 mg



Total Cannabinoids

**87.535%**

Total Cannabinoids / Container  
: 0.000

	TOTAL CA	TOTAL CB	TOTAL TH	CBC	CBGA	CBG	THCV	D8-THC	CBDV	CBN	CBDA	CBD	THCA	D9-THC
%	87.5350	ND	83.3800	1.0760	ND	1.6640	1.0980	ND	ND	0.2590	ND	ND	0.4670	82.9710
mg/g	875.3490	ND	833.8000	10.7600	ND	16.6400	10.9800	ND	ND	2.5900	ND	ND	4.6700	829.7100
LOD	0.0000	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0010	0.0001	0.0010	0.0001
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

Filtration	PASSED
------------	--------

Analyzed By	Weight	Extraction date	Extracted By
584	1g	01/16/20	584
Analyte	LOD	Result	Batch Date
Filtration and Foreign Material	0	ND	01/16/20 11:39:56
Analysis Method -SOP.T.40.013			
Analytical Batch -DA009496FIL			
Instrument Used :			

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. An SH-2B/T Stereo Microscope is used for inspection.

## Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
1224	0.1006g	01/16/20 01:01:53	574
Analysis Method -SOP.T.40.020, SOP.T.30.050			
Batch Date : 01/16/20 09:54:17			
Analytical Batch -DA0094979POT			
Instrument Used : DA-LC-003			

Reagent	Dilution	Consums. ID
011020.R10	400	
011020.R11		
011420.R09		
011420.R08		

Full spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection (HPLC-UV). (Method: SOP.T.30.050 for sample prep and Shimadzu High Sensitivity Method SOP.T.40.020 for analysis. LOQ for all cannabinoids is 1 mg/L).

This report shall not be reproduced, unless in its entirety, without written approval from Kaycha Labs. This report is an Kaycha Labs certification. The results relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Void after 1 year from test end date. Cannabinoid content of batch material may vary depending on sampling error. IC=In-control QC parameter, NC=Non-controlled QC parameter, ND=Not Detected, NA=Not Analyzed, ppm=Parts Per Million, ppb=Parts Per Billion. Limit of Detection (LoD) and Limit Of Quantitation (LoQ) are terms used to describe the smallest concentration that can be reliably measured by an analytical procedure. RPD=Reproducibility of two measurements. Action Levels are State determined thresholds for human safety for consumption and/or inhalation. The result >99% are variable based on uncertainty of measurement (UM) for the analyte. The UM error is available from the lab upon request. The "Decision Rule" for the pass/fail does not include the UM. The limits are based on F.S. Rule 64-4.310.

Jorge Segredo  
Lab Director

State License # CMTL-0002  
ISO Accreditation # ISO/IEC  
17025:2017 Accreditation  
PJLA-Testing 97164

  
Signature

01/20/20

Signed On



# Certificate of Analysis

**PASSED**

 19000 SW 192 STREET  
 MIAMI, FL, 33187, US  
**Telephone:** 7865860672  
**Email:** erick.ramirez@curaleaf.com

**Sample :** DA00116010-001  
**Harvest/LOT ID:** HS-TVF0116202001

**Batch# :** HS-TVF0116202001  
**Sampled :** 01/16/20  
**Ordered :** 01/16/20

**Sample Size Received :** 7.0 gram  
**Total Weight/Volume :** 2000 gram  
**Completed :** 01/20/20 **Expires:** 01/20/21  
**Sample Method :** SOP Client Method

