



# Certificate of Analysis

**Sample: DA90523007-004**  
**Harvest/Lot ID: HS-TSV0523201902**  
**Cultivation Facility: N/A**  
**Processing Facility: N/A**  
**Seed to Sale #4785 5369 4758 5939**  
**Batch Date :05/23/19**  
**Batch#: HS-TSV0523201902**  
**Sample Size Received: 5**  
**Total Weight/Volume: N/A**  
**Retail Product Size: N/A gram**  
**Ordered : 05/23/19**  
**sampled : 05/23/19**  
**Completed: 01/16/20**  
**Sampling Method: SOP Client Method**

Jan 16, 2020 | CURALEAF FLORIDA LLC

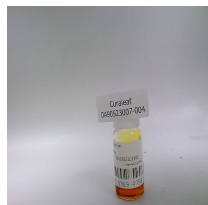
19000 SW 192 STREET  
MIAMI, FL, 33187, US



**PASSED**

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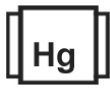
## PRODUCT IMAGE



## SAFETY RESULTS



Pesticides  
**PASSED**



Heavy Metals  
**PASSED**



Microbials  
**PASSED**



Mycotoxins  
**PASSED**



Residuals  
Solvents  
**PASSED**



Filtration  
**NOT TESTED**



Water Activity  
**NOT TESTED**



Moisture  
**NOT TESTED**



Terpenes  
**NOT TESTED**

## MISC.

## CANNABINOID RESULTS



**Total THC**  
**86.182%**



**Total CBD**  
**0.120%**



**Total Cannabinoids**  
**92.331%**

	TOTAL CA	TOTAL CB	TOTAL TH	CBC	CBGA	CBG	THCV	DB-THC	CBDV	CBN	CBDA	CBD	THCA	D9-THC
%	92.3310	0.1200	86.1820	1.6810	0.0960	3.6250	0.2250	ND	ND	0.3920	ND	0.1200	0.0790	86.1130
mg/g	923.3100	1.2000	861.8200	16.8100	0.9600	36.2500	2.2500	ND	ND	3.9200	ND	1.2000	0.7900	861.1300
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
%	%	%	%	%	%	%	%	%	%	%	%	%	%	%

## Cannabinoid Profile Test

Analyzed by 372	Weight 0.1055g	Extraction date : 0000-00-00 00:00:00	Extracted By : Batch Date : 05/23/19 12:12:41
Analysis Method -SOP.T.40.020, SOP.T.30.050	Instrument Used : DA-LC-001		
Analytical Batch -DA003514			

Reagent	Dilution	Consums. ID
052219.R09 052319.R10 052219.R08 052219.R07	10	180711 SFM-BX-1025 840CA-840AK 840CS-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).

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 # n/a  
ISO Accreditation # 97164

  
Signature

01/16/20

Signed On



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

**Sample :** DA90523007-004  
**Harvest/LOT ID:** HS-TSV0523201902

**Batch# :** HS-TSV0523201902  
**Sampled :** 05/23/19  
**Ordered :** 05/23/19

**Sample Size Received :** 5  
**Total Weight/Volume :** N/A  
**Completed :** 01/16/20 **Expires:** 01/16/21  
**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	0.020	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	Weight	Extraction date	Extracted By
56	1.0021g	0000-00-00 00:00:00	
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 - DA003516			
Instrument Used : LCMS E-SHI-039			
Running On :			
Batch Date : 05/23/19 13:23:47			
Reagent	Dilution	Consums. ID	
052119.806	1	180711 280653964	

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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**Harvest/LOT ID:** HS-TSV0523201902

**Batch# :** HS-TSV0523201902  
**Sampled :** 05/23/19  
**Ordered :** 05/23/19

**Sample Size Received :** 5  
**Total Weight/Volume :** N/A  
**Completed :** 01/16/20 **Expires:** 01/16/21  
**Sample Method :** SOP Client Method

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	<b>Residual Solvents</b>	<b>PASSED</b>
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	<b>Residual Solvents</b>	<b>PASSED</b>
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Solvent	LOD	Units	Action Level (PPM)	Pass/Fail	Result
PROPANE	120	ppm	2100	PASS	ND
BUTANES (N-BUTANE)	96	ppm		PASS	ND
ETHYLENE OXIDE	0.6	ppm	5	PASS	ND
METHANOL	22.5	ppm	250	PASS	<100.000
ETHANOL	90	ppm	5000	PASS	ND
PENTANES (N-PENTANE)	67.5	ppm		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	<17.400
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	<130.199
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> 585	<b>Weight</b> 0.0220g	<b>Extraction date</b> 0000-00-00 00:00:00	<b>Extracted By</b>
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**Analysis Method -SOP.T.40.032**  
**Analytical Batch -DA003501**  
**Instrument Used : Headspace GCMS 2**  
**Running On :**  
**Batch Date : 05/23/19 09:15:24**

Reagent	Dilution	Consums. ID
	1	00263624 unknown-022519.01 00252287 24150157

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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**Sample :** DA90523007-004  
**Harvest/LOT ID:** HS-TSV0523201902

**Batch# :** HS-  
 TSV0523201902  
**Sampled :** 05/23/19  
**Ordered :** 05/23/19

**Sample Size Received :** 5  
**Total Weight/Volume :** N/A  
**Completed :** 01/16/20 **Expires:** 01/16/21  
**Sample Method :** SOP Client Method

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	<b>Microbials</b>	<b>PASSED</b>
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Analyte	LOD	Result	Action Level (cfu/g)
ASPERGILLUS_TERREUS_1J2		not present in 1 gram.	
ASPERGILLUS_NIGER		not present in 1 gram.	
ASPERGILLUS_FUMIGATUS		not present in 1 gram.	
ASPERGILLUS_FLAVUS		not present in 1 gram.	
SALMONELLA_SPECIFIC_GENE		not present in 1 gram.	
ESCHERICHIA_COLI_SHIGELLA_SPP		not present in 1 gram.	

Analysis Method -SOP.T.40.043 / SOP.T.40.044 / SOP.T.40.041

Analytical Batch -DA003552 Batch Date : 05/24/19

Instrument Used :

Running On :

Analyzed by	Weight	Extraction date	Extracted By
513	1g	0000-00-00 00:00:00	

**Reagent**

052319.R09

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>
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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 -DA003517

Instrument Used : LCMS E-SHI-039

Running On :

Batch Date : 05/23/19 13:36:45

Analyzed by	Weight	Extraction date	Extracted By
56	1g	0000-00-00 00:00:00	

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 <20ug/Kg.

	<b>Heavy Metals</b>	<b>PASSED</b>
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Reagent	Reagent	Reagent	Dilution
051719.R03	050919.R23	051619.R03	50
052319.R02	051319.R05	050819.01	
052119.R09	052319.R05		
040219.21	052319.R06		
052319.R03	052319.R07		
052319.R04	052319.R08		

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
450	0.2631g	0000-00-00 00:00:00	

Analysis Method -SOP.T.40.050, SOP.T.30.052

Analytical Batch -DA003499

Instrument Used : ICPMS-2030

Running On :

Batch Date : 05/23/19 09:01:39

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.