



TOPICAL  
Sample Matrix:  
CBD/HEMP  
Derivative Products  
(External Use)



DEA No. RA0571996  
FL License # CMTL-0003  
CLIA No. 10D1094068

# Certificate of Analysis

## Compliance Test

**STAR MANUFACTURING  
EXTRACTION**  
540 B RD  
LABELLE, FL 33935

Batch # DHSDERM1017-1  
Batch Date: 2022-10-17  
Extracted From: HEMP

Sampling Method: MSP 7.3.1  
Test Reg State: Florida

Order # STA221019-070001  
Order Date: 2022-10-19  
Sample # AADP105

Sampling Date: 2022-10-19  
Lab Batch Date: 2022-10-19  
Completion Date: 2022-10-25

Initial Gross Weight: 20.426 g



Product Image

<b>Potency</b> Tested	<b>Terpenes</b> Tested	<b>Heavy Metals</b> Passed	<b>Mycotoxins</b> Passed	<b>Pesticides</b> Passed
<b>Residual Solvents</b> Passed	<b>Pathogenic Microbiology</b> Passed	<b>Listeria Monocytogenes</b> Passed	<b>Flavonoids</b> Tested	



### Potency 10

Specimen Weight: 119.350 mg

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	(%)
CBC	10.000	1.80E-5	0.0015	-	<LOQ
CBD	10.000	5.40E-5	0.0015	-	<LOQ
CBDa	10.000	1.00E-5	0.0015	-	<LOQ
CBDV	10.000	6.50E-5	0.0015	-	<LOQ
CBG	10.000	2.48E-4	0.0015	-	<LOQ
CBGA	10.000	8.00E-5	0.0015	-	<LOQ
CBN	10.000	1.40E-5	0.0015	-	<LOQ
Delta-9 THC	10.000	1.30E-5	0.0015	-	<LOQ
THCA-A	10.000	3.20E-5	0.0015	-	<LOQ
THCV	10.000	7.00E-6	0.0015	-	<LOQ

### Tested

SOP13.001 (LCUV)



### Potency Summary

<b>Total Active THC</b> None Detected	<b>Total Active CBD</b> None Detected
<b>Total CBG</b> None Detected	<b>Total CBN</b> None Detected
<b>Other Cannabinoids</b> None Detected	<b>Total Cannabinoids</b> None Detected



### Terpenes Summary

Analyte	Result (mg/g) (%)
<b>Total Terpenes:</b>	<b>0.000%</b>

Detailed Terpenes Analysis is on the following page



### Flavonoids Summary

Analyte	Result (ppm)
<b>Total Flavonoids:</b>	<b>0.000ppm</b>

Detailed Flavonoids Analysis is on one of the following pages

*Xueli Gao*  
Xueli Gao  
Lab Toxicologist  
Ph.D., DABT

*Aixia Sun*  
Aixia Sun  
Lab Director/Principal Scientist  
D.H.Sc., M.Sc., B.Sc., MT (AAB)



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Sample # AADP105

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**Pesticides FL V4**  
Specimen Weight: 263.200 mg

