4131 SW 47th AVENUE SUITE 1408
DAVIE, FL, 33314, US

Kaycha Labs

THC Apple Jack Vape
Apple Jack
Matrix: Derivative

Certificate of Analysis

Sample:DA90913007-004
Harvest/Lot ID: HS-TVF0912201901
Cultivation Facility: Miami Cultivation
Processing Facility : Homestead Processing
Seed to Sale #8178 3525 3345 3271
Batch Date :N/A
Batch#: HS-TVF0912201901
Sample Size Received: 7 gram
Total Weight/Volume: 1590 gram
Retail Product Size: 0.5 ml gram
Ordered : 09/13/19
sampled : 09/13/19
Completed: 09/23/19
Sampling Method: SOP Client Method

Sep 23, 2019 | CURALEAF FLORIDA LLC

19000 SW 192 STREET
MIAMI, FL, 33187, US

PASSED

PRODUCT IMAGE

SAFETY RESULTS

Pesticides	Heavy Metals	Microbials	Mycotoxins	Residuals Solvents	Filth	Water Activity	Moisture
PASSED	PASSED	PASSED	PASSED	PASSED	PASSED	NOT TESTED	NOT TESTED

MISC.

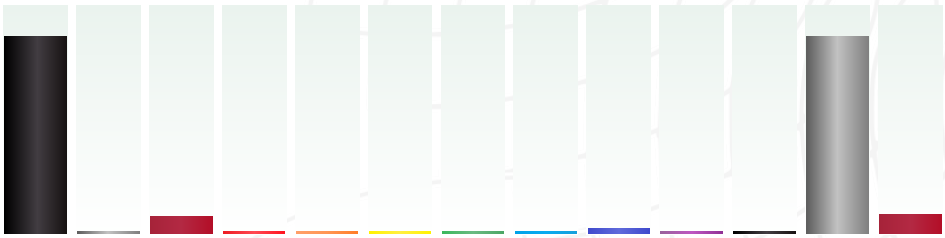
Terpenes
TESTED

CANNABINOID RESULTS

Total THC
81.026%
THC/Container :405.13 mg

Total CBD
7.976%
CBD/Container :39.88 mg

Total Cannabinoids
0.000%
Total Cannabinoids / Container :0.000



	D9-THC	THCA	CBD	CBDA	CBN	CBDV	D8-THC	THCV	CBG	CBGA	CBC	TOTAL TH	TOTAL CB
%	81.0260	ND	7.2140	0.8700	0.2910	ND	0.1640	0.4810	2.1340	ND	1.1930	81.0260	7.9760
mg/g	810.2600	ND	72.1400	8.7000	2.9100	ND	1.6400	4.8099	21.3400	ND	11.9300	810.2600	79.7600
LOD	0.0332 %	0.0025 %	0.0243 %	0.0015 %	0.0011 %	0.0064 %	0.0068 %	0.0059 %	0.0045 %	0.0010 %	0.0011 %	0.0010 %	0.0010 %

Cannabinoid Profile Test

Analyzed by	Weight	Extraction date :	Extracted By :
372	0.1095g	09/13/19 02:09:22	574

Analysis Method -SOP.T.40.020, SOP.T.30.050
Analytical Batch -DA006375 **Instrument Used :** **Batch Date :**

Reagent	Dilution	Consums. ID
091119.R05	40	76124-662
091119.R04		SFN-BX-1025
091119.R07		923C4-923AK
091019.R01		910C6 - 910H

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).

Filth — PASSED

Analyzed By	Weight	Extraction date	Extracted By
584	1g	09/13/19	584

Analyte | **LOD** | **Result**
Filth and Foreign Material | 0 | ND

Analysis Method -SOP.T.40.013 **Batch Date :**
Analytical Batch -DA006357
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 use for inspection.

