



## CSX Agricultural, Inc.

280 Moccasin Creek Ln.  
Elkton, FL 32033

## Hemp Crude Oil

Harvest/Lot ID: HH22120  
Batch ID: NA  
Sample Size: 45g  
Compliance: Hemp

Batch Date: NA  
Product Type: Derivative (Oil)

Order ID: 20221212-2092  
Sampled on: 12/12/2022

Sample ID: LC-20221212-5697  
Received on: 2022-12-12 17:15:00



## RESULTS SUMMARY



**Potency**  
TESTED



**Terpenes**  
TESTED



**Pesticides**  
PASS



**Heavy Metals**  
PASS



**Mycotoxins**  
PASS



**Micro - Hemp**  
PASS



**Residual Solvents**  
PASS



**Foreign Material**  
NOT TESTED

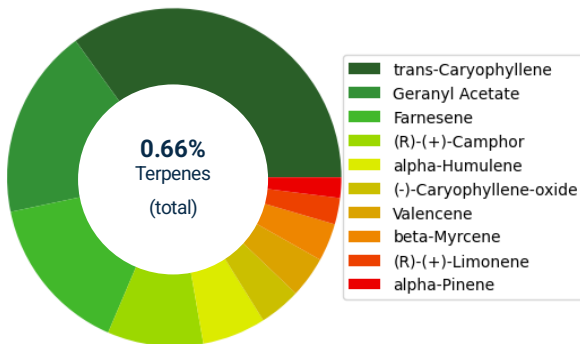


**Water Activity**  
TESTED

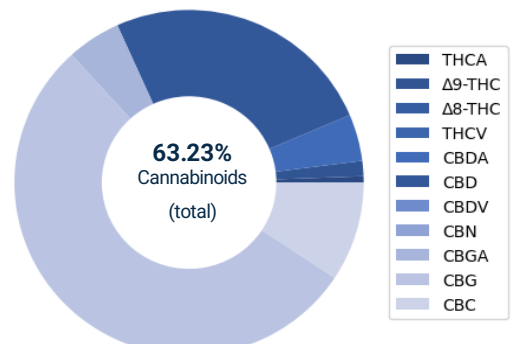


**Moisture**  
TESTED

### TERPENE PROFILE (%)



### CANNABINOID PROFILE (%)



Terpene	%	Terpene	%
trans-Caryophyllene	0.202	(-)-Caryophyllene-oxide	0.023
Geranyl Acetate	0.105	Valencene	0.023
Farnesene	0.088	beta-Myrcene	0.021
(R)-(+)-Camphor	0.054	(R)-(+)-Limonene	0.015
alpha-Humulene	0.036	alpha-Pinene	0.011

Detailed terpene analysis results on page 2.

Cannabinoid	%	mg/g
Total THC	1.23	12.30
Total CBD	18.45	18.45
Total CBG	36.89	368.93
<b>Total Cannabinoids</b>	<b>63.23</b>	<b>632.34</b>

Total THC = THC + (THCA \* 0.877)  
Total CBD = CBD + (CBDA \* 0.877)  
Total CBG = CBG + (CBGA \* 0.877)

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FORM: COA54.16



## CANNABINOIDS (POTENCY)

**Analysis Batch:** WO-22121213

**Analysis Date:** 2022-12-13 15:48:00

**Analysis Method:** SOP 6.6

**Instrument:** Agilent HPLC I-33

Cannabinoid	Result (mg/g)	Result (%)	LOD (%)	Dilution
THCA	3.735	0.373	0.030	10
Δ9-THC	9.024	0.902	0.030	10
Δ8-THC	ND	ND	0.030	10
THCV	ND	ND	0.030	10
CBDA	27.697	2.770	0.030	10
CBD	160.246	16.025	0.030	10
CBDV	ND	ND	0.030	10
CBN	ND	ND	0.030	10
CBGA	31.583	3.158	0.030	10
CBG	341.232	34.123	0.030	10
CBC	58.825	5.882	0.030	10
Total THC	12.299	1.230		
Total CBD	184.536	18.454		
Total CBG	368.930	36.893		
Total Cannabinoids	632.341	63.234		

