

**SUMMARY OF ANALYSIS (SAMPLE ID: SA37694)**

<b>Testing Location:</b>	<b>Customer ID:</b> 2161	<b>Order ID:</b> OR10973	<b>Sample Type:</b> Primary
Arkansas	River Valley Relief Cultivation	<b>Lot Number:</b>	<b>Matrix:</b> Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13130809585	<b>Mass:</b> 23g
Greenbrier, AR 72058	Fort Smith, AR 72903	<b>Production Run:</b>	<b>Date Collected:</b> 04/22/2024
License: ADH 113	License: 00065C	4060H20240329BBF-1	<b>Date Received:</b> 04/22/2024
<b>Cultivar (Strain) or Sample Description:</b> Bens Buffalo			<b>Date Completed:</b> 04/24/2024

\*This page is simply a summary of the analysis performed. For analytical details, please consult the individual Certificate(s) of Analysis for each of the specific test(s) performed. All contaminant action levels are referenced from the State of Arkansas MMJ testing guidelines.

**Moisture Content (%)**

12.7

**Water Activity (aw)**

0.460 @ 24.3°C

**PASS/FAIL**

**PASS**

Moisture content/water activity action levels are referenced from the State of Arkansas MMJ testing guidelines.

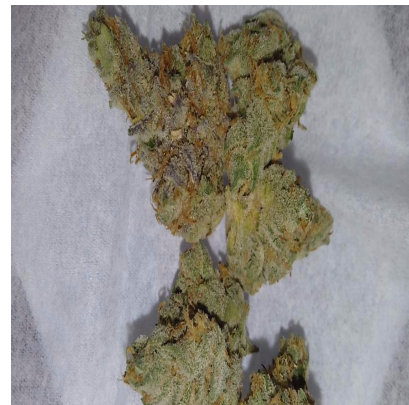
Moisture content levels less than 15% are recommended but the sample does not fail. Water activity levels must be less than 0.65aw.

<b>Cannabinoids (Top 3)</b>	<b>(%)</b>	<b>mg/g</b>
THCA	17.3	173
CBGA	0.756	7.56
THCVA	0.701	7.01
TOTAL CBD	-	-
TOTAL THC	15.8	158
TOTAL CANNABINOIDS	19.4	194

<b>Terpenes (Top 5)</b>	<b>(%)</b>	<b>µg/g</b>
Terpinolene	0.369	3690
β-Myrcene	0.256	2560
β-Caryophyllene	0.194	1940
d-Limonene	0.106	1060
Linalool	0.104	1040
TOTAL TERPENES	1.49	14900

<b>Contaminants</b>	<b>PASS/FAIL</b>
Heavy Metals:	<b>PASS</b>
Microbiology:	<b>PASS</b>
Pesticides:	<b>PASS</b>

**Sample Picture Upon Receipt**



Scan the QR code to verify results.

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*Kyle W. Felling*  
Kyle W. Felling, Ph.D.  
Laboratory Director



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**CANNABINOID (POTENCY) PROFILE (SOP: SOP-CANN-001)**