Jorge Segredo
Lab Director

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

Signature

09/23/19
Signed On

4131 SW 47th AVENUE SUITE 1408
DAVIE, FL, 33314, US

Kaycha Labs

THC Apple Jack Vape
Apple Jack
Matrix : Derivative

Certificate of Analysis

PASSED

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

Sample : DA90913007-004
Harvest/LOT ID: HS-TVF0912201901

Batch# : HS-TVF0912201901
Sampled : 09/13/19
Ordered : 09/13/19

Sample Size Received : 7 gram
Total Weight/Volume : 1590 gram
Completed : 09/23/19 **Expires:** 09/23/20
Sample Method : SOP Client Method

Terpenes

TESTED

Terpenes	LOD(%)	mg/g	%	Result (%)
ALPHA-CEDRENE	0.007	ND	ND	
ALPHA-HUMULENE	0.007	ND	ND	
ALPHA-PINENE	0.007	51.433	5.143	
ALPHA-TERPINENE	0.007	ND	ND	
BETA-MYRCENE	0.007	ND	ND	
BETA-PINENE	0.007	6.584	0.658	
BORNEOL	0.013	ND	ND	
CAMPHENE	0.007	1.115	0.111	
CAMPHOR	0.013	ND	ND	
CARYOPHYLLENE OXIDE	0.007	ND	ND	
CEDROL	0.007	ND	ND	
ALPHA-BISABOLOL	0.007	0.434	0.043	
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	ND	ND	
GERANIOL	0.007	ND	ND	
GERANYL ACETATE	0.007	ND	ND	
GUAIOL	0.007	< 0.2	< 0.020	
LIMONENE	0.007	ND	ND	
LINALOOL	0.007	ND	ND	
NEROL	0.007	ND	ND	
OCIMENE	0.007	ND	ND	
ALPHA-PHELLANDRENE	0.007	ND	ND	
PULEGONE	0.007	ND	ND	
SABINENE	0.007	ND	ND	
SABINENE HYDRATE	0.007	ND	ND	
TERPINEOL	0.007	ND	ND	
TERPINOLENE	0.007	ND	ND	
TRANS-CARYOPHYLLENE	0.007	0.535	0.053	
TRANS-NEROLIDOL	0.007	ND	ND	
VALENCENE	0.007	ND	ND	

Total (%) 6.010

Terpenes

TESTED

Analyzed by	Weight	Extraction date	Extracted By
585	1.0140g	09/13/19 04:09:12	585

Analysis Method -SOP.T.40.090
Analytical Batch -DA006336
Instrument Used :
Running On :
Batch Date :

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.

Jorge Segredo
Lab Director

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

Signature

09/23/19
Signed On

4131 SW 47th AVENUE SUITE 1408
DAVIE, FL, 33314, US

Kaycha Labs
THC Apple Jack Vape
Apple Jack
Matrix : Derivative

Certificate of Analysis

PASSED

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

Sample : DA90913007-004
Harvest/LOT ID: HS-TVF0912201901

Batch# : HS-TVF0912201901
Sampled : 09/13/19
Ordered : 09/13/19

Sample Size Received : 7 gram
Total Weight/Volume : 1590 gram
Completed : 09/23/19 **Expires:** 09/23/20
Sample Method : SOP Client Method

Pesticides

PASSED

Pesticides	LOD	Units	Action Level	Result
DIMETHOATE	0.01	ppm	0.05	ND
ABAMECTIN B1A	0.02	ppm	0.1	ND
PENTACHLORONITROBENZENE	0.005	ppm	0.2	ND
METHYL PARATHION	0.005	ppm	0.2	ND
CYFLUTHRIN	0.025	ppm	1	ND
CIS-PERMETHRIN	0.05	ppm	0.1	ND
ACEPHATE	0.001	ppm	0.1	ND
DIMETHOMORPH	0.005	ppm	0.05	ND
ETHOPROPHOS	0.01	ppm	0.05	ND
ACEQUINOCYL	0.01	ppm	0.1	ND
ACETAMIPRID	0.01	ppm	0.05	ND
ETOFENPROX	0.01	ppm	0.05	ND
ALDICARB	0.02	ppm	0.05	ND
ETOXAZOLE	0.01	ppm	0.05	ND
AZOXYSTROBIN	0.01	ppm	0.05	ND
FENHEXAMID	0.01	ppm	0.1	ND
BIFENAZATE	0.01	ppm	0.1	ND
FENOXYCARB	0.01	ppm	0.05	ND
FENPYROXIMATE	0.01	ppm	0.5	ND
BIFENTHRIN	0.01	ppm	0.1	ND
CARBARYL	0.01	ppm		ND
FIPRONIL	0.02	ppm	0.05	ND
FLONICAMID	0.01	ppm	0.4	ND
CARBOFURAN	0.01	ppm		ND
CHLORANTRANILIPROLE	0.01	ppm		ND
FLUDIOXONIL	0.01	ppm	0.1	ND
HEXYTHIAZOX	0.01	ppm	0.25	ND
CHLORFENAPYR	0.01	ppm	0.05	ND
IMAZALIL	0.01	ppm	0.05	ND
CHLORPYRIFOS	0.01	ppm	0.1	ND
IMIDACLOPRID	0.01	ppm	0.1	ND
CLOFENTEZINE	0.01	ppm	0.2	ND
KRESOXIM-METHYL	0.01	ppm	0.1	ND
COUMAPHOS	0.005	ppm	0.05	ND
MALATHION	0.01	ppm	0.05	ND
CYPERMETHRIN	0.01	ppm	0.5	ND
DAMINOZIDE	0.01	ppm	0.5	ND
METALAXYL	0.01	ppm	0.05	ND
DICHLORVOS	0.05	ppm	0.1	ND
METHIOCARB	0.01	ppm	0.05	ND
METHOMYL	0.01	ppm	0.1	ND
DIAZANON	0.01	ppm	0.05	ND
MEVINPHOS	0.01	ppm	0.05	ND
MYCLOBUTANIL	0.01	ppm	0.1	ND
NALED	0.01	ppm	0.25	ND
OXAMYL	0.01	ppm	0.25	ND