**Passed**  
SOP13.007  
(LCMS/GCMS)

**Flavonoids**  
Specimen Weight: 19.800 mg

**Tested**  
SOP13.011  
(LCMS)

Dilution Factor: 5.700

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	2.8900E-1	28.23	300	<LOQ	Fludioxonil	1.7400E+0	48	3000	<LOQ
Acephate	2.3000E-2	30	3000	<LOQ	Hexythiazox	4.9000E-2	30	2000	<LOQ
Acetamiprid	9.5640E+0	48	2000	<LOQ	Imazalil	2.4800E-1	30	100	<LOQ
Acetamiprid	5.2000E-2	30	3000	<LOQ	Imidacloprid	9.4000E-2	30	3000	<LOQ
Aldicarb	2.6000E-2	30	100	<LOQ	Kresoxim Methyl	4.2000E-2	30	1000	<LOQ
Azoxystrobin	8.1000E-2	10	3000	<LOQ	Malathion	8.2000E-2	30	2000	<LOQ
Bifenazate	1.4150E+0	30	3000	<LOQ	Metolachl	8.1000E-2	10	3000	<LOQ
Bifenthrin	4.3000E-2	30	500	<LOQ	Methiocarb	3.2000E-2	30	100	<LOQ
Boscalid	5.5000E-2	10	3000	<LOQ	Methomyl	2.2000E-2	30	100	<LOQ
Captan	6.1200E+0	30	3000	<LOQ	methyl-Parathion	1.7100E+0	10	100	<LOQ
Carbaryl	2.2000E-2	10	500	<LOQ	Mevinphos	2.1500E+0	10	100	<LOQ
Carbofuran	3.4000E-2	10	100	<LOQ	Myclobutanil	1.0290E+0	30	3000	<LOQ
Chlorantraniliprole	3.3000E-2	10	3000	<LOQ	Naled	9.5000E-2	30	500	<LOQ
Chloridane	1.0000E+1	10	100	<LOQ	Oxamyl	2.5000E-2	30	500	<LOQ
Chlorfenapyr	3.4000E-2	30	100	<LOQ	Paclobutrazol	6.5000E-2	30	100	<LOQ
Chloromequat Chloride	1.0800E-1	10	3000	<LOQ	Pentachloronitrobenzene	1.3200E+0	10	200	<LOQ
Chlorpyrifos	3.5000E-2	30	100	<LOQ	Permethrin	3.4300E-1	30	1000	<LOQ
Clofentezine	1.1900E-1	30	500	<LOQ	Phosmet	8.2000E-2	30	200	<LOQ
Coumaphos	3.7700E+0	48	100	<LOQ	Piperonylbutoxide	2.9000E-2	30	3000	<LOQ
Cyfluthrin	3.1100E+0	30	1000	<LOQ	Prallethrin	7.9800E-1	30	400	<LOQ
Cypermethrin	1.4490E+0	30	1000	<LOQ	Propiconazole	7.0000E-2	30	1000	<LOQ
Daminozide	8.8500E-1	30	100	<LOQ	Propoxur	4.6000E-2	30	100	<LOQ
Diazinon	4.4000E-2	30	200	<LOQ	Pyrethrins	2.3593E+1	30	1000	<LOQ
Dichlorvos	2.1820E+0	30	100	<LOQ	Pyridaben	3.2000E-2	30	3000	<LOQ
Dimethoate	2.1000E-2	30	100	<LOQ	Spinetoram	8.0000E-2	10	3000	<LOQ
Dimethomorph	5.8300E+0	48	3000	<LOQ	Spinosad	8.8000E-2	30	3000	<LOQ
Ethoprophos	3.6000E-1	30	100	<LOQ	Spiromesifen	2.6100E-1	30	3000	<LOQ
Etofenprox	1.1600E-1	30	100	<LOQ	Spirotetramat	8.9000E-2	30	3000	<LOQ
Etoxazole	9.5000E-2	30	1500	<LOQ	Spiroxamine	1.3100E-1	30	100	<LOQ
Fenheamid	5.1000E-1	10	3000	<LOQ	Tebuconazole	6.7000E-2	30	1000	<LOQ
Fenoxycarb	1.0700E-1	30	100	<LOQ	Thiacloprid	6.4000E-2	30	100	<LOQ
Fenpyroximate	1.3800E-1	30	2000	<LOQ	Thiamethoxam	5.0000E-2	30	1000	<LOQ
Fipronil	1.0700E-1	30	100	<LOQ	Trifloxystrobin	3.7000E-2	30	3000	<LOQ
Fonicamid	5.1700E-1	30	2000	<LOQ					

Dilution Factor: 10.000

Analyte	Dilution (1:n)	LOQ (ppm)	Result (ppm)	Analyte	Dilution (1:n)	LOQ (ppm)	Result (ppm)
Apigenin	0.100	4	<LOQ	Kaempferol	0.000	1	<LOQ
Baicalin	0.100	8	<LOQ	Luteolin	0.000	2.5	<LOQ
beta sitosterol	0.100	5	<LOQ	Orientin	0.000	5	<LOQ
Cannflavin A	0.100	3.91	<LOQ	Pelargonidin-3-O-glucoside	0.000	11.56	<LOQ
Cannflavin B	0.100	4.84	<LOQ	Quercetin	0.000	2.23	<LOQ
Cannflavin C	0.100	2.36	<LOQ	Rutin	0.000	7.81	<LOQ
Chrysin	0.100	2.5	<LOQ	Vitexin	0.000	4	<LOQ
Fisetin	0.100	5	<LOQ	Wogonin	0.000	0.5	<LOQ

**Pathogenic Microbiology  
SAE (MicroArray)**

Specimen Weight: 1024.590 mg

Dilution Factor: 1.000

Analyte	Result (cfu/g)	Analyte	Result (cfu/g)
Aspergillus flavus	Absence in 1g	Aspergillus terreus	Absence in 1g
Aspergillus fumigatus	Absence in 1g	Salmonella	Absence in 1g
Aspergillus niger	Absence in 1g	STEC E. Coli	Absence in 1g

**Listeria Monocytogenes**

Specimen Weight: 987.400 mg

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result
Listeria Monocytogenes	1	Absence in 1g

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Lab Toxicologist

*Aixia Sun*  
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D.H.Sc., M.Sc., B.Sc., MT (AAB)  
Lab Director/Principal Scientist



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 Lab Batch Date: 2022-10-19  
 Completion Date: 2022-10-25

Initial Gross Weight: 20.426 g



## Terpenes

Specimen Weight: 84.190 mg

Tested

SOP13.045 (GC/GCMS)