**Analysis Date/Time:** 04/23/2024 1548

**Method:** HPLC/DAD

**Moisture Content (%):** 12.7

**Analyst:** PW

**Instrument:** Agilent 1100

**Water Activity (aw):** 0.460 @ 24.3°C

<u>Cannabinoid</u>	<u>Result</u> (%)	<u>Result</u> (mg/g)	<u>LOD</u> (mg/g)	<u>LOQ</u> (mg/g)	<u>Result</u> (mg/ mL)	<u>Per</u> <u>Serving</u> (mg)	<u>Per</u> <u>Unit</u> (mg)
CBC	ND	ND	0.0445	0.104	-	-	-
CBCA	ND	ND	0.138	0.323	-	-	-
CBD	ND	ND	0.314	0.733	-	-	-
CBDV	ND	ND	0.116	0.270	-	-	-
CBDVA	ND	ND	0.134	0.314	-	-	-
CBG	ND	ND	0.204	0.476	-	-	-
CBGA	0.756	7.56	0.289	0.341	-	6.60	6.60
CBL	ND	ND	0.236	0.550	-	-	-
CBN	ND	ND	0.108	0.253	-	-	-
CBNA	ND	ND	0.117	0.272	-	-	-
Δ9-THC	0.648	6.48	0.130	0.302	-	5.66	5.66
Δ8-THC	ND	ND	0.202	0.472	-	-	-
THCA	17.3	173	0.0703	0.164	-	151	151
THCV	ND	ND	0.169	0.393	-	-	-
THCVA	0.701	7.01	0.0539	0.125	-	6.12	6.12
<b>TOTAL</b>	19.4	194			-	170	170
<b>TOTAL CBC</b>	-	-			-	-	-
<b>TOTAL CBD</b>	-	-			-	-	-
<b>TOTAL CBDV</b>	-	-			-	-	-
<b>TOTAL CBG</b>	0.664	6.64			-	5.80	5.80
<b>TOTAL CBN</b>	-	-			-	-	-
<b>TOTAL THC</b>	15.8	158			-	138	138
<b>TOTAL THCV</b>	0.608	6.08			-	5.31	5.31



**SERVING MASS (g):** 1.00  
**SERVINGS/UNIT:** 1

"-" Not detected above LOD.

*Deviations from standard operating procedure:*  
None

*Recoveries for all analyte standards:* 90-110%  
*Replicate Uncertainties:* <5% RSD, <20% RPD  
*Sample/Reagent Blanks:* <RL for all analytes

Values for plant matter are adjusted for moisture content.

Total CBC = (CBCA x 0.877) + CBC  
Total CBD = (CBDV x 0.877) + CBD  
Total CBDV = (CBDVA x 0.867) + CBDV  
Total CBG = (CBGA x 0.878) + CBG  
Total CBN = (CBNA x 0.876) + CBN  
Total THC = (THCA x 0.877) + Δ9-THC  
Total THCV = (THCVA x 0.867) + THCV

*Abbreviations:* DAD - Diode Array Detector, HPLC - High Pressure Liquid Chromatography,  
RL - Reporting Limit, RPD - Relative Percent Difference, RSD - Relative Standard Deviation,  
DET - Detected (less than LOQ), LOD - Limit of Detection, LOQ - Limit of Quantitation,  
UM - Measurement Uncertainty

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Percentage results are reported by mass.

mg/g results are reported as mass component per mass material.

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**TERPENOID PROFILE**

**Analysis Date/Time:** 04/23/2024 2046  
**Analyst:** KF

**Method:** GC/MS  
**Instrument:** Agilent 7890/5975

**Deviations from SOP:**  
None

<b>Terpene</b>	<b>Result (µg/g)</b>	<b>Result (%)</b>	
α-Bisabolol	596	0.0596	■
Camphene	<LOQ	-	
δ-3-Carene	168	0.0168	■
β-Caryophyllene	1940	0.194	■
Caryophyllene oxide	240	0.0240	■
p-Cymene	ND	-	
Eucalyptol	<LOQ	-	
Geraniol	55.5	0.00555	■
Guaiol	ND	-	
α-Humulene	861	0.0861	■
Isopulegol	ND	-	
d-Limonene	1060	0.106	■
Linalool	1040	0.104	■
β-Myrcene	2560	0.256	■
cis-Nerolidol	ND	-	
trans-Nerolidol	483	0.0483	■
α-Ocimene	<LOQ	-	
β-Ocimene	654	0.0654	■
α-Pinene	500	0.0500	■
β-Pinene	850	0.0850	■
α-Terpinene	137	0.0137	■
γ-Terpinene	81.7	0.00817	■
Terpinolene	3690	0.369	■
<b>TOTAL</b>	<b>14900</b>	<b>1.49</b>	



**Abbreviations:** GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit  
**Abbreviations:** ND - Not Detected, LOD - Limit of Detection, LOQ - Limit of Quantitation

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**Reporting Limit (µg/g): 48.8**

"-" Not detected above LOD.

