



Certificate of Analysis

Sample:GA20624001-018
Harvest/Lot ID: HVFV102-2206-10338

Batch#: DF-GRCR-2206-9799

Cultivation Facility: Gainesville Cultivation

Processing Facility : Gainesville Processing

Seed to Sale# HVFV102-2206-10338

Batch Date: 06/20/22

Sample Size Received: 16 gram

Total Batch Size: 2368 gram

Retail Product Size: 1 gram

Ordered : 06/24/22

Sampled : 06/24/22




Completed: 06/27/22


Sampling Method: SOP.T.20.010.FL

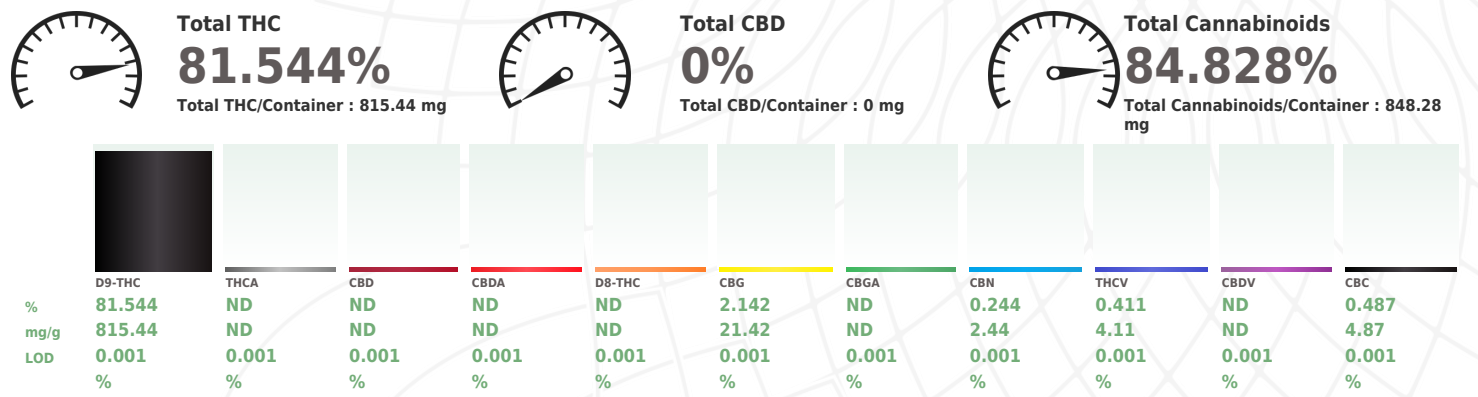
PASSED

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Jun 27, 2022 | Liberty Health Sciences, FL
18770 N CR 225
Gainesville, FL, 32609, US


PRODUCT IMAGE	SAFETY RESULTS								MISC.
	 Pesticides PASSED	 Heavy Metals PASSED	 Microbials PASSED	 Mycotoxins PASSED	 Residuals Solvents PASSED	 Filtration PASSED	 Water Activity PASSED	 Moisture NOT TESTED	 Terpenes TESTED

	Cannabinoid	PASSED
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Analyzed by: 3404, 3134, 3571, 2507, 3303	Weight: 0.1023g	Extraction date: 06/24/22 15:24:19	Extracted by: 3134
Analysis Method : SOP.T.40.031, SOP.T.30.031 Analytical Batch : GA045928POT Instrument Used : GA-HPLC-002 2040C Running on : 06/25/22 10:52:55		Reviewed On : 06/25/22 11:52:19 Batch Date : 06/24/22 12:55:49	
Dilution : 400 Reagent : 020322.R09; 010421.48; 060922.11; 060422.R40; 060822.R51 Consumables : GA-169; 947.271; H20364; 9291.271; LLS-00-0005; 7711028; R0NB32898; 000000146137; 944C4 944j; 210268; 206639 Pipette : GA-004; GA-011; GA-146			

Full Spectrum cannabinoid analysis utilizing High Performance Liquid Chromatography with UV detection in accordance with F.S. Rule 64ER20-39.



