

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

# Certificate of Analysis

R&D

Batch # AP050422  
 Batch Date: 2022-05-06  
 Extracted From: CBD Hemp

Test Reg State: Oregon

Order # AM0220506-040001  
 Order Date: 2022-05-06  
 Sample # AACU477

Sampling Date: 2022-05-09  
 Lab Batch Date: 2022-05-09  
 Completion Date: 2022-05-12

Initial Gross Weight: 31.066 g  
 Net Weight: 26.566 g

Number of Units: 1  
 Net Weight per Unit: 4427.667 mg



Product Image

Potency Tested

HHC Tested

HHC Metals Passed

Mycotoxins Passed

Pesticides Passed

Residual Solvents Passed

Pathogenic Microbiology Passed

Listeria Monocytogenes Passed

## Potency 21 (LCUV)

Specimen Weight: 205.000 mg

Tested (LCUV)

## Potency Summary

<b>Total HHC</b> 0.72876%	32.26710mg	<b>Total THC</b> None Detected
<b>Total CBD</b> None Detected		<b>Total CBG</b> None Detected
<b>Total CBN</b> None Detected		<b>Other Cannabinoids</b> 0.055% 2.440mg
<b>Total Cannabinoids</b> 0.784%	34.710mg	

Pieces For Panel: 6

Analyte	Dilution (1:n)	LOD (%)	LOQ (%)	Result (mg/g)	(%)
Delta-8 THC	10.000	0.000026	0.0015	0.5480	0.0548
Exo-THC	10.000	0.00023	0.0015	<LOQ	
THCVA	10.000	0.000047	0.0015	<LOQ	
THCV	10.000	0.000007	0.0015	<LOQ	
THCA	10.000	0.000032	0.0015	<LOQ	
CBC	10.000	0.000018	0.0015	<LOQ	
Delta-9 THC-O Acetate	10.000	0.000077	0.0003	<LOQ	
CBCA	10.000	0.000107	0.0015	<LOQ	
Delta-8 THCV	10.000	0.00004	0.0015	<LOQ	
Delta-8 THC-O Acetate	10.000	0.000027	0.0003	<LOQ	
CBT	10.000	0.0002	0.0015	<LOQ	
CBNA	10.000	0.000095	0.0015	<LOQ	
CBN	10.000	0.000014	0.0015	<LOQ	
CBL	10.000	0.000035	0.0015	<LOQ	
CBGA	10.000	0.00008	0.0015	<LOQ	
CBG	10.000	0.000248	0.0015	<LOQ	
CBDVA	10.000	0.000014	0.0015	<LOQ	
CBDV	10.000	0.000065	0.0015	<LOQ	
CBDA	10.000	0.00001	0.0015	<LOQ	
CBD	10.000	0.000054	0.0015	<LOQ	
Delta-9 THC	10.000	0.000013	0.0015	<LOQ	

Xueli Gao  
 Ph.D., DABT  
 Lab Toxicologist

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



Definitions and Abbreviations used in this report: \*Total CBD = CBD + (CBD-A \* 0.877), \*Total CBDV = CBDV + (CBDVA \* 0.87), \*Total THC = THCA-A \* 0.877 + Delta 9 THC, \*Total THCV = 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, \*Other Cannabinoids Total = Total Cannabinoids - All the listed cannabinoids on the summary section, \*Total Detected Cannabinoids = Delta6a10a-THC + Delta8-THC + Total CBN + CBT + Delta8-THCV + Total CBG + Total CBD + Total THCV + CBL + Total THC + Total CBC + Total CBDV + Delta10-THC + Total THC-O-Acetate, + HHC \* Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (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, \*Measurement of Uncertainty = +/- 10%

This report shall not be reproduced, without written approval, from ACS Laboratory. The results of this report relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Accredited by a third-party accrediting body as a competent testing laboratory pursuant to ISO/IEC 17025 of the International Organization for Standardization.