## TERPENES

**Analysis Batch:** WO-22121216

**Analysis Date:** 2022-12-13 16:40:00

**Analysis Method:** SOP 6.9

**Instrument:** Agilent HS-GC-FID/MS (I-36)

Terpene	Result (ppm)	Result (%)	LOD (ppm)	Terpene	Result (ppm)	Result (%)	LOD (ppm)
(-)-alpha-Bisabolol	72.95	0.0073	1.00	(+)-Borneol	ND	ND	1.00
Camphene	23.97	0.0024	1.00	(-)-Borneol	ND	ND	1.00
Camphor	8.33	0.0008	1.00	(R)-(+)-Camphor	535.26	0.0535	1.00
(1S)-3-(+)-Carene	102.07	0.0102	1.00	(S)-(-)-Camphor	ND	ND	1.00
trans-Caryophyllene	2024.16	0.2024	1.00	alpha-Cedrene	ND	ND	1.00
(-)-Caryophyllene-oxide	231.41	0.0231	1.00	Endo Fenchyl Alcohol	27.26	0.0027	1.00
(+)-Cedrol	33.59	0.0034	1.00	(L)-(-)-Fenchon	3.07	0.0003	1.00
Eucalyptol	27.82	0.0028	1.00	Geraniol	ND	ND	1.00
Farnesene	880.85	0.0881	1.00	(-)-Guaiol	88.40	0.0088	1.00
(+)-Fenchone	3.58	0.0004	1.00	alpha-Humulene	355.18	0.0355	1.00
Geranyl Acetate	1053.56	0.1054	1.00	(R)-(+)-Limonene	145.42	0.0145	1.00
Hexahydrothymol	ND	ND	1.00	trans-Nerolidol	44.83	0.0045	1.00
Isoborneol	16.71	0.0017	1.00	alpha-Pinene	113.48	0.0113	1.00
(-)-Isopulegol	14.98	0.0015	1.00	beta-Pinene	8.79	0.0009	1.00
Linalool	27.08	0.0027	1.00	(+)-Pulegon	ND	ND	1.00
p-Mentha-1,5-diene	81.34	0.0081	1.00	Sabine Hydrate	2.69	0.0003	1.00
beta-Myrcene	209.55	0.021	1.00	Sabinene	36.49	0.0036	1.00
Nerol	84.05	0.0084	1.00	alpha-Terpinene	16.65	0.0017	1.00
cis-Nerolidol	ND	ND	1.00	gamma-Terpinene	11.02	0.0011	1.00
Ocimene	9.35	0.0009	1.00	Terpineol	28.44	0.0028	1.00
Valencene	227.50	0.0227	1.00	Terpinolene	29.98	0.003	1.00
				Total Terpenes	6579.81	0.658	

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*Steven Perez*

Steven Perez  
Executive Laboratory Director



**PASS**

## MYCOTOXINS

**Analysis Batch:** WO-22121219  
**Analysis Date:** 2022-12-13 13:35:00

**Analysis Method:** SOP 6.7  
**Instrument:** Agilent LC/TQ (I-32)

Mycotoxin	Result (ppm)	LOD (ppm)	Limit (ppm)
Aflatoxin B1	ND	0.005	
Aflatoxin B2	ND	0.005	
Aflatoxin G1	ND	0.005	

Mycotoxin	Result (ppm)	LOD (ppm)	Limit (ppm)
Aflatoxin G2	ND	0.005	
Ochratoxin A	ND	0.005	0.02
Total Aflatoxins	ND		0.02

## HEAVY METALS

**Analysis Batch:** WO-22121218  
**Analysis Date:** 2022-12-15 17:00:00

**Analysis Method:** SOP 6.10  
**Instrument:** Agilent ICP/MS (I-37)

Metal	Result (ppm)	LOD (ppm)	Limit (ppm)
Arsenic	ND	0.05	1.5
Cadmium	ND	0.05	0.5

Metal	Result (ppm)	LOD (ppm)	Limit (ppm)
Lead	ND	0.05	0.5
Mercury	ND	0.005	3.0

**PASS**

## RESIDUAL SOLVENTS

**Analysis Batch:** WO-22121217  
**Analysis Date:** 2022-12-13 16:20:00

**Analysis Method:** SOP 6.8  
**Instrument:** Agilent HS-GC-FID/MS (I-36)

Solvent	Result (ppm)	LOD (ppm)	Limit (ppm)
1, 1 Dichloroethene	ND	0.7	8
1, 2 Dichloroethane	ND	0.1	5
Acetone	80.92	1.3	5000
Acetonitrile	ND	0.6	410
Benzene	ND	0.1	2
Butane	ND	12.4	2000
Chloroform	ND	0.1	60
Ethanol	4665.25	0.7	5000
Ethyl acetate	35.42	0.1	5000
Ethyl ether	ND	1.2	5000

Solvent	Result (ppm)	LOD (ppm)	Limit (ppm)
Ethylene Oxide	ND	0.5	5
Heptane	74.24	0.6	5000
Hexane	ND	0.1	290
Isopropyl alcohol	ND	2.0	500
Methanol	ND	1.4	3000
Methylene chloride	ND	0.6	600
Pentane	ND	0.9	5000
Propane	ND	1.4	2100
Toluene	ND	0.2	890
Total Xylenes	ND	0.2	2170
Trichloroethylene	ND	0.6	80

**PASS**

## MOISTURE DETERMINATION

**Analysis Batch:** WO-22121215  
**Analysis Date:** 2022-12-16 13:10:00

**Analysis Method:** SOP 6.12  
**Instrument:** Shimadzu MOC63u (I-45)

Test	Result (%)
Moisture	4.89

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*Steven Perez*  
Steven Perez  
Executive Laboratory Director



