



Certificate of Analysis

Jan 17, 2020 | CURALEAF FLORIDA LLC

19000 SW 192 STREET
MIAMI, FL, 33187, US

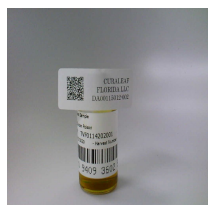


Sample: DA00115012-002
Harvest/Lot ID: HS-TVF0114202001
Cultivation Facility: Miami Cultivation
Processing Facility : Homestead Processing
Seed to Sale #5320 9409 3602 5183
Batch Date : N/A
Batch#: HS-TVF0114202001
Sample Size Received: 7.0 gram
Total Weight/Volume: 2000 gram
Retail Product Size: 0.5 gram gram
Ordered : 01/15/20
sampled : 01/15/20
Completed: 01/17/20
Sampling Method: SOP Client Method

PASSED

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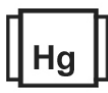
PRODUCT IMAGE



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

CANNABINOID RESULTS



Total THC

80.498%

THC/Container : 402.49 mg



Total CBD

0.104%

CBD/Container : 0.52 mg



Total Cannabinoids

84.486%

Total Cannabinoids / Container
: 0.000

	TOTAL CA	TOTAL CB	TOTAL TH	CBC	CBGA	CBG	THCV	DB-THC	CBDV	CBN	CBDA	CBD	THCA	D9-THC
%	84.4860	0.1040	80.4980	1.2280	ND	1.4720	0.8530	0.1110	ND	0.2200	ND	0.1040	ND	80.4980
mg/g	844.8600	1.0400	804.9800	12.2800	ND	14.7200	8.5300	1.1100	ND	2.2000	ND	1.0400	ND	804.9800
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
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Analyzed By	Weight	Extraction date	Extracted By
584	1g	01/15/20	584
Analyte			Result
Filtration and Foreign Material			ND
			LOD
			0
			Batch Date : 01/15/20
			13:40:50

This includes but is not limited to hair, insects, feces, packaging contaminants, and manufacturing waste and by-products. An SH-28/T Stereo Microscope is used for inspection.

Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
1224	0.1022g	01/15/20 01:01:29	574
Analysis Method			Batch Date :
SOP.T.40.020, SOP.T.30.050			01/15/20 10:28:04
Analytical Batch	Instrument Used		
-DA009445POT	DA-LC-003		
Reagent	Dilution	Consumers ID	
011020.R10	400	76124-662	
011420.R09		SFN-BX-1025	
011420.R08		849CA-849AK	
		840C6-840H	

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).

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Jorge Segredo
Lab Director

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


Signature

01/17/20

Signed On



Certificate of Analysis

PASSED

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

Sample : DA00115012-002
Harvest/LOT ID: HS-TVF0114202001

Batch# : HS-TVF0114202001
Sampled : 01/15/20
Ordered : 01/15/20

Sample Size Received : 7.0 gram
Total Weight/Volume : 2000 gram
Completed : 01/17/20 **Expires:** 01/17/21
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	0.213	0.021		SABINENE HYDRATE	0.007	ND	ND	
ALPHA-PINENE	0.007	2.445	0.244		TERPINEOL	0.007	ND	ND	
ALPHA-TERPINENE	0.007	ND	ND		TERPINOLENE	0.007	11.877	1.187	
BETA-MYRCENE	0.007	22.670	2.267		BETA-CARYOPHYLLENE	0.007	5.934	0.593	
BETA-PINENE	0.007	2.163	0.216		TRANS-NEROLIDOL	0.007	ND	ND	
BORNEOL	0.013	ND	ND		VALENCENE	0.007	ND	ND	
CAMPHENE	0.007	ND	ND						
CAMPHOR	0.013	ND	ND						
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	ND	ND						
FENCHONE	0.007	ND	ND						
GAMMA-TERPINENE	0.007	< 0.2	< 0.020						
GERANIOL	0.007	ND	ND						
GERANYL ACETATE	0.007	ND	ND						
GUAJOL	0.007	ND	ND						
LIMONENE	0.007	7.807	0.780						
LINALOOL	0.007	ND	ND						
NEROL	0.007	ND	ND						
OCIMENE	0.007	ND	ND						
ALPHA-PHELLANDRENE	0.007	0.505	0.050						
PULEGONE	0.007	ND	ND						
Total (%)		5.361							



