



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

# Certificate of Analysis

R&D

**3 TALL PINES LLC**  
W6326 COUNTY ROAD Z  
PLYMOUTH  
PLYMOUTH, WI 53073

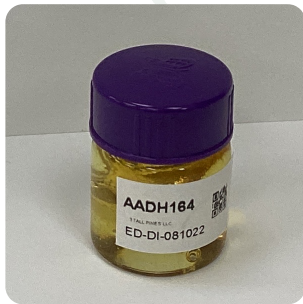
Batch # ED-DI-081022  
Batch Date: 2022-08-10  
Extracted From: Hemp

Test Reg State: Florida

Order # 3TA220819-010001  
Order Date: 2022-08-19  
Sample # AADH164

Sampling Date: 2022-08-22  
Lab Batch Date: 2022-08-22  
Completion Date: 2022-08-26

Initial Gross Weight: 22.270 g



Product Image

<b>Potency Tested</b>	<b>HHC Tested</b>	<b>HHC Metals Passed</b>	<b>Heavy Metals Passed</b>	<b>2,3-Butanedione Passed</b>
<b>Mycotoxins Passed</b>	<b>Pesticides Passed</b>	<b>Residual Solvents Passed</b>	<b>Pathogenic Microbiology Passed</b>	<b>Listeria Monocytogenes Passed</b>
<b>Vitamin E Passed</b>				

**Delta 8/Delta 10 Potency 13 - (LCUV) + Potency 21 (LCUV)**

**Tested**  
SOP13.002 (LCUV)

**Potency Summary**

<b>Total THC</b> None Detected	<b>Total CBD</b> None Detected
<b>Total CBG</b> 4.201%	<b>Total CBN</b> 14.465%
<b>Other Cannabinoids</b> 51.392%	<b>Total Cannabinoids</b> 70.124%

Summary Results determined from two distinct Potency Tests - Delta 8/Delta 10 Potency 13 - (LCUV) + Potency 21 (LCUV)

Specimen Weight: 47.810 mg

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	(%)
Delta-8 THC	1000.000	2.60E-5	0.0015	405.1100	40.5110
CBN	1000.000	1.40E-5	0.0015	139.9100	13.9910
Delta-8 THC-O Acetate	100.000	2.70E-5	0.0003	81.7900	8.1790
CBG	1000.000	2.48E-4	0.0015	42.0100	4.2010
CBC	1000.000	1.80E-5	0.0015	21.4200	2.1420
CBNA	10.000	9.50E-5	0.0015	5.4040	0.5404
CBT	10.000	2.00E-4	0.0015	2.9160	0.2916
Delta-9 THC-O Acetate	10.000	7.70E-5	0.0003	2.6810	0.2681
CBD	1000.000	5.40E-5	0.0015	<LOQ	<LOQ
CBDA	1000.000	1.00E-5	0.0015	<LOQ	<LOQ
CBDV	1000.000	6.50E-5	0.0015	<LOQ	<LOQ
CBGA	1000.000	8.00E-5	0.0015	<LOQ	<LOQ
Delta-10 THC	10.000	3.00E-6	0.0015	<LOQ	<LOQ
Delta-9 THC	1000.000	1.30E-5	0.0015	<LOQ	<LOQ
Delta6a10a-THC	1000.000	8.47E-5	0.0015	<LOQ	<LOQ
THCA	10.000	3.20E-5	0.0015	<LOQ	<LOQ
THCV	1000.000	7.00E-6	0.0015	<LOQ	<LOQ
CBCA	10.000	1.07E-4	0.0015	<LOQ	<LOQ
CBDVA	10.000	1.40E-5	0.0015	<LOQ	<LOQ
CBL	10.000	3.50E-5	0.0015	<LOQ	<LOQ
Delta-8 THCV	10.000	4.00E-5	0.0015	<LOQ	<LOQ
Exo-THC	10.000	2.30E-4	0.0015	<LOQ	<LOQ
THCVA	10.000	4.70E-5	0.0015	<LOQ	<LOQ

Xueli Gao  
Ph.D., DABT  
Lab Toxicologist

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



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Initial Gross Weight: 22.270 g

**Pesticides FL V4**  
Specimen Weight: 272.410 mg

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

Dilution Factor: 5.510

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	2.8800E-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
Acequinocyl	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	Kesoxim 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	Metaxyl	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	Paclitaxel	6.5000E-2	30	100	<LOQ
Chlomequat 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
Fenhexamid	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					

**Pathogenic Microbiology SAE (MicroArray)**

**Passed**  
SOP13.019  
(Micro Array)

Specimen Weight: 1042.140 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

**2,3-butanedione(Diacetyl)**  
Specimen Weight: 307.700 mg

**Passed**  
SOP13.039  
(GCMS)

Dilution Factor: 500.000

Analyte	LOD (ppm)	LOQ (ppm)	Result (ppm)
2,3-Butanedione	.024	0.024	<LOQ

**Listeria Monocytogenes**  
Specimen Weight: 1012.640 mg

**Passed**  
SOP13.032  
(qPCR)

Dilution Factor: 1.000

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

**Vitamin E (Tocopheryl Acetate)**  
Specimen Weight: 272.410 mg

**Passed**  
SOP13.007 (LC-MS)

Dilution Factor: 5.510

Analyte	LOD (ppb)	Result (ppb)
Vitamin E Acetate	.705	<LOQ

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Lab Toxicologist

Aixia Sun  
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Lab Director/Principal Scientist



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Initial Gross Weight: 22.270 g

## Residual Solvents - FL (CBD)

**Passed**  
SOP13.039 (GCMS)

Specimen Weight: 307.700 mg

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	42.647
Chloroform	0.0001	0.04	60	<LOQ	Propane	0.031	5.83	2100	<LOQ
Ethanol	0.0021	2.78	5000	<LOQ	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					

## HHC Metals

**Passed**  
13.051 (ICP-MS)

Specimen Weight: 251.950 mg

Dilution Factor: 198.452

Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOD (ppb)	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Arsenic (As)	1.9E-2	100	200	<LOQ	Nickel (Ni)	1.5E-1	250	500	<LOQ
Cadmium (Cd)	4.0E-3	100	200	<LOQ	Palladium (Pd)	7.0E-3	50	100	<LOQ
Lead (Pb)	1.0E-2	100	500	<LOQ	Platinum (Pt)	1.3E-2	50	100	<LOQ
Mercury (Hg)	4.4E-2	100	200	<LOQ	Zinc (Zn)	4.1E-1	1000	na	<LOQ

## Mycotoxins

**Passed**  
SOP13.007 (LCMS)

Specimen Weight: 272.410 mg

Dilution Factor: 5.510

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					

## HHC

**Tested**  
SOP13.050 (LCMS)

Specimen Weight: 47.810 mg

Dilution Factor: 5000.000

Analyte	LOD (%)	LOQ (%)	Result (mg/g)	(%)	Analyte	LOD (%)	LOQ (%)	Result (mg/g)	(%)
(9R)-HHC	3.1100E-7	7.5E-5	66.3000	6.63	(±)-9R-hydroxy-HHC	4.5800E-7	7.5E-5	0.4920	0.0492
(9S)-HHC	8.7400E-7	7.5E-5	31.4000	3.14	Total HHC		7.5E-5	98.1920	9.8192

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## Heavy Metals

Specimen Weight: 254.860 mg

**Passed**  
SOP13.048 (ICP-MS)

Dilution Factor: 196

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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