Pesticides	LOD	Units	Action Level	Result
PACLOBUTRAZOL	0.01	ppm	0.05	ND
TRANS-PERMETHRIN	0.05	ppm	0.1	ND
PHOSMET	0.01	ppm	0.1	ND
PIPERONYL BUTOXIDE	0.01	ppm	3	ND
PRALLETHRIN	0.05	ppm	0.1	ND
PROPICONAZOLE	0.01	ppm	0.1	ND
PROPOXUR	0.01	ppm	0.1	ND
PYRETHRIN I	0.01	ppm	0.5	ND
PYRIDABEN	0.01	ppm	0.2	ND
SPINOSAD (SPINOSYN A)	0.01	ppm	0.1	ND
SPINOSAD (SPINOSYN D)	0.01	ppm	0.1	ND
SPIROMESIFEN	0.01	ppm	0.1	ND
SPIROTETRAMAT	0.02	ppm	0.1	ND
SPIROXAMINE	0.01	ppm	0.05	ND
TEBUCONAZOLE	0.01	ppm	0.05	ND
THIACLOPRID	0.01	ppm	0.05	ND
THIAMETHOXAM	0.01	ppm	0.05	ND
TRIFLOXYSTROBIN	0.01	ppm	0.1	ND

Pesticides — PASSED

Analyzed by	Weight	Extraction date	Extracted By
56	1.0161g	09/13/19 02:09:55	56

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 - DA006343
Instrument Used :
Running On : **Batch Date :**

Reagent	Dilution	Consums. ID
	10	

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.

Jorge Segredo
Lab Director

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

Signature

09/23/19
Signed On

4131 SW 47th AVENUE SUITE 1408
DAVIE, FL, 33314, US

Kaycha Labs

THC Apple Jack Vape
Apple Jack
Matrix : Derivative

Certificate of Analysis

PASSED

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

Sample : DA90913007-004
Harvest/LOT ID: HS-TVF0912201901

Batch# : HS-TVF0912201901
Sampled : 09/13/19
Ordered : 09/13/19

Sample Size Received : 7 gram
Total Weight/Volume : 1590 gram
Completed : 09/23/19 **Expires:** 09/23/20
Sample Method : SOP Client Method