**PASS**

## AGRICULTURAL AGENTS (PESTICIDES)

**Analysis Batch:** WO-22121219

**Analysis Date:** 2022-12-13 13:35:00

**Analysis Method:** SOP 6.7

**Instrument:** Agilent LC/TQ (I-32) and Agilent GC/TQ (I-34)

Pesticide	Result (ppm)	Action Limit (ppm)	LOD (ppm)
Abamectin	ND	0.3	0.01
Acephate	ND	3.0	0.01
Acequinocyl*	ND	2.0	0.01
Acetamiprid	ND	3.0	0.01
Aldicarb	ND	0.1	0.01
Azoxystrobin	ND	3.0	0.01
Bifenazate	ND	3.0	0.01
Bifenthrin*	ND	0.5	0.01
Boscalid*	ND	3.0	0.01
Captan	ND	3.0	0.01
Carbaryl	ND	0.5	0.01
Carbofuran	ND	0.1	0.01
Chlorantraniliprole	ND	3.0	0.01
Chlordane*	ND	0.1	0.01
Chlorfenapyr*	ND	0.05	0.01
Chlormequat chloride	ND	3.0	0.01
Chlorpyrifos*	ND	0.1	0.01
Clofentezine	ND	0.5	0.01
Coumaphos	ND	0.1	0.01
Cyfluthrin*	ND	1.0	0.01
Cypermethrin*	ND	1.0	0.01
Daminozide	ND	0.1	0.01
Diazinon	ND	0.2	0.01
Dichlorvos	ND	0.1	0.01
Dimethoate	ND	0.1	0.01
Dimethomorph (I/II)	ND	3.0	0.01
Ethoprophos (Prophos)	ND	0.1	0.01
Etofenprox	ND	0.1	0.01
Etoxazole	ND	1.5	0.01
Fenhexamid	ND	3.0	0.01
Fenoxycarb	ND	0.1	0.01
Fenpyroximate	ND	2.0	0.01
Fipronil	ND	0.1	0.01

\*Analyzed by GC/TQ.

Pesticide	Result (ppm)	Action Limit (ppm)	LOD (ppm)
Fonicamid	ND	2.0	0.01
Fludioxonil	ND	3.0	0.01
Hexythiazox	ND	2.0	0.01
Imazalil	ND	0.1	0.01
Imidacloprid	ND	3.0	0.01
Kresoxim-methyl	ND	1.0	0.01
Malathion	ND	2.0	0.01
Metalaxyl	ND	3.0	0.01
Methiocarb	ND	0.1	0.01
Methomyl	ND	0.1	0.01
Methyl parathion*	ND	0.1	0.01
Mevinphos (I/II)	ND	0.1	0.01
Myclobutanil	ND	3.0	0.01
Naled	ND	0.5	0.01
Oxamyl	ND	0.5	0.01
Paclobutrazol	ND	0.1	0.01
Pentachloronitrobenzene	ND	0.2	0.01
Permethrin*	ND	1.0	0.01
Phosmet	ND	0.2	0.01
Piperonyl butoxide	ND	3.0	0.01
Prallethrin	ND	0.4	0.01
Propiconazole	ND	1.0	0.01
Propoxur	ND	0.1	0.01
Pyrethrins	ND	1.0	0.01
Pyridaben	ND	3.0	0.01
Spinetoram (J/L)	ND	3.0	0.01
Spinosad (A+D)	ND	3.0	0.01
Spiromesifen	ND	3.0	0.01
Spirotetramat	ND	3.0	0.01
Spiroxamine (I/II)	ND	0.1	0.01
Tebuconazole	ND	1.0	0.01
Thiacloprid	ND	0.1	0.01
Thiamethoxam	ND	1.0	0.01
Trifloxystrobin	ND	3.0	0.01

## MICROBIAL PANEL A - HEMP COMPLIANCE

**PASS**

**Analysis Batch:** WO-22121214

**Analysis Date:** 2022-12-13 13:45:00

**Analysis Method:** SOP 6.11

**Instrument:** See Below

Target	Result (CFU/g)	Limit (CFU/g)	Method	Instrument
Listeria monocytogenes	ND	None Present	SOP 6.11	Agilent AriaMX, I-43
Salmonella	ND	None Present	SOP 6.11	Agilent AriaMX, I-43
Shiga toxin producing E. coli - [STEC]	ND	None Present	SOP 6.11	Agilent AriaMX, I-43

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*Steven Perez*



## WATER ACTIVITY

**Analysis Batch:** WO-22121215  
**Analysis Date:** 2022-12-15 13:25:00

**Analysis Method:** SOP 6.12  
**Instrument:** AquaLab 4TE (I-40)

**Test**

**Result (Aw)**

Water Activity

0.7771

- End of report -

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Steven Perez  
Executive Laboratory Director

12/16/2022