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Gainesville, FL, 32609, US

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Email: Qualityassurance@libertyhealthsciences.com

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Total Batch Size : 2368 gram

Completed : 06/27/22 Expires: 06/27/23

Sample Method : SOP.T.20.010

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Terpenes

TESTED

Terpenes	LOD (%)	mg/g	%	Result (%)	Terpenes	LOD (%)	mg/g	%	Result (%)
CAMPHENE	0.007	<0.2	<0.02		GERANIOL	0.007	ND	ND	
BETA-MYRCENE	0.007	12.27	1.227		PULEGONE	0.007	ND	ND	
3-CARENE	0.007	<0.2	<0.02		ALPHA-CEDRENE	0.007	ND	ND	
ALPHA-PHELLANDRENE	0.007	0.91	0.091		ALPHA-HUMULENE	0.007	3.42	0.342	
OCIMENE	0.007	6.42	0.642		TRANS-NEROLIDOL	0.007	ND	ND	
EUCALYPTOL	0.007	ND	ND		GUAJOL	0.007	ND	ND	
LINALOOL	0.007	1.89	0.189		Analyzed by: 3404, 3303, 3575, 3209, 3205, 2338, 1541 Weight: 1.02114g Extraction date: 06/24/22 17:00:443303 Analysis Method : SOP.T.30.061A.FL, SOP.T.40.061A.FL Analytical Batch : GA045927TER Instrument Used : GA-GCMS-002 QP2010S Running on : 06/25/22 10:21:45 Dilution : 50 Reagent : 060922.R22; 050322.49; 010421.48 Consumables : 947.271; H20364; 9291.271; 210419634; 000000146137; 210268; 944C4 944j; 209598 Pipette : DA-146; DA-211; GA-151; GA-182 Terpenoid testing is performed utilizing Gas Chromatography Mass Spectrometry.				
FENCHONE	0.007	ND	ND						
ISOPULEGOL	0.007	ND	ND						
ISOBORNEOL	0.007	ND	ND						
HEXAHYDROTHYMOL	0.007	ND	ND						
NEROL	0.007	ND	ND						
GERANYL ACETATE	0.007	ND	ND						
BETA-CARYOPHYLLENE	0.007	7.28	0.728						
VALENCENE	0.007	5.49	0.549						
CIS-NEROLIDOL	0.007	ND	ND						
CEDROL	0.007	ND	ND						
FARNESENE	0	0.15	0.015						
CARYOPHYLLENE OXIDE	0.007	0.65	0.065						
ALPHA-BISABOLOL	0.007	2.34	0.234						
ALPHA-PINENE	0.007	3.13	0.313						
SABINENE	0.007	ND	ND						
BETA-PINENE	0.007	1.54	0.154						
ALPHA-TERPINENE	0.007	ND	ND						
LIMONENE	0.007	3.98	0.398						
GAMMA-TERPINENE	0.007	ND	ND						
TERPINOLENE	0.007	<0.2	<0.02						
SABINENE HYDRATE	0.007	ND	ND						
FENCHYL ALCOHOL	0.007	0.43	0.043						
CAMPHOR	0.013	ND	ND						
BORNEOL	0.013	ND	ND						
Total (%)			5.031						