Page 2 of 5



## Terpenes

**TESTED**

Terpenes	LOD(%)	mg/g	%	Result (%)	Terpenes	LOD(%)	mg/g	%	Result (%)
ALPHA-CEDRENE	0.007	ND	ND		SABINENE	0.007	< 0.2	< 0.020	
ALPHA-HUMULENE	0.007	1.018	0.101		SABINENE HYDRATE	0.007	ND	ND	
ALPHA-PINENE	0.007	1.527	0.152		TERPINEOL	0.007	ND	ND	
ALPHA-TERPINENE	0.007	1.005	0.100		TERPINOLENE	0.007	27.965	2.796	
BETA-MYRCENE	0.007	14.177	1.417		BETA-CARYOPHYLLENE	0.007	3.407	0.340	
BETA-PINENE	0.007	2.103	0.210		TRANS-NEROLIDOL	0.007	ND	ND	
BORNEOL	0.013	ND	ND		VALENCENE	0.007	ND	ND	
CAMPHENE	0.007	ND	ND						
CAMPHOR	0.013	< 0.4	< 0.040						
CARYOPHYLLENE OXIDE	0.007	ND	ND						
CEDROL	0.007	ND	ND						
ALPHA-BISABOLOL	0.007	ND	ND						
ISOPULEGOL	0.007	ND	ND						
CIS-NEROLIDOL	0.007	ND	ND						
3-CARENE	0.007	ND	ND						
FENCHYL ALCOHOL	0.007	ND	ND						
HEXAHYDROTHYMOL	0.007	ND	ND						
EUCALYPTOL	0.007	ND	ND						
ISOBORNEOL	0.007	ND	ND						
FARNESENE	0.007	0.583	0.058						
FENCHONE	0.007	ND	ND						
GAMMA-TERPINENE	0.007	0.530	0.053						
GERANIOL	0.007	ND	ND						
GERANYL ACETATE	0.007	ND	ND						
GUAJOL	0.007	ND	ND						
LIMONENE	0.007	2.202	0.220						
LINALOOL	0.007	ND	ND						
NEROL	0.007	ND	ND						
OCIMENE	0.007	0.287	0.028						
ALPHA-PHELLANDRENE	0.007	1.663	0.166						
PULEGONE	0.007	ND	ND						
<b>Total (%)</b>		5.647							



## Terpenes

**TESTED**
**Analyzed by** 1118 **Weight** 1.0201g **Extraction date** 01/16/20 12:01:41 **Extracted By** 1118

**Analysis Method -SOP.T.40.090**  
**Analytical Batch -DA009468TER**  
**Instrument Used : Liquid Injection GCMS QP2010**  
**Running On :**  
**Batch Date : 01/16/20 08:46:09**

Reagent	Dilution	Consums. ID
052119.04	10	76124-662 280630187

Terpenoid profile screening is performed using GC-MS with Liquid Injection (Gas Chromatography - Mass Spectrometer) which can screen 38 terpenes using Method SOP.T.40.091 Terpenoid Analysis Via GC/MS.



# Certificate of Analysis

**PASSED**

19000 SW 192 STREET  
MIAMI, FL, 33187, US  
**Telephone:** 7865860672  
**Email:** erick.ramirez@curaleaf.com

**Sample :** DA00116010-001  
**Harvest/LOT ID:** HS-TVF0116202001

**Batch# :** HS-TVF0116202001  
**Sampled :** 01/16/20  
**Ordered :** 01/16/20

**Sample Size Received :** 7.0 gram  
**Total Weight/Volume :** 2000 gram  
**Completed :** 01/20/20 **Expires:** 01/20/21  
**Sample Method :** SOP Client Method