Terpenes

TESTED
Analyzed by 1118 **Weight** 0.9268g **Extraction date** 01/15/20 11:01:42 **Extracted By** 1118

Analysis Method -SOP.T.40.090
Analytical Batch -DA009419TER
Instrument Used : Liquid Injection GCMS QP2010
Running On :
Batch Date : 01/15/20 08:21:37

Reagent	Dilution	Consums. ID
	10	
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.		



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Sampled : 01/15/20
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Total Weight/Volume : 2000 gram
Completed : 01/17/20 **Expires:** 01/17/21
Sample Method : SOP Client Method

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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 1.0386g	Extraction date 01/15/20 12:01:09	Extracted By 357
Analysis Method - SOP.T.30.065, SOP.T.40.065, SOP.T.40.066, SOP.T.40.070 , SOP.T.30.065, SOP.T.40.070 Analytical Batch - DA009433PES Instrument Used : LCMS E-SHI-039 Running On :			
		Batch Date : 01/15/20 09:24:07	
Reagent	Dilution	Consums. ID	
101519.04 010220.805 010220.806		180711	
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.T.40.065/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.			

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Jorge Segredo
 Lab Director

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 ISO Accreditation # ISO/IEC
 17025:2017 Accreditation
 PJLA-Testing 97164


 Signature

01/17/20

Signed On



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Email: erick.ramirez@curaleaf.com

Sample : DA00115012-002
Harvest/LOT ID: HS-TVF0114202001

Batch# : HS-TVF0114202001
Sampled : 01/15/20
Ordered : 01/15/20

Sample Size Received : 7.0 gram
Total Weight/Volume : 2000 gram
Completed : 01/17/20 **Expires:** 01/17/21
Sample Method : SOP Client Method

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	Residual Solvents	PASSED
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	Residual Solvents	PASSED
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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

Analyzed by 850	Weight 0.0285g	Extraction date 01/15/20 03:01:39	Extracted By 850
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Analysis Method -SOP.T.40.032
Analytical Batch -DA009459SOL
Instrument Used : Headspace GCMS
Running On :
Batch Date : 01/15/20 15:09:12

Reagent	Dilution	Consums. ID
	1	00276446 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).



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Harvest/LOT ID: HS-TVF0114202001

Batch# : HS-TVF0114202001
Sampled : 01/15/20
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Sample Method : SOP Client Method

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	Microbials	PASSED
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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 -DA009429MIC Batch Date : 01/15/20, 01/15/20
 Instrument Used : PathogenDX PCR Array Scanner, PathogenDX PCR Array Scanner
 Running On :

Analyzed by	Weight	Extraction date	Extracted By
513,	1.0316g	01/15/20	1082,

Reagent	Consums. ID	Consums. ID
011320.R03	2802012	012
	2803022	
	A03	
	010A	
	020	
	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.

	Mycotoxins	PASSED
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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 -DA009434
 Instrument Used : LCMS E-SHI-039
 Running On :
 Batch Date : 01/15/20 09:25:31

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.

	Heavy Metals	PASSED
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Reagent	Reagent	Dilution
010220.R09	011020.R13	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
53	0.2518g	01/15/20 04:01:28	457

Analysis Method -SOP.T.40.050, SOP.T.30.052
 Analytical Batch -DA009426HEA
 Instrument Used : ICPMS-2030
 Running On :
 Batch Date : 01/15/20 08:43:31

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.

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