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<div>  Pesticides </div>						PASSED					
Pesticide	LOD	Units	Action Level	Pass/Fail	Result	Pesticide	LOD	Units	Action Level	Pass/Fail	Result
ABAMECTIN B1A	0.01	ppm	0.1	PASS	ND	PROPOXUR	0.01	ppm	0.1	PASS	ND
ACEPHATE	0.01	ppm	0.1	PASS	ND	PYRETHRINS	0.01	ppm	0.5	PASS	ND
ACEQUINOCYL	0.01	ppm	0.1	PASS	ND	PYRIDABEN	0.01	ppm	0.2	PASS	ND
ACETAMIPRID	0.01	ppm	0.1	PASS	ND	SPIROMESIFEN	0.01	ppm	0.1	PASS	ND
ALDICARB	0.01	ppm	0.1	PASS	ND	SPIROTETRAMAT	0.01	ppm	0.1	PASS	ND
AZOXYSTROBIN	0.01	ppm	0.1	PASS	ND	SPIROXAMINE	0.01	ppm	0.1	PASS	ND
BIFENAZATE	0.01	ppm	0.1	PASS	ND	TEBUCONAZOLE	0.01	ppm	0.1	PASS	ND
BIFENTHRIN	0.01	ppm	0.1	PASS	ND	THIACLOPRID	0.01	ppm	0.1	PASS	ND
BOSCALID	0.01	PPM	0.1	PASS	ND	THIAMETHOXAM	0.01	ppm	0.5	PASS	ND
CARBARYL	0.01	ppm	0.5	PASS	ND	TRIFLOXYSTROBIN	0.01	ppm	0.1	PASS	ND
CARBOFURAN	0.01	ppm	0.1	PASS	ND	PENTACHLORONITROBENZENE (PCNB) *	0.01	PPM	0.15	PASS	ND
CHLORANTRANILIPROLE	0.01	ppm	1	PASS	ND	PARATHION-METHYL *	0.01	PPM	0.1	PASS	ND
CHLORMEQUAT CHLORIDE	0.01	ppm	1	PASS	ND	CAPTAN *	0.07	PPM	0.7	PASS	ND
CHLORPYRIFOS	0.01	ppm	0.1	PASS	ND	CHLORDANE *	0.01	PPM	0.1	PASS	ND
CLOFENTEZINE	0.01	ppm	0.2	PASS	ND	CHLORFENAPYR *	0.01	PPM	0.1	PASS	ND
COUMAPHOS	0.01	ppm	0.1	PASS	ND	CYFLUTHRIN *	0.05	PPM	0.5	PASS	ND
DAMINOZIDE	0.01	ppm	0.1	PASS	ND	CYPERMETHRIN *	0.05	PPM	0.5	PASS	ND
DIAZINON	0.01	ppm	0.1	PASS	ND	Analyzed by: 3404, 3134, 2338, 1541 Weight: 0.9938g Extraction date: 06/24/22 16:26:14 Extracted by: 3134 Analysis Method : SOP.T.30.101.FL, SOP.T.30.102.FL, SOP.T.30.151.FL, SOP.T.40.101.FL, SOP.T.40.102.FL, SOP.T.40.151.FL Analytical Batch : GA045931PES Reviewed On : 06/26/22 18:13:04 Instrument Used : GA-LCMS-001 PES Batch Date : 06/24/22 12:57:06 Running on : 06/25/22 10:41:10					
DICHLORVOS	0.01	ppm	0.1	PASS	ND	Dilution : 10 Reagent : 060422.R38; 060422.R36; 061222.R01; 011122.06 Consumables : 947.271; 470228-424; 9291.271; LLS-00-0005; 210419634; 296055173; 41064115C4115B; 209598; 206639 Pipette : GA-002; GA-005; GA-013; GA-210 Dispenser					
DIMETHOATE	0.01	ppm	0.1	PASS	ND	Testing for agricultural agents is performed utilizing Liquid Chromatography Triple-Quadrupole Mass Spectrometry and Gas Chromatography Triple-Quadrupole Mass Spectrometry in accordance with F.S. Rule 64ER20-39.					
ETHOPROPHOS	0.01	ppm	0.1	PASS	ND	Analyzed by: NA Weight: NA Extraction date: NA Extracted by: NA Analysis Method : SOP.T.30.060, SOP.T.40.060 Analytical Batch : GA045948VOL Reviewed On : 06/26/22 13:05:28 Instrument Used : GA-GCMS-006 Batch Date : 06/24/22 18:27:09 Running on : 06/25/22 11:04:48					
ETOFENPROX	0.01	ppm	0.1	PASS	ND	Dilution : 100 Reagent : 061222.R01; 011122.06; 061522.R52 Consumables : 947.271; 470228-424; 9291.271; LLS-00-0005; 210419634; 296055173; 41064115C4115B; 209598; 206639; 15024701 Pipette : GA-002; GA-005; GA-013; GA-210 Dispenser					
ETOXAZOLE	0.01	ppm	0.1	PASS	ND	Testing for agricultural agents is performed utilizing Liquid Chromatography Triple-Quadrupole Mass Spectrometry and Gas Chromatography Triple-Quadrupole Mass Spectrometry in accordance with F.S. Rule 64ER20-39.					
FENHEXAMID	0.01	ppm	0.1	PASS	ND						
FENOXYCARB	0.01	ppm	0.1	PASS	ND						
FENPYROXIMATE	0.01	ppm	0.1	PASS	ND						
FIPRONIL	0.01	ppm	0.1	PASS	ND						
FLONICAMID	0.01	ppm	0.1	PASS	ND						
FLUDIOXONIL	0.01	ppm	0.1	PASS	ND						
HEXYTHIAZOX	0.01	ppm	0.1	PASS	ND						
IMAZALIL	0.01	ppm	0.1	PASS	ND						
IMIDACLOPRID	0.01	ppm	0.4	PASS	ND						
KRESOXIM-METHYL	0.01	ppm	0.1	PASS	ND						
MALATHION	0.01	ppm	0.2	PASS	ND						
METALAXYL	0.01	ppm	0.1	PASS	ND						
METHIOCARB	0.01	ppm	0.1	PASS	ND						
METHOMYL	0.01	ppm	0.1	PASS	ND						
MEVINPHOS	0.01	ppm	0.1	PASS	ND						
MYCLOBUTANIL	0.01	ppm	0.1	PASS	ND						
NALED	0.01	ppm	0.25	PASS	ND						
OXAMYL	0.01	ppm	0.5	PASS	ND						
PACLOBUTRAZOL	0.01	ppm	0.1	PASS	ND						
PHOSMET	0.01	ppm	0.1	PASS	ND						
PIPERONYL BUTOXIDE	0.01	ppm	3	PASS	ND						
PRALLETHRIN	0.01	ppm	0.1	PASS	ND						
PROPICONAZOLE	0.01	ppm	0.1	PASS	ND						