Page 3 of 5



## Pesticides

**PASSED**

Pesticides	LOD	Units	Action Level	Result	Pesticides	LOD	Units	Action Level	Result
CHLORDANE	0.005	ppm	0.1	ND	OXAMYL	0.01	ppm	0.5	ND
CAPTAN	0.05	ppm	0.7	ND	PACLOBUTRAZOL	0.01	ppm	0.1	ND
BOSCALID	0.01	PPM	0.1	ND	TRANS-PERMETHRIN	0.05	ppm	0.1	ND
DIMETHOATE	0.01	ppm	0.1	ND	PHOSMET	0.01	ppm	0.1	ND
AZOXYSTROBIN	0.01	ppm	0.01	ND	PIPERONYL BUTOXIDE	0.01	ppm	3	ND
ABAMECTIN B1A	0.02	ppm	0.1	ND	PRALLETHRIN	0.05	ppm	0.1	ND
CIS-PERMETHRIN	0.05	ppm	0.1	ND	PROPICONAZOLE	0.01	ppm	0.1	ND
SPINETORAM	0.01	PPM	0.2	ND	PROPOXUR	0.01	ppm	0.1	ND
ACEPHATE	0.001	ppm	0.1	ND	PYRETHRIN I	0.01	ppm	0.5	ND
FENOXYCARB	0.01	ppm	0.1	ND	PYRIDABEN	0.01	ppm	0.2	ND
DIMETHOMORPH	0.005	ppm	0.2	ND	SPINOSAD (SPINOSYN A)	0.01	ppm	0.1	ND
BIFENAZATE	0.01	ppm	0.1	ND	SPINOSAD (SPINOSYN D)	0.01	ppm	0.1	ND
ETHOPROPHOS	0.01	ppm	0.1	ND	SPIROMESIFEN	0.01	ppm	0.1	ND
ACEQUINOCYL	0.01	ppm	0.1	ND	SPIROTETRAMAT	0.02	ppm	0.1	ND
ACETAMIPRID	0.01	ppm	0.1	ND	SPIROXAMINE	0.01	ppm	0.1	ND
ETOFENPROX	0.01	ppm	0.1	ND	TEBUCONAZOLE	0.01	ppm	0.1	ND
BIFENTHRIN	0.01	ppm	0.1	ND	THIACLOPRID	0.01	ppm	0.1	ND
ALDICARB	0.02	ppm	0.1	ND	THIAMETHOXAM	0.01	ppm	0.5	ND
ETOXAZOLE	0.01	ppm	0.1	ND	TRIFLOXYSTROBIN	0.01	ppm	0.1	ND
FENPYROXIMATE	0.01	ppm	0.1	ND					
FIPRONIL	0.02	ppm	0.1	ND					
FENHEXAMID	0.01	ppm	0.1	ND					
CARBARYL	0.01	ppm	0.5	ND					
CARBOFURAN	0.01	ppm	0.1	ND					
FLONICAMID	0.01	ppm	0.1	ND					
FLUDIOXONIL	0.01	ppm	0.1	ND					
CHLORFENAPYR	0.01	ppm	0.1	ND					
CHLORANTRANILIPROLE	0.01	ppm	1	ND					
HEXYTHIAZOX	0.01	ppm	0.1	ND					
CHLORPYRIFOS	0.01	ppm	0.1	ND					
IMAZALIL	0.01	ppm	0.1	ND					
MALATHION	0.01	ppm	0.2	ND					
CLOFENTEZINE	0.01	ppm	0.2	ND					
DAMINOZIDE	0.02	ppm	0.1	ND					
IMIDACLOPRID	0.01	ppm	0.4	ND					
METALAXYL	0.01	ppm	0.02	ND					
DICHLORVOS	0.05	ppm	0.1	ND					
METHIOCARB	0.01	ppm	0.05	ND					
COUMAPHOS	0.005	ppm	0.1	ND					
METHOMYL	0.01	ppm	0.1	ND					
KRESOXIM-METHYL	0.01	ppm	0.1	ND					
DIAZANON	0.01	ppm	0.1	ND					
CYPERMETHRIN	0.01	ppm	0.5	ND					
MEVINPHOS	0.01	ppm	0.1	ND					
MYCLOBUTANIL	0.01	ppm	0.1	ND					
NALED	0.01	ppm	0.25	ND					



## Pesticides

**PASSED**
**Analyzed by**  
585

**Weight**  
1.0666g

**Extraction date**  
01/16/20 01:01:36

**Extracted By**  
1082

**Analysis Method** - SOP.T.30.065, SOP.T.40.065, SOP.T.40.066, SOP.T.40.070, SOP.T.30.065,

SOP.T40.070

**Analytical Batch** - DA009497PES

**Instrument Used** : LCMS E-SHI-039

**Running On** :

**Batch Date** : 01/16/20 11:40:29

**Reagent**
**Dilution**
**Consums. ID**

101519.04

012020.909

011620.810

Pesticide screen is performed using LC-MS and/or GC-MS which can screen down to below single digit ppb concentrations for regulated Pesticides. Currently we analyze for 67 Pesticides. (Method: SOP.T.30.060 Sample Preparation for Pesticides Analysis via LCMSMS and GCMSMS. SOP.T40.065/SOP.T.40.066/SOP.T.40.070 Procedure for Pesticide Quantification Using LCMS and GCMS). \* Volatile Pesticide screening is performed using GC-MS which can screen down to below single digit ppb concentrations for regulated Pesticides. Analytes marked with an asterisk were tested using GC-MS.

This report shall not be reproduced, unless in its entirety, without written approval from Kaycha Labs. This report is an Kaycha Labs certification. The results relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Void after 1 year from test end date. Cannabinoid content of batch material may vary depending on sampling error. IC=In-control QC parameter, NC=Non-controlled QC parameter, ND=Not Detected, NA=Not Analyzed, ppm=Parts Per Million, ppb=Parts Per Billion. Limit of Detection (LoD) and Limit Of Quantitation (LoQ) are terms used to describe the smallest concentration that can be reliably measured by an analytical procedure. RPD=Reproducibility of two measurements. Action Levels are State determined thresholds for human safety for consumption and/or inhalation. The result >99% are variable based on uncertainty of measurement (UM) for the analyte. The UM error is available from the lab upon request. The "Decision Rule" for the pass/fail does not include the UM. The limits are based on F.S. Rule 64-4.310.