Residual Solvents — PASSED

Solvent	LOD	Units	Action Level (PPM)	Pass/Fail	Result
1,2-DICHLOROETHANE	0.2	ppm	2	PASS	ND
1,1-DICHLOROETHENE	0.2	ppm	8	PASS	ND
1,4-DIOXANE	22.8	ppm		PASS	ND
2-BUTANOL	140	ppm		PASS	ND
2-ETHOXYETHANOL	9.6	ppm		PASS	ND
2-PROPANOL	140	ppm	500	PASS	ND
ACETONE	140	ppm	750	PASS	ND
ACETONITRILE	6	ppm	60	PASS	ND
BENZENE	0.1	ppm	1	PASS	ND
BUTANES (ISO-BUTANE)	50	ppm	2000	PASS	ND
BUTANES (N-BUTANE)	50	ppm	2000	PASS	ND
CHLOROFORM	0.2	ppm	2	PASS	ND
ETHANOL	140	ppm	5000	PASS	ND
ETHYL ACETATE	140	ppm	400	PASS	217.587
CYCLOHEXANE	232.8	ppm		PASS	ND
DICHLOROMETHANE	36	ppm		PASS	ND
ETHYL ETHER	140	ppm	500	PASS	ND
ETHYLENE OXIDE	0.5	ppm	5	PASS	ND
ETHYLBENZENE	130.2	ppm		PASS	ND
HEPTANE	140	ppm	500	PASS	ND
HEXANES (2,2-DIMETHYLBUTANE)	17.4	ppm	60	PASS	ND
HEXANES (2,3-DIMETHYLBUTANE)	17.4	ppm	60	PASS	ND
HEXANES (2-METHYLPENTANE)	17.4	ppm	60	PASS	ND
HEXANES (3-METHYLPENTANE)	17.4	ppm	60	PASS	ND
ISOPROPYL ACETATE	140	ppm		PASS	ND
METHALENE CHLORIDE	1	ppm	125	PASS	ND
METHANOL	25	ppm	250	PASS	ND
N-HEXANE	17.4	ppm	60	PASS	ND
PENTANES (ISO-PENTANE)	140	ppm		PASS	ND
PENTANES (N-PENTANE)	50	ppm	750	PASS	ND
PENTANES (NEO-PENTANE)	50	ppm		PASS	ND
PROPANE	10	ppm	2100	PASS	ND
TETRAHYDROFURAN	43.2	ppm		PASS	ND
TOLUENE	15	ppm	150	PASS	ND
TOTAL XYLENES	1	ppm	150	PASS	ND
TRICHLOROETHYLENE	0.2	ppm	25	PASS	ND

Residual Solvents — PASSED

Analyzed by	Weight	Extraction date	Extracted By
850	0.0223g	09/13/19 01:09:08	850

Analysis Method -SOP.T.40.032
Analytical Batch -DA006368
Instrument Used :
Running On :
Batch Date :

Reagent	Dilution	Consums. ID
	1	00276446 160861-1 24152438

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).

Jorge Segredo
Lab Director

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

Signature

09/23/19
Signed On

4131 SW 47th AVENUE SUITE 1408
DAVIE, FL, 33314, US

Kaycha Labs

THC Apple Jack Vape
Apple Jack
Matrix : Derivative

Certificate of Analysis

PASSED

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

Sample : DA90913007-004
Harvest/LOT ID: HS-TVF0912201901

Batch# : HS-TVF0912201901
Sampled : 09/13/19
Ordered : 09/13/19

Sample Size Received : 7 gram
Total Weight/Volume : 1590 gram
Completed : 09/23/19 **Expires:** 09/23/20
Sample Method : SOP Client Method

Microbials — PASSED

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 -DA006361 **Batch Date :**
Instrument Used :
Running On :

Analyzed by	Weight	Extraction date	Extracted By
513	0.9984g	09/13/19	513

Reagent	Consums. ID
090619.R02	A01
	2803018
	013
	009A
	019
	009

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

Analyte	LOD	Units	Result	Action Level (PPM)
AFLATOXIN_G2	0.001	ppm	ND	0.02
AFLATOXIN_G1	0.001	ppm	ND	0.02
AFLATOXIN_B2	0.001	ppm	ND	0.02
AFLATOXIN_B1	0.001	ppm	ND	0.02
OCHRATOXIN_A	0.001	ppm	ND	0.02

Analysis Method -SOP.T.30.065, SOP.T.40.065
Analytical Batch -DA006424
Instrument Used :
Running On :
Batch Date :

Analyzed by	Weight	Extraction date	Extracted By
56	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.T40.065 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

Reagent	Dilution
091119.R09	50
091319.R01	
082719.R04	
091119.R10	
072519.R23	
052419.01	

Metal	LOD	Unit	Result	Action Level (PPM)
ARSENIC	0.0062878	ppm	ND	0.2
CADMIUM	0.0040357	ppm	ND	0.2
LEAD	0.0022993	ppm	ND	0.5
MERCURY	0.0016524	ppm	ND	0.1

Analyzed by	Weight	Extraction date	Extracted By
457	0.4921g	09/13/19 03:09:42	457

Analysis Method -SOP.T.40.050, SOP.T.30.052
Analytical Batch -DA006372
Instrument Used :
Running On :
Batch Date :

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.

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

Signature

09/23/19
Signed On