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

# Certificate of Analysis

R&D

Batch # AP050422  
Batch Date: 2022-05-06  
Extracted From: CBD Hemp

Test Reg State: Oregon

Order # AM020506-040001  
Order Date: 2022-05-06  
Sample # AACU477

Sampling Date: 2022-05-09  
Lab Batch Date: 2022-05-09  
Completion Date: 2022-05-12

Initial Gross Weight: 31.066 g  
Net Weight: 26.566 g

Number of Units: 1  
Net Weight per Unit: 4427.667 mg

## Pesticides

Specimen Weight: 260.300 mg

Dilution Factor: 5.763

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Abamectin	28.23	300	<LOQ	Imazalil	30	100	<LOQ
Acephate	30	3000	<LOQ	Imidacloprid	30	3000	<LOQ
Acequinocyl	48	2000	<LOQ	Kresoxim Methyl	30	1000	<LOQ
Acetamiprid	30	3000	<LOQ	Malathion	30	2000	<LOQ
Aldicarb	30	100	<LOQ	Metaxalyl	10	3000	<LOQ
Azoxystrobin	10	3000	<LOQ	Methiocarb	30	100	<LOQ
Bifenazate	30	3000	<LOQ	Methomyl	30	100	<LOQ
Bifenthrin	30	500	<LOQ	Mevinphos	30	100	<LOQ
Carbaryl	10	500	<LOQ	Myclobutanil	30	3000	<LOQ
Chlorfenapyr	48	100	<LOQ	Naled	30	500	<LOQ
Chlorpyrifos	30	100	<LOQ	Oxamyl	30	500	<LOQ
Clofentezine	30	500	<LOQ	Pacllobutrazol	30	100	<LOQ
Coumaphos	30	100	<LOQ	Parathion-methyl	48	100	<LOQ
Cyfluthrin	30	1000	<LOQ	Pentachloronitrobenzene	30	200	<LOQ
Cypermethrin	30	1000	<LOQ	Permethrin	30	1000	<LOQ
Daminozide	30	100	<LOQ	Phosmet	30	200	<LOQ
Diazinon	30	200	<LOQ	Piperonylbutoxide	30	3000	<LOQ
Dichlorvos	30	100	<LOQ	Prallethrin	30	400	<LOQ
Dimethoate	30	100	<LOQ	Propiconazole	30	1000	<LOQ
Dimethomorph	30	3000	<LOQ	Propoxur	30	100	<LOQ
Ethofenphos	30	100	<LOQ	Pyrethrins	30	1000	<LOQ
Etofenprox	30	100	<LOQ	Pyridaben	30	3000	<LOQ
Etoxazole	30	1500	<LOQ	Spinetoram	30	3000	<LOQ
Fenhexamid	30	3000	<LOQ	Spiromesifen	30	3000	<LOQ
Fenoxycarb	30	100	<LOQ	Spirotetramat	30	3000	<LOQ
Fenpyroximate	30	2000	<LOQ	Spiroxamine	30	100	<LOQ
Fipronil	30	100	<LOQ	Tebuconazole	30	1000	<LOQ
Fonicamid	30	2000	<LOQ	Thiacloprid	30	100	<LOQ
Fludioxonil	30	3000	<LOQ	Thiamethoxam	30	1000	<LOQ
Hexythiazox	30	2000	<LOQ	Trifloxystrobin	30	3000	<LOQ

Passed (LCMS/GCMS)



## Residual Solvents - FL (CBD)

Specimen Weight: 10.400 mg

Dilution Factor: 1.000

Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)	Analyte	LOQ (ppm)	Action Level (ppm)	Result (ppm)
1,1-Dichloroethene	0.16	8	<LOQ	Heptane	1.39	5000	<LOQ
1,2-Dichloroethane	0.04	5	<LOQ	Hexane	1.17	290	<LOQ
Acetone	2.08	5000	<LOQ	Isopropyl alcohol	1.39	500	<LOQ
Acetonitrile	1.17	410	<LOQ	Methanol	0.69	3000	<LOQ
Benzene	0.02	2	<LOQ	Methylene chloride	2.43	600	<LOQ
Butanes	2.5	2000	<LOQ	Pentane	2.08	5000	<LOQ
Chloroform	0.04	60	<LOQ	Propane	5.83	2100	<LOQ
Ethanol	2.78	5000	<LOQ	Toluene	2.92	890	<LOQ
Ethyl Acetate	1.11	5000	<LOQ	Total Xylenes	2.92	2170	<LOQ
Ethyl Ether	1.39	5000	<LOQ	Trichloroethylene	0.49	80	<LOQ
Ethylene Oxide	0.1	5	<LOQ				

Passed (GCMS)