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**PESTICIDES PROFILE (SOP: SOP-PEST-001)**

**Analysis Date/Time:** 04/23/2024 1620

**Analyst:** KF

**Method:** LC/MS/MS

**Instrument:** Shimadzu LC-8050

**Deviations from SOP:**

None

Pesticide	Result (µg/g)	LOD (µg/g)	LOQ (µg/g)	Action Level (µg/g)	Pesticide	Result (µg/g)	LOD (µg/g)	LOQ (µg/g)	Action Level (µg/g)
Abamectin (71751-41-2)	-	0.0486	0.389	0.5	Kresoxim-methyl (143390-89-0)	-	0.0486	0.389	0.4
Acephate (30560-19-1)	-	0.0486	0.389	0.4	Malathion (121-75-5)	-	0.0486	0.389	0.2
Acetaminophen (57960-19-7)	-	0.0486	0.389	2	Metalaxyl (57837-19-1)	-	0.0486	0.389	0.2
Acetamiprid (135410-20-7)	-	0.0486	0.389	0.2	Methiocarb (2032-65-7)	-	0.0486	0.389	0.2
Aldicarb (116-06-3)	-	0.0486	0.389	0.4	Methomyl (16752-77-5)	-	0.0486	0.389	0.4
Azoxystrobin (131860-33-8)	-	0.0486	0.389	0.2	Methyl parathion (298-0-0)	-	0.0486	0.389	0.2
Bifenazate (149877-41-8)	-	0.0486	0.389	0.2	MGK 264 (113-48-4)	-	0.0486	0.389	0.2
Bifenthrin (82657-04-3)	-	0.0486	0.389	0.2	Myclobutanil (88671-89-0)	-	0.0486	0.389	0.2
Boscalid (188425-85-6)	-	0.0486	0.389	0.4	Naled (300-76-5)	-	0.0486	0.389	0.5
Carbaryl (63-25-2)	-	0.0486	0.389	0.2	Oxamyl (23135-22-0)	-	0.0486	0.389	1
Carbofuran (1563-66-2)	-	0.0486	0.389	0.2	Paclobutrazol (76738-62-0)	-	0.0486	0.389	0.4
Chlorantraniliprole (800008-45-7)	-	0.0486	0.389	0.2	Permethrins (52645-53-1)	-	0.0486	0.389	0.2
Chlorfenapyr (122453-73-0)	-	0.0486	0.389	1	Phosmet (732-11-6)	-	0.0486	0.389	0.2
Chlorpyrifos (2921-88-2)	-	0.0486	0.389	0.2	Piperonyl butoxide (51-03-6)	-	0.0486	0.389	2
Clofentezine (74115-24-5)	-	0.0486	0.389	0.2	Prallethrin (2331-36-9)	-	0.0486	0.389	0.2
Cyfluthrin (68359-37-5)	-	0.0486	0.389	1	Propiconazole (60207-90-1))	-	0.0486	0.389	0.4
Cypermethrin (52315-07-8)	-	0.0486	0.389	1	Propoxur (114-26-1)	-	0.0486	0.389	0.2
Daminozide (1596-84-5)	-	0.0486	0.389	1	Pyrethrins (8003-34-7)	-	0.0486	0.389	1
DDVP (62-73-7)	-	0.0486	0.389	0.1	Pyridaben (96489-71-3)	-	0.0486	0.389	0.2
Diazinon (333-41-5)	-	0.0486	0.389	0.2	Spinosad (168316-95-8)	-	0.0486	0.389	0.2
Dimethoate (60-51-5)	-	0.0486	0.389	0.2	Spiromesifen (283594-90-1)	-	0.0486	0.389	0.2
Ethoprophos (13194-48-4)	-	0.0486	0.389	0.2	Spirotetramat (203313-25-1)	-	0.0486	0.389	0.2
Etofenprox (80844-07-1)	-	0.0486	0.389	0.4	Spiroxamine (118134-30-8)	-	0.0486	0.389	0.4
Etoxazole (153233-91-1)	-	0.0486	0.389	0.2	Tebuconazole (80443-41-0)	-	0.0486	0.389	0.4
Fenoxycarb (72490-01-8)	-	0.0486	0.389	0.2	Thiacloprid (111988-49-9)	-	0.0486	0.389	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0486	0.389	0.4	Thiamethoxam (153719-23-4)	-	0.0486	0.389	0.2
Fipronil (120068-37-3)	-	0.0486	0.389	0.4	Trifloxystrobin (141517-21-7)	-	0.0486	0.389	0.2
Flonicamid (158062-67-0)	-	0.0486	0.389	1					
Fludioxinil (131341-86-1)	-	0.0486	0.389	0.4					
Hexythiazox (78587-05-0)	-	0.0486	0.389	1					
Imazalil (35554-44-0)	-	0.0486	0.389	0.2					
Imidacloprid (138261-41-3)	-	0.0486	0.389	0.4					