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Harvest/Lot ID: HVFV102-2206-10338

Batch# : DF-GRCR-2206-9799 Sample Size Received : 16 gram

Sampled : 06/24/22

Ordered : 06/24/22

Total Batch Size : 2368 gram

Completed : 06/27/22 Expires: 06/27/23

Sample Method : SOP.T.20.010

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Residual Solvents

PASSED

Solvents	LOD	Units	Action Level	Pass/Fail	Result
METHANOL	25	ppm	250	PASS	ND
ETHANOL	500	ppm	5000	PASS	ND
PENTANES (N-PENTANE)	75	ppm	750	PASS	ND
ETHYL ETHER	50	ppm	500	PASS	ND
ACETONE	75	ppm	750	PASS	ND
2-PROPANOL	50	ppm	500	PASS	ND
ACETONITRILE	6	ppm	60	PASS	ND
DICHLOROMETHANE	12.5	ppm	125	PASS	ND
N-HEXANE	25	ppm	250	PASS	ND
ETHYL ACETATE	40	ppm	400	PASS	ND
BENZENE	0.1	ppm	1	PASS	ND
HEPTANE	500	ppm	5000	PASS	ND
TOLUENE	15	ppm	150	PASS	ND
PROPANE	500	ppm	5000	PASS	ND
CHLOROFORM	0.2	ppm	2	PASS	ND
1,2-DICHLOROETHANE	0.2	ppm	2	PASS	ND
BUTANES (N-BUTANE)	500	ppm	5000	PASS	ND
ETHYLENE OXIDE	0.5	ppm	5	PASS	ND
1,1-DICHLOROETHENE	0.8	ppm	8	PASS	ND
TRICHLOROETHYLENE	2.5	ppm	25	PASS	ND

 Analyzed by:
 NA

Weight:

 Extraction date:
 NA

 Extracted by:
 NA

Analysis Method : SOP.T.40.041.FL

Analytical Batch : GA045934SOL

Instrument Used : GA-GCMS-004 QP2020NX

Running on : 06/24/22 16:48:30

Reviewed On : 06/25/22 14:02:23

Batch Date : 06/24/22 13:13:50

Dilution : 1

Reagent :

Consumables : 27296; 854996

Pipette :

Residual solvents analysis is performed utilizing Gas Chromatography Mass Spectrometry in accordance with with F.S. Rule 64ER20-39.