## HHC Metals

Specimen Weight: 248.120 mg

Dilution Factor: 201.515

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Aluminium (Al)	1000	na	7540.6	Nickel (Ni)	250	500	<LOQ
Arsenic (As)	100	200	<LOQ	Palladium (Pd)	50	100	<LOQ
Cadmium (Cd)	100	200	<LOQ	Platinum (Pt)	50	100	<LOQ
Lead (Pb)	100	500	<LOQ	Zinc (Zn)	1000	na	<LOQ
Mercury (Hg)	100	200	<LOQ				

Passed (ICP-MS)



## Mycotoxins

Specimen Weight: 260.300 mg

Dilution Factor: 5.763

Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)	Analyte	LOQ (ppb)	Action Level (ppb)	Result (ppb)
Aflatoxin B1	6	20	<LOQ	Aflatoxin G2	6	20	<LOQ
Aflatoxin B2	6	20	<LOQ	Ochratoxin A	12	20	<LOQ
Aflatoxin G1	6	20	<LOQ				

Passed (LCMS)

## Listeria Monocytogenes

Specimen Weight: 1012.000 mg

Dilution Factor: 1.000

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

Passed (qPCR)

Xueli Gao  
Ph.D., DABT  
Lab Toxicologist

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

Definitions and Abbreviations used in this report: \*Total CBD = CBD + (CBD-A \* 0.877), \*Total CBDV = CBDV + (CBDVA \* 0.87), \*Total THC = THCA-A \* 0.877 + Delta 9 THC, \*Total THCV = 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, \*Other Cannabinoids Total = Total Cannabinoids - All the listed cannabinoids on the summary section, \*Total Detected Cannabinoids = Delta6a10a-THC + Delta8-THC + Total CBN + CBT + Delta8-THCV + Total CBG + Total CBD + Total THCV + CBL + Total THC + Total CBC + Total CBDV + Delta10-THC + Total THC-O-Acetate, + HHC \*Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (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, \*Measurement of Uncertainty = +/- 10%

This report shall not be reproduced, without written approval, from ACS Laboratory. The results of this report relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Accredited by a third-party accrediting body as a competent testing laboratory pursuant to ISO/IEC 17025 of the International Organization for Standardization.



# Certificate of Analysis

R&D

Batch # AP050422  
Batch Date: 2022-05-06  
Extracted From: CBD Hemp

Test Reg State: Oregon

Order # AM0220506-040001  
Order Date: 2022-05-06  
Sample # AACU477

Sampling Date: 2022-05-09  
Lab Batch Date: 2022-05-09  
Completion Date: 2022-05-12

Initial Gross Weight: 31.066 g  
Net Weight: 26.566 g

Number of Units: 1  
Net Weight per Unit: 4427.667 mg



## Pathogenic Microbiology SAE (MicroArray)

**Passed**  
(Micro Array)

Specimen Weight: 1016.100 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



## HHC

**Tested**  
(LCMS)

Specimen Weight: 205.000 mg

Dilution Factor: 1000.000

Total/Piece (mg): 32.267063624292

Analyte	LOQ (%)	Result (mg/g)	(%)	Analyte	LOQ (%)	Result (mg/g)	(%)
(9R)-HHC	7.5E-5	4.4000	0.44	(±)-9β-hydroxy-HHC	7.5E-5	0.0076	0.00076
(9S)-HHC	7.5E-5	2.8800	0.288	Total HHC	7.5E-5	7.2876	0.72876

*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)



Definitions and Abbreviations used in this report: \*Total CBD = CBD + (CBD-A \* 0.877), \*Total CBDV = CBDV + (CBDVA \* 0.87), \*Total THC = THCA-A \* 0.877 + Delta 9 THC, \*Total THCV = 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, \*Other Cannabinoids Total = Total Cannabinoids - All the listed cannabinoids on the summary section, \*Total Detected Cannabinoids = Delta6a10a-THC + Delta8-THC + Total CBN + CBT + Delta8-THCV + Total CBG + Total CBD + Total THCV + CBL + Total THC + Total CBC + Total CBDV + Delta10-THC + Total THC-O-Acetate, + HHC \*Analyte Details above show the Dry Weight Concentrations unless specified as 12% moisture concentration. (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, \*Measurement of Uncertainty = +/- 10%

This report shall not be reproduced, without written approval, from ACS Laboratory. The results of this report relate only to the material or product analyzed. Test results are confidential unless explicitly waived otherwise. Accredited by a third-party accrediting body as a competent testing laboratory pursuant to ISO/IEC 17025 of the International Organization for Standardization.