**Jorge Segredo**  
Lab Director

State License # CMTL-0002  
ISO Accreditation # ISO/IEC  
17025:2017 Accreditation  
PJLA-Testing 97164

Signature

01/20/20

Signed On





# Certificate of Analysis

**PASSED**

 19000 SW 192 STREET  
 MIAMI, FL, 33187, US  
**Telephone:** 7865860672  
**Email:** erick.ramirez@curaleaf.com

**Sample :** DA00116010-001  
**Harvest/LOT ID:** HS-TVF0116202001

**Batch# :** HS-TVF0116202001  
**Sampled :** 01/16/20  
**Ordered :** 01/16/20

**Sample Size Received :** 7.0 gram  
**Total Weight/Volume :** 2000 gram  
**Completed :** 01/20/20 **Expires:** 01/20/21  
**Sample Method :** SOP Client Method

Page 4 of 5

	<b>Residual Solvents</b>	<b>PASSED</b>
--	--------------------------	---------------

	<b>Residual Solvents</b>	<b>PASSED</b>
---	--------------------------	---------------

Solvent	LOD	Units	Action Level (PPM)	Pass/Fail	Result
PROPANE	120	ppm	2100	PASS	ND
BUTANES (N-BUTANE)	96	ppm	2000	PASS	ND
ETHYLENE OXIDE	0.6	ppm	5	PASS	ND
METHANOL	22.5	ppm	250	PASS	ND
ETHANOL	90	ppm	5000	PASS	ND
PENTANES (N-PENTANE)	67.5	ppm	750	PASS	ND
ETHYL ETHER	45	ppm	500	PASS	ND
ACETONE	67.5	ppm	750	PASS	ND
2-PROPANOL	45	ppm	500	PASS	ND
ACETONITRILE	5.4	ppm	60	PASS	ND
DICHLOROMETHANE	11.25	ppm	125	PASS	ND
N-HEXANE	4.5	ppm	250	PASS	ND
ETHYL ACETATE	36	ppm	400	PASS	ND
BENZENE	0.09	ppm	1	PASS	ND
HEPTANE	45	ppm	500	PASS	ND
TOLUENE	13.5	ppm	150	PASS	ND
CHLOROFORM	0.18	ppm	2	PASS	ND
1,2-DICHLOROETHANE	0.18	ppm	2	PASS	ND
TRICHLOROETHYLENE	2.25	ppm	25	PASS	ND
1,1-DICHLOROETHENE	1	ppm	8	PASS	ND
TOTAL XYLENES	13.5	ppm	150	PASS	ND

<b>Analyzed by</b> 850	<b>Weight</b> 0.0264g	<b>Extraction date</b> 01/17/20 01:01:45	<b>Extracted By</b> 850
---------------------------	--------------------------	---	----------------------------

**Analysis Method -SOP.T.40.032**  
**Analytical Batch -DA009504SOL**  
**Instrument Used : Headspace GCMS**  
**Running On :**  
**Batch Date : 01/16/20 14:29:13**

Reagent	Dilution	Consums. ID
	1	00268767 161040-1 24152436

Residual solvents screening is performed using GC-MS which can detect below single digit ppm concentrations. Currently we analyze for 21 Residual solvents.(Method: SOP.T.40.032 Residual Solvents Analysis via GC-MS).



# Certificate of Analysis

**PASSED**

 19000 SW 192 STREET  
 MIAMI, FL, 33187, US  
**Telephone:** 7865860672  
**Email:** erick.ramirez@curaleaf.com

**Sample :** DA00116010-001  
**Harvest/LOT ID:** HS-TVF0116202001

**Batch# :** HS-TVF0116202001  
**Sampled :** 01/16/20  
**Ordered :** 01/16/20

**Sample Size Received :** 7.0 gram  
**Total Weight/Volume :** 2000 gram  
**Completed :** 01/20/20 **Expires:** 01/20/21  
**Sample Method :** SOP Client Method

Page 5 of 5

	<b>Microbials</b>	<b>PASSED</b>
--	-------------------	---------------

Analyte	LOD	Result	Action Level (cfu/g)
ASPERGILLUS_FLAVUS		not present in 1 gram.	
ASPERGILLUS_FUMIGATUS		not present in 1 gram.	
ASPERGILLUS_NIGER		not present in 1 gram.	
ASPERGILLUS_TERREUS		not present in 1 gram.	
ESCHERICHIA_COLI_SHIGELLA_SPP		not present in 1 gram.	
SALMONELLA_SPECIFIC_GENE		not present in 1 gram.	
TOTAL_YEAST_AND_MOLD		not present in 1 gram.	