Dilution Factor: 20.000

Analyte	LOQ (%)	Result (mg/g)	(%)	Analyte	LOQ (%)	Result (mg/g)	(%)
(+)-Cedrol	0.002	<LOQ	<LOQ	Fenchyl Alcohol	0.002	<LOQ	<LOQ
(R)-(+)-Limonene	0.002	<LOQ	<LOQ	Gamma-Terpinene	0.002	<LOQ	<LOQ
3-Carene	0.002	<LOQ	<LOQ	Geraniol	0.002	<LOQ	<LOQ
alpha-Bisabolol	0.002	<LOQ	<LOQ	Geranyl acetate	0.002	<LOQ	<LOQ
alpha-Cedrene	0.002	<LOQ	<LOQ	Guaiol	0.002	<LOQ	<LOQ
alpha-Humulene	0.002	<LOQ	<LOQ	Hexahydrothymol	0.002	<LOQ	<LOQ
alpha-Phellandrene	0.002	<LOQ	<LOQ	Isoborneol	0.002	<LOQ	<LOQ
alpha-Pinene	0.002	<LOQ	<LOQ	Isopulegol	0.002	<LOQ	<LOQ
alpha-Terpinene	0.002	<LOQ	<LOQ	Linalool	0.002	<LOQ	<LOQ
beta-Myrcene	0.002	<LOQ	<LOQ	Nerol	0.002	<LOQ	<LOQ
beta-Pinene	0.002	<LOQ	<LOQ	Ocimene	0.00033	<LOQ	<LOQ
Borneol	0.004	<LOQ	<LOQ	Pulegone	0.002	<LOQ	<LOQ
Camphene	0.002	<LOQ	<LOQ	Sabinene	0.002	<LOQ	<LOQ
Camphors	0.006	<LOQ	<LOQ	Sabinene Hydrate	0.002	<LOQ	<LOQ
Caryophyllene oxide	0.002	<LOQ	<LOQ	Terpinolene	0.002	<LOQ	<LOQ
cis-Nerolidol	0.002	<LOQ	<LOQ	Total Terpineol	0.00126	<LOQ	<LOQ
Eucalyptol	0.002	<LOQ	<LOQ	trans-Caryophyllene	0.002	<LOQ	<LOQ
Farnesene	0.002	<LOQ	<LOQ	trans-Nerolidol	0.002	<LOQ	<LOQ
Fenchone	0.002	<LOQ	<LOQ	Valencene	0.002	<LOQ	<LOQ

Total Terpenes: 0.000%



## Residual Solvents - FL (CBD)

Specimen Weight: 303.900 mg

Passed

SOP13.039 (GCMS)

Dilution Factor: 500.000

Analyte	LOD (ppm)	LOQ (ppm)	Action Level (ppm)	Result (ppm)	Analyte	LOD (ppm)	LOQ (ppm)	Action Level (ppm)	Result (ppm)
1,1-Dichloroethane	0.0094	0.16	8	<LOQ	Heptane	0.0013	1.39	5000	<LOQ
1,2-Dichloroethane	0.0003	0.04	5	<LOQ	Hexane	0.068	1.17	290	<LOQ
Acetone	0.015	2.08	5000	<LOQ	Isopropyl alcohol	0.0048	1.39	500	<LOQ
Acetonitrile	0.06	1.17	410	<LOQ	Methanol	0.0005	0.69	3000	<LOQ
Benzene	0.0002	0.02	2	<LOQ	Methylene chloride	0.0029	2.43	600	<LOQ
Butanes	0.4167	2.5	2000	<LOQ	Pentane	0.037	2.08	5000	<LOQ
Chloroform	0.0001	0.04	60	<LOQ	Propane	0.031	5.83	2100	<LOQ
Ethanol	0.0021	2.78	5000	567.504	Toluene	0.0009	2.92	890	<LOQ
Ethyl Acetate	0.0012	1.11	5000	<LOQ	Total Xylenes	0.0001	2.92	2170	<LOQ
Ethyl Ether	0.0049	1.39	5000	<LOQ	Trichloroethylene	0.0014	0.49	80	<LOQ
Ethylene Oxide	0.0038	0.1	5	<LOQ					

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 Xueli Gao Lab Toxicologist  
 Ph.D., DABT

*Abxia Sun*  
 Abxia Sun Lab Director/Principal Scientist  
 D.H.Sc., M.Sc., B.Sc., MT (AAB)



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## Mycotoxins

Passed

Specimen Weight: 263.200 mg

SOP13.007 (LCMS)

Dilution Factor: 5.700

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Aflatoxin B1	3.0400E-1	6	20	<LOQ	Aflatoxin G2	2.7100E-1	6	20	<LOQ
Aflatoxin B2	7.7000E-2	6	20	<LOQ	Ochratoxin A	7.5400E-1	12	20	<LOQ
Aflatoxin G1	3.0400E-1	6	20	<LOQ					



## Heavy Metals

Passed

Specimen Weight: 246.820 mg

SOP13.048 (ICP-MS)

Dilution Factor: 202

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Arsenic (As)	4.83	100	1500	<LOQ	Lead (Pb)	11.76	100	500	<LOQ
Cadmium (Cd)	.64	100	500	<LOQ	Mercury (Hg)	.58	100	3000	<LOQ

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Xueli Gao  
Ph.D., DABT

*Gen*

Lab Toxicologist

*Aixia Sun*

Aixia Sun  
D.H.Sc., M.Sc., B.Sc., MT (AAB)  
Lab Director/Principal Scientist



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