



Certificate of Analysis

R&D

Client Information:

FOUR WINDS FARM LLC
2312 ALPINE AVE NW
HOMESTEAD, IA 52236

Batch # 23001101
Batch Date: 2023-07-27
Extracted From: cbg hemp

Test Reg State: Florida

Production Facility: Four Winds Farm
Production Date: 2023-07-27

Order # FOU230808-010001
Order Date: 2023-08-08
Sample # AAET316

Sampling Date: 2023-08-11
Lab Batch Date: 2023-08-11
Orig. Completion Date: 2023-09-20
Statement of Amendment: Merging reports; Updated Net Weight

Initial Gross Weight: 113.398 g
Net Weight: 113.398 g
Density: .9395 g/ml

Number of Units: 1
Net Weight per Unit: 56690.000 mg



Product Image



Potency
Tested



Heavy Metals
Passed



Mycotoxins
Passed



Pesticides
Passed



Residual Solvents
Passed



Moisture
Tested



Water Activity
Tested



Pathogenic Microbiology
Passed



Microbiology (qPCR)
Passed



Microbiology Petrifilm
Passed

Potency 10

Specimen Weight: 104.670 mg

Tested

SOP13.001 (LCUV)

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/ml)	Result (%)
CBG	100.000	2.48E-4	0.015	2.0200	0.2020
CBC	100.000	1.80E-5	0.015	<LOQ	<LOQ
CBD	100.000	5.40E-5	0.015	<LOQ	<LOQ
CBDA	100.000	1.00E-5	0.015	<LOQ	<LOQ
CBDV	100.000	6.50E-5	0.015	<LOQ	<LOQ
CBGA	100.000	8.00E-5	0.015	<LOQ	<LOQ
CBN	100.000	1.40E-5	0.015	<LOQ	<LOQ
Delta-9 THC	100.000	1.30E-5	0.015	<LOQ	<LOQ
THCA-A	100.000	3.20E-5	0.015	<LOQ	<LOQ
THCV	100.000	7.00E-6	0.015	<LOQ	<LOQ
Total Active CBD	100.000			<LOQ	<LOQ
Total Active THC	100.000			<LOQ	<LOQ



Potency Summary

Total Active THC None Detected	Total Active CBD None Detected
Total CBG 0.202% 114.510mg	Total CBN None Detected
Other Cannabinoids 0%	Total Cannabinoids 0.202% 114.510mg

Aixia Sun

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



Definitions and Abbreviations used in this report: Total Active CBD = CBD + (CBD-A * 0.877), *Total CBDV = CBDV + (CBDVA * 0.87), Total Active THC = THCA-A * 0.877 + Delta 9 THC, Total THC = THC + (THCVA * 0.87), CBG Total = (CBGA * 0.877) + CBG, CBN Total = (CBNA * 0.877) + CBN, Total CBC = CBC + (CBCA * 0.877), Total THC-O-Acetate = Delta 8 THC-O-Acetate + Delta 9 THC-O-Acetate, Total THCP = Delta8-THCP + Delta9-THCP, Other Cannabinoids Total = Total Cannabinoids - All the listed cannabinoids on the summary section, Total Detected Cannabinoids = Delta6a10a-THC + Delta8-THC + Total CBN + CBT + CBE + Delta8-THCV + Total CBG + Total CBD + Total THC + CBL + Total THC + Total CBC + Total CBDV + Delta10-THC + Total THC-O-Acetate + Total THCP. (mg/ml) = Milligrams per Milliliter, LOQ = Limit of Quantitation, LOD = Limit of Detection, Dilution = Dilution Factor (ppb) = Parts per Billion, (%) = Percent, (cfu/g) = Colony Forming Unit per Gram (cfu/g) = Colony Forming Unit per Gram, , LOD = Limit of Detection, (µg/g) = Microgram per Gram (ppm) = Parts per Million, (ppm) = (µg/g), (aw) = Water Activity, (mg/Kg) = Milligram per Kilogram, ACS uses simple acceptance criteria. Passed - Analyte/microbe is not detected or is at the level below the action limit per FL rule 64ER20-39, 5K4.036, 5K4.034. Failed - Analyte/microbe is at the level that equal or above the action limit per FL rule 64ER20-39, 5K4.036, 5K4.034 Sample not received via laboratory sampling. Revised report- see statement of amendment above.

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Net Weight: 113.398 g
Density: .9395 g/ml

Number of Units: 1
Net Weight per Unit: 56690.000 mg

Moisture
Net Weight: 113.398 g

Dilution Factor: 1.000

Analyte	Action Level (%)	Result (%)
Moisture	15	2.100

Tested
SOP13.015 (Moisture Meter)

Water Activity
Net Weight: 113.398 g

Dilution Factor: 1.000

Analyte	Action Level (aw)	Result (aw)
Water Activity	0.85	0.524

Tested
SOP13.016 (Water Activity Analyzer)

Total Yeast and Mold
Specimen Weight: 481.500 mg

Dilution Factor: 1.000

Analyte	Action Level (cfu/g)	Result (cfu/g)	Remark
Total Yeast/Mold	100000	<LOQ	Passed

Passed
SOP13.017 (qPCR)

Microbiology (Petrifilm)
Specimen Weight: 997.800 mg

Dilution Factor: 1.000

Analyte	LOQ (cfu/g)	Action Level (cfu/g)	Result (cfu/g)	Analyte	LOQ (cfu/g)	Action Level (cfu/g)	Result (cfu/g)
Aerobic Bacteria	10	100000	<10	Total Enterobacteriaceae	10	1000	<10
E. Coli / Coliform	10	100	<10	Yeast/Mold	10	1000	<10

Passed
SOP13.003 (Petrifilm)

Pathogenic Microbiology SAE (MicroArray)
Specimen Weight: 1016.600 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

Passed
SOP13.019 (Micro Array)

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Definitions are found on page 1

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Number of Units: 1
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Heavy Metals

Specimen Weight: 251.800 mg

Passed
SOP13.048 (ICP-MS)

Dilution Factor: 198

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

Mycotoxins

Specimen Weight: 585.700 mg

Passed
SOP13.007 (LCMS)

Dilution Factor: 2.560

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	3.8	20	<LOQ
Aflatoxin G1	3.0400E-1	6	20	<LOQ					

Residual Solvents - FL (CBD)

Specimen Weight: 312.200 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-Dichloroethene	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	<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					

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Pesticides
Specimen Weight: 585.700 mg

Passed
SOP13.007 (LCMS/GCMS)

Dilution Factor: 2.560

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	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	Metalaxyl	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
Chlordane	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
Chlormequat 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					

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