



Certificate of Analysis

R&D

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

Batch # 23001301
Batch Date: 2023-02-19
Extracted From: cbdv/cbg flower

Test Reg State: Florida

Production Facility: Four Winds Farm
Production Date: 2023-02-19

Order # FOU230221-010001
Order Date: 2023-02-21
Sample # AAED061

Sampling Date: 2023-02-23
Lab Batch Date: 2023-02-23
Completion Date: 2023-03-02

Initial Gross Weight: 57.934 g
Net Weight: 14.270 g
Density: .970 g/ml

Number of Units: 1
Net Weight per Unit: 14270.000 mg



Product Image



Potency Tested



Heavy Metals Passed



Mycotoxins Passed



Pesticides Passed



Residual Solvents Passed



Moisture Tested



Water Activity Tested



Pathogenic Microbiology Passed



Listeria Monocytogenes Passed



Microbiology Petrifilm Passed

Potency 10 Specimen Weight: 91.530 mg **Tested** SOP13.001 (LCUV)

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/ml)	(%)
CBG	100.000	2.48E-4	0.0015	69.1900	6.9190
CBD	100.000	5.40E-5	0.0015	3.4800	0.3480
CBDV	100.000	6.50E-5	0.0015	3.4000	0.3400
Delta-9 THC	100.000	1.30E-5	0.0015	0.7900	0.0790
CBDA	100.000	1.00E-5	0.0015	0.3600	0.0360
CBC	100.000	1.80E-5	0.0015	0.3100	0.0310
THCV	100.000	7.00E-6	0.0015	0.2200	0.0220
CBGA	100.000	8.00E-5	0.0015	<LOQ	<LOQ
CBN	100.000	1.40E-5	0.0015	<LOQ	<LOQ
THCA-A	100.000	3.20E-5	0.0015	<LOQ	<LOQ
Total Active CBD	100.000			54.160	0.380
Total Active THC	100.000			11.270	0.079

Potency Summary

Total Active THC 0.079% 11.270mg	Total Active CBD 0.380% 54.160mg
Total CBG 6.919% 987.340mg	Total CBN - None Detected
Other Cannabinoids 0.393% 56.080mg	Total Cannabinoids 7.771% 1,108.920

Mycotoxins Specimen Weight: 258.900 mg **Passed** SOP13.007 (LCMS)

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					

Pathogenic Microbiology SAE (MicroArray) **Passed** SOP13.019 (Micro Array)

Specimen Weight: 1048.270 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

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 = THCV + (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 = Delta8-THC + Delta9-THC + Total CBN + CBT + CBE + Delta8-THCV + Total CBG + Total CBD + Total THCV + 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) = aw (area ratio) = Area Ratio, (mg/Kg) = Milligram per Kilogram, Passed - Analyte/microbe is non-detected or at the level below the action limit, Failed - Analyte/microbe is at the level that equal or above the action limit, *Measurement of Uncertainty = +/- 10%
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Test Reg State: Florida

Production Facility: Four Winds Farm
Production Date: 2023-02-19

Order # FOU230221-010001
Order Date: 2023-02-21
Sample # AAED061

Sampling Date: 2023-02-23
Lab Batch Date: 2023-02-23
Completion Date: 2023-03-02

Initial Gross Weight: 57.934 g
Net Weight: 14.270 g
Density: .970 g/ml

Number of Units: 1
Net Weight per Unit: 14270.000 mg

Pesticides FL
Specimen Weight: 258.900 mg

Dilution Factor: 5.790

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	1000	<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	Paclotubtrazol	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
Clofentazine	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					

Passed
SOP13.007
(LCMS/GCMS)



Microbiology (Petrifilm)
Specimen Weight: 997.000 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	10000	10.000 *	Total Enterobacteriaceae	10	1000	<10
E. Coli / Coliform	10	100	<10	Yeast/Mold	10	1000	<10

Moisture
Net Weight: 14.270 g

Dilution Factor: 1.000

Analyte	Action Level (%)	Result (%)
Moisture	15	0.760

Water Activity
Net Weight: 14.270 g

Dilution Factor: 1.000

Analyte	Action Level (aw)	Result (aw)
Water Activity	0.85	0.293

Listeria Monocytogenes
Specimen Weight: 1022.500 mg

Dilution Factor: 1.000

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

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Aixia Sun Lab Director/Principal Scientist
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Order # FOU230221-010001 Order Date: 2023-02-21 Sample # AAED061	Sampling Date: 2023-02-23 Lab Batch Date: 2023-02-23 Completion Date: 2023-03-02	Initial Gross Weight: 57.934 g Net Weight: 14.270 g Density: .970 g/ml	Number of Units: 1 Net Weight per Unit: 14270.000 mg

Residual Solvents - FL (CBD)
Specimen Weight: 302.300 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					

Heavy Metals
Specimen Weight: 251.510 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

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