

Signature \_\_\_\_\_



# Certificate of Analysis

**PASSED**

Liberty Health Sciences, FL

18770 N CR 225

Gainesville, FL, 32609, US

Telephone: (833) 254-4877

Email: Qualityassurance@libertyhealthsciences.com

Sample : GA20624001-016

Harvest/Lot ID: ORFCW164-2206-10527

Batch# : DSRT-3D-050922-2-P2

Sampled : 06/24/22

Ordered : 06/24/22

Sample Size Received : 16 gram

Total Batch Size : 126 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	ND	ND		GERANIOL	0.007	ND	ND	
BETA-MYRCENE	0.007	1.02	0.102		PULEGONE	0.007	ND	ND	
3-CARENE	0.007	ND	ND		ALPHA-CEDRENE	0.007	ND	ND	
ALPHA-PHELLANDRENE	0.007	ND	ND		ALPHA-HUMULENE	0.007	8.66	0.866	
OCIMENE	0.007	0.31	0.031		TRANS-NEROLIDOL	0.007	1.7	0.17	
EUCALYPTOL	0.007	<0.2	<0.02		GUAJOL	0.007	0.2	0.02	
LINALOOL	0.007	11.73	1.173		Analyzed by: 3404, 3303, 3575, 3209, 3205, 2338, 1541				
FENCHONE	0.007	ND	ND		Weight: Extraction date: Extracted by: 1.0406g06/24/22 16:59:533303				
ISOPULEGOL	0.007	ND	ND		Analysis Method : SOP.T.30.061A.FL, SOP.T.40.061A.FL				
ISOBORNEOL	0.007	ND	ND		Analytical Batch : GA045927TER				
HEXAHYDROTHYMOL	0.007	ND	ND		Instrument Used : GA-GCMS-002 QP2010S				
NEROL	0.007	ND	ND		Running on : 06/25/22 10:21:45				
GERANYL ACETATE	0.007	ND	ND		Dilution : 50				
BETA-CARYOPHYLLENE	0.007	29.97	2.997		Reagent : 060922.R22; 050322.49; 010421.48				
VALENCENE	0.007	ND	ND		Consumables : 947.271; H20364; 9291.271; 210419634; 000000146137; 210268; 944C4 944j; 209598				
CIS-NEROLIDOL	0.007	ND	ND		Pipette : DA-146; DA-211; GA-151; GA-182				
CEDROL	0.007	ND	ND		Terpenoid testing is performed utilizing Gas Chromatography Mass Spectrometry.				
FARNESENE	0	2.85	0.285						
CARYOPHYLLENE OXIDE	0.007	0.74	0.074						
ALPHA-BISABOLOL	0.007	3.38	0.338						
ALPHA-PINENE	0.007	ND	ND						
SABINENE	0.007	ND	ND						
BETA-PINENE	0.007	ND	ND						
ALPHA-TERPINENE	0.007	ND	ND						
LIMONENE	0.007	2.42	0.242						
GAMMA-TERPINENE	0.007	ND	ND						
TERPINOLENE	0.007	0.73	0.073						
SABINENE HYDRATE	0.007	ND	ND						
FENCHYL ALCOHOL	0.007	1.85	0.185						
CAMPHOR	0.013	ND	ND						
BORNEOL	0.013	<0.4	<0.04						
Total (%)			6.709						



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## Pesticides

**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 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 Instrument Used : GA-LCMS-001 PES Running on : 06/25/22 10:41:10 Dilution : 10 Reagent : 060422.R38; 060422.R36; 061222.R01; 011122.06 Consumables : 947.271; 470228-424; 9291.271; LLS-00-0005; 210419634; 296055173; 41064115C41158; 209598; 206639 Pipette : GA-002; GA-005; GA-013; GA-210 Dispenser 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.					
DICHLORVOS	0.01	ppm	0.1	PASS	ND	Analyzed by: NA Weight: 1.0088g Extraction date: 06/24/22 16:21:36 Extracted by: 3134 Analysis Method : SOP.T.30.060, SOP.T.40.060 Analytical Batch : GA045948VOL Instrument Used : GA-GCMS-006 Running on : 06/25/22 11:04:48 Dilution : 100 Reagent : 061222.R01; 011122.06; 061522.R52 Consumables : 947.271; 470228-424; 9291.271; LLS-00-0005; 210419634; 296055173; 41064115C41158; 209598; 206639; 15024701 Pipette : GA-002; GA-005; GA-013; GA-210 Dispenser 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.					
DIMETHOATE	0.01	ppm	0.1	PASS	ND						
ETHOPROPHOS	0.01	ppm	0.1	PASS	ND						
ETOFENPROX	0.01	ppm	0.1	PASS	ND						
ETOXAZOLE	0.01	ppm	0.1	PASS	ND						
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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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	<2500
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	<200
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 14:02:16

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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
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 <b>Microbial</b> <b>PASSED</b>						 <b>Mycotoxins</b> <b>PASSED</b>					
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: 1.02g Extraction date: 06/24/22 18:14:04 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: 1.0088g Extraction date: 06/24/22 16:21:36 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.						 <b>Heavy Metals</b> <b>PASSED</b>					
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						
Analyzed by: 3404, 3317, 3209, 2338, 1541 Weight: 0.4856g Extraction date: 06/25/22 15:16:05 Extracted by: 3209 Analysis Method : SOP.T.30.081.FL, SOP.T.30.082.FL, SOP.T.40.081.FL, SOP.T.40.082.FL Analytical Batch : GA045933HEA Instrument Used : GA-ICPMS-002 Running on : 06/26/22 08:54:56 Dilution : 100 Reagent : 041622.R02; 051622.R03; 041722.R01; 042022.R45; 061621.03; 052422.R35; 062222.R63 Consumables : L2019501; CGR0114; 12400-133CD-133C; 210268 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.											



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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, 3571, 3303	Weight: 15.5415g	Extraction date: 06/24/22 12:36:17	Extracted by: 3571
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Analysis Method : SOP.T.30.074, SOP.T.40.074

Analytical Batch : GA045924FIL

Instrument Used : GA-Filth/Foreign Material Microscope

Running on :

Reviewed On : 06/24/22 12:51:53

Batch Date : 06/24/22 12:35:24

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	0.602	PASS	0.85

Analyzed by: 3404, 3575, 1541	Weight: 0.7408g	Extraction date: 06/25/22 09:09:32	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 10:27:10

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.