Analysis Method -SOP.T.40.043 / SOP.T.40.044 / SOP.T.40.041  
 Analytical Batch -DA009491MIC Batch Date : 01/16/20, 01/16/20  
 Instrument Used : PathogenDX PCR\_Array Scanner, PathogenDX PCR\_Array Scanner  
 Running On :

Analyzed by	Weight	Extraction date	Extracted By
513,	1.0130g	01/16/20	1082,

Reagent	Consums. ID	Consums. ID
011320.R03	2803024	2802012
	A03	
	010A	
	020	
	011	
	19193	

Microbiological testing for Fungal and Bacterial Identification via Polymerase Chain Reaction (PCR) method consisting of sample DNA amplified via tandem Polymerase Chain Reaction (PCR) as a crude lysate which avoids purification. (Method SOP.T.40.043) If a pathogenic Escherichia Coli, Salmonella, Aspergillus fumigatus, Aspergillus flavus, Aspergillus niger, or Aspergillus terreus is detected in 1g of a sample, the sample fails the microbiological-impurity testing. Pour-plating is used for quantitation and confirmation, Total Yeast and Mold has an action limit of 100,000 CFU.

	<b>Mycotoxins</b>	<b>PASSED</b>
---	-------------------	---------------

Analyte	LOD	Units	Result	Action Level (PPM)
AFLATOXIN G2	0.002	ppm	ND	
AFLATOXIN G1	0.002	ppm	ND	
AFLATOXIN B2	0.002	ppm	ND	
AFLATOXIN B1	0.002	ppm	ND	
OCHRATOXIN A+	0.002	ppm	ND	0.02
TOTAL AFLATOXINS	0.02	PPM	ND	0.02

Analysis Method -SOP.T.30.065, SOP.T.40.065  
 Analytical Batch -DA009499  
 Instrument Used : LCMS E-SHI-039  
 Running On :  
 Batch Date : 01/16/20 11:41:15

Analyzed by	Weight	Extraction date	Extracted By
585	1g	NA	NA

Aflatoxins B1, B2, G1, G2, and Ochratoxins A testing using LC-MS. (Method: SOP.T.30.065 for Sample Preparation and SOP.T.40.065 Procedure for Mycotoxins Quantification Using LCMS. LOQ 1.0 ppb). Aflatoxin B1, B2, G1, and G2 must individually be <20ug/Kg. Ochratoxins must be <20µg/Kg.

	<b>Heavy Metals</b>	<b>PASSED</b>
---	---------------------	---------------

Reagent	Reagent	Dilution
010220.R09	011620.R01	50
011420.R04	010220.R04	
010620.R02	111319.01	
011520.R02		
011520.R03		
011520.R01		

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC	0.01	PPM	ND	0.2
CADMIUM	0.01	PPM	ND	0.2
LEAD	0.01	PPM	ND	0.5
MERCURY	0.01	PPM	ND	0.1

Analyzed by	Weight	Extraction date	Extracted By
457	0.2572g	01/16/20 01:01:12	457

Analysis Method -SOP.T.40.050, SOP.T.30.052  
 Analytical Batch -DA009469HEA  
 Instrument Used : ICPMS-2030  
 Running On :  
 Batch Date : 01/16/20 08:47:47

Heavy Metals screening is performed using ICP-MS (Inductively Coupled Plasma - Mass Spectrometer) which can screen down to below single digit ppb concentrations for regulated heavy metals using Method SOP.T.30.052 Sample Preparation for Heavy Metals Analysis via ICP-MS and SOP.T.40.050 Heavy Metals Analysis via ICP-MS.

This report shall not be reproduced, unless in its entirety, without written approval from Kaycha Labs. This report is an Kaycha Labs certification. The results relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Void after 1 year from test end date. Cannabinoid content of batch material may vary depending on sampling error. IC=In-control QC parameter, NC=Non-controlled QC parameter, ND=Not Detected, NA=Not Analyzed, ppm=Parts Per Million, ppb=Parts Per Billion. Limit of Detection (LoD) and Limit Of Quantitation (LoQ) are terms used to describe the smallest concentration that can be reliably measured by an analytical procedure. RPD=Reproducibility of two measurements. Action Levels are State determined thresholds for human safety for consumption and/or inhalation. The result >99% are variable based on uncertainty of measurement (UM) for the analyte. The UM error is available from the lab upon request. The "Decision Rule" for the pass/fail does not include the UM. The limits are based on F.S. Rule 64-4.310.

**Jorge Segredo**  
 Lab Director

 State License # CMTL-0002  
 ISO Accreditation # ISO/IEC  
 17025:2017 Accreditation  
 PJLA-Testing 97164

  
 Signature

01/20/20

Signed On