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 Microbial						 Mycotoxins						PASSED					
Analyte	LOD	Units	Result	Pass / Fail	Action Level	Analyte	LOD	Units	Result	Pass / Fail	Action Level						
ESCHERICHIA COLI SHIGELLA SPP			Not Present	PASS		AFLATOXIN B2	0.002	ppm	ND	PASS	0.02						
SALMONELLA SPECIFIC GENE			Not Present	PASS		AFLATOXIN B1	0.002	ppm	ND	PASS	0.02						
ASPERGILLUS FLAVUS			Not Present	PASS		OCHRATOXIN A	0.002	ppm	ND	PASS	0.02						
ASPERGILLUS FUMIGATUS			Not Present	PASS		AFLATOXIN G1	0.002	ppm	ND	PASS	0.02						
ASPERGILLUS TERREUS			Not Present	PASS		AFLATOXIN G2	0.002	ppm	ND	PASS	0.02						
ASPERGILLUS NIGER			Not Present	PASS													
TOTAL YEAST AND MOLD	10	CFU/g	<10	PASS	100000												
Analyzed by: 3404, 1790, 3574, 2821, 1541 Weight: 1.01g Extraction date: 06/24/22 18:14:27 Extracted by: 1790 Analysis Method : SOP.T.40.041, SOP.T.40.043, SOP.T.40.045, SOP.T.40.056B, SOP.T.40.058.FL, SOP.T.40.208 Analytical Batch : GA045929MIC Instrument Used : GA-TYM-001 Tempo Filler and Reader Running on : 06/24/22 18:15:12 Dilution : 90 Reagent : 052622.09 Consumables : 2303260; 2303190; 2304090; 2304090; GA-185; GA-213; 61630-123C6-123E Pipette : GA-154 Microbial testing is performed utilizing various technologies including: PCR, RTPCR, MPN, and traditional culture based techniques in accordance with F.S. Rule 64ER20-39.						Analyzed by: 3404, 3134, 2338, 1541 Weight: 0.9938g Extraction date: 06/24/22 16:26:14 Extracted by: 3134 Analysis Method : SOP.T.30.101.FL, SOP.T.40.101.FL, SOP.T.30.102.FL, SOP.T.40.102.FL Analytical Batch : GA045949MYC Instrument Used : GA-LCMS-001 MYC Running on : 06/25/22 10:41:49 Dilution : Reagent : aflatoxin_b2; aflatoxin_b1; aflatoxin_g1; aflatoxin_g2 Consumables : 0.02; 0.02; 0.02; 0.02 Pipette : Mycotoxins testing utilizing Liquid Chromatography with Triple-Quadrupole Mass Spectrometry in accordance with F.S. Rule 64ER20-39.											
Analyzed by: NA Weight: NA Extraction date: NA Extracted by: NA Analysis Method : SOP.T.40.041 Analytical Batch : GA045930TYM Instrument Used : GA-TYM-001 bioMérieux Tempo Filler and Reader Running on : 06/24/22 18:27:15 Dilution : 90 Reagent : 052622.09 Consumables : 2304090; 2304090; GA-185; GA-213; 61630-123C6-123E Pipette : GA-154 Total yeast and mold testing is performed utilizing MPN and traditional culture based techniques in accordance with F.S. Rule 64ER20-39.						Analyzed by: 3404, 3317, 3209, 3134, 2338, 1541 Weight: 0.5304g Extraction date: 06/26/22 11:16:11 Extracted by: 3134 Analysis Method : SOP.T.30.081.FL, SOP.T.30.082.FL, SOP.T.40.081.FL, SOP.T.40.082.FL Analytical Batch : GA045979HEA Instrument Used : GA-ICPMS-002 Running on : Dilution : 100 Reagent : 052422.R35; 062222.R63; 010421.51; 061621.03; 041622.R02; 051622.R03; 041722.R01; 042022.R45 Consumables : CGR0114; 12400-133CD-133C; 209598; L2019501 Pipette : GA-012; GA-183; GA - 194; GA-195; GA-193 Heavy Metals analysis is performed using Inductively Coupled Plasma Mass Spectrometry in accordance with F.S. Rule 64ER20-39.											
						Heavy Metals						PASSED					
Metal	LOD	Units	Result	Pass / Fail	Action Level												
ARSENIC	0.02	PPM	ND	PASS	0.2												
CADMIUM	0.02	PPM	ND	PASS	0.2												
MERCURY	0.02	PPM	ND	PASS	0.2												
LEAD	0.05	PPM	ND	PASS	0.5												



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**Filth/Foreign
Material**
PASSED

Analyte	LOD	Units	Result	P/F	Action Level
Filth and Foreign Material	1	%	ND	PASS	5

Analyzed by: 3404, 3209, 1541	Weight: 13.1g	Extraction date: 06/24/22 13:46:17	Extracted by: 3209
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Analysis Method : SOP.T.30.074, SOP.T.40.074

Analytical Batch : GA045925FIL

Instrument Used : GA-Filth/Foreign Material Microscope

Running on :

Reviewed On : 06/24/22 16:07:47

Batch Date : 06/24/22 12:43:14

Dilution : 1

Reagent :

Consumables :

Pipette :

Filth and foreign material inspection is performed by visual inspection utilizing naked eye and microscope technologies in accordance with F.S. Rule 64ER20-39.


Water Activity
PASSED

Analyte	LOD	Units	Result	P/F	Action Level
Water Activity	0.1	aw	0.595	PASS	0.85

Analyzed by: 3404, 3575, 1541	Weight: 0.8497g	Extraction date: 06/25/22 09:13:26	Extracted by: 3575
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Analysis Method : SOP.T.40.019

Analytical Batch : GA045932WAT

Instrument Used : GA-203 Rotronic HygroPalm

Running on :

Reviewed On : 06/25/22 10:27:11

Batch Date : 06/24/22 12:58:24

Dilution : 1

Reagent :

Consumables : 107264

Pipette :

Water Activity is performed using a Rotronic HygroPalm HP 23-AW in accordance with F.S. Rule 64ER20-39.