**Color Key**

RESULT < AL
RESULT > AL

"DET" detected less than LOQ  
"- " not detected above  
LOD

Permethrins measured as the  
cumulative residue of the *cis*- and  
*trans*- permethrin isomers.

Pyrethrins measured as the  
cumulative residue of the  
pyrethrin I, cinerin I, and jasmolin  
I isomers.

Action levels are referenced from  
the  
State of Arkansas MMJ testing  
guidelines.

A value of "-" for the action level  
means that analyte is not  
currently regulated by the  
regulations referenced above.

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Abbreviations: LC - Liquid Chromatography, MS - Mass Spectrometry, RL - Reporting Limit, AL - Action Level, CAS - Chemical Abstract Services, LOD - Limit of Detection, LOQ - Limit of Quantification

Pesticide	Synonym(s)	Pesticide	Synonym(s)	Pesticide	Synonym(s)
Cyfluthrin	Baythroid	Myclobutanil	Systhane	Propiconazole	Tilt
DDVP	Dichlorvos	Naled	Dibrom	Propoxur	Baygon
Ethoprophos	Prophos	Phosmet	Imidan		

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**HEAVY METAL PROFILE (SOP: SOP-ICP-200.6)**

<b>Analysis Date/Time:</b> 04/23/2024 1950 (ICP/OES)	<b>Method:</b> ICP/MS	<b>Deviations from SOP:</b>
<b>Analysis Date/Time:</b> - (DMA)	<b>Instrument:</b> Agilent 7500ce	None
<b>Analyst:</b> KF		

<b>Heavy Metal</b>	<b>Result (µg/kg)</b>	<b>LOD (µg/kg)</b>	<b>LOQ (µg/kg)</b>	<b>Action Level (µg/kg)</b>
Arsenic (As)	-	58.2	92.1	200
Cadmium (Cd)	-	58.2	92.1	200
Lead (Pb)	-	58.2	92.1	500
Mercury (Hg)	-	58.2	92.1	100



**Abbreviations:** ICP - Inductively-Coupled Plasma, OES - Optical Emission Spectroscopy,  
DMA - Direct Mercury Analyzer, RL - Reporting Limit, AL - Action Level, LOD - Limit of Detection, LOQ - Limit of Quantitation

**Color Key**

<b>RESULT &lt; AL</b>
<b>RESULT &gt; AL</b>

"DET" detected less than LOQ

"-" not detected above LOD

Action levels for heavy metals are referenced from the State of Arkansas MMJ testing guidelines.

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**MICROBIOLOGICAL PROFILE (SOP: SOP-Micro-001)**

**Analysis Date/Time:** 04/23/2024 1232  
**Analyst:** PW  
**Method:** Hardy Diagnostics CompactDry  
**Instrument:** Thermo Incubator  
**Deviations from SOP:** None

<b>Bacteria/Microbe</b>	<b>Result (CFU/g)</b>	<b>Action Level (CFU/g)</b>
Aerobic Plate Count	NT	-
Coliforms, Total	Absent	1
Escherichia Coli (E. Coli)	Absent	100
Mold/Yeast	NT	-
Pseudomonas aeruginosa	NT	-
Salmonella spp.	NT	-
Staphylococcus aureus	NT	-



**Abbreviations:** EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level, TNTC - Too Numerous To Count, NT - Not Tested  
Absent - Not Detected Above RL, Present - Detected Above RL

**Color Key**

**RESULT < AL**

**RESULT > AL**

**Reporting Limit (CFU/g)**

1

Action levels for microbiology are referenced from the State of Arkansas MMJ testing guidelines.  
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