

SUMMARY OF ANALYSIS (SAMPLE ID: SA36622)

Testing Location:	Customer ID: 2161	Order ID: OR10758	Sample Type: Primary
Arkansas	River Valley Relief Cultivation	Lot Number:	Matrix: Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13133555673	Mass: 20g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 12/11/2023
License: ADH 113	License: 00065C	5047H20231023BBF-3	Date Received: 12/12/2023
Cultivar (Strain) or Sample Description: Bens Buffalo			Date Completed: 12/13/2023

*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 (%)

12.9

Water Activity (aw)

0.401 @ 24.2°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.

Cannabinoids (Top 3)	(%)	mg/g
THCA	20.2	202
CBGA	1.08	10.8
THCVA	0.766	7.66
TOTAL CBD	-	-
TOTAL THC	18.4	184
TOTAL CANNABINOIDS	22.8	228

Terpenes (Top 5)	(%)	µg/g
Terpinolene	0.602	6020
β-Pinene	0.229	2290
β-Caryophyllene	0.179	1790
d-Limonene	0.176	1760
Linalool	0.118	1180
TOTAL TERPENES	1.75	17500

Contaminants	PASS/FAIL
Heavy Metals:	PASS
Microbiology:	PASS
Pesticides:	PASS

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: 12/12/2023 1546

Method: HPLC/DAD

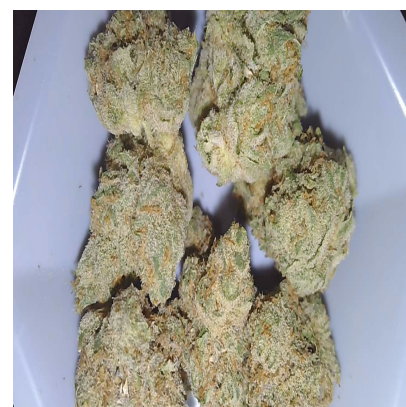
Moisture Content (%): 12.9

Analyst: PW

Instrument: Agilent 1100

Water Activity (aw): 0.401 @ 24.2°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	0.0402	0.0938	-	-	-
CBCA	ND	ND	0.125	0.291	-	-	-
CBD	ND	ND	0.283	0.662	-	-	-
CBDV	ND	ND	0.104	0.244	-	-	-
CBDVA	ND	ND	0.0455	0.106	-	-	-
CBDVA	ND	ND	0.121	0.283	-	-	-
CBG	ND	ND	0.184	0.430	-	-	-
CBGA	1.08	10.8	0.261	0.308	-	9.42	9.42
CBL	ND	ND	0.213	0.496	-	-	-
CBN	ND	ND	0.0977	0.228	-	-	-
CBNA	ND	ND	0.105	0.246	-	-	-
Δ9-THC	0.765	7.65	0.117	0.273	-	6.67	6.67
Δ8-THC	ND	ND	0.183	0.426	-	-	-
THCA	20.2	202	0.0635	0.148	-	176	176
THCV	ND	ND	0.152	0.355	-	-	-
THCVA	0.766	7.66	0.0487	0.113	-	6.67	6.67
TOTAL	22.8	228			-	198	198
TOTAL CBC	-	-			-	-	-
TOTAL CBD	-	-			-	-	-
TOTAL CBDV	-	-			-	-	-
TOTAL CBG	0.950	9.50			-	8.27	8.27
TOTAL CBN	-	-			-	-	-
TOTAL THC	18.4	184			-	161	161
TOTAL THC V	0.664	6.64			-	5.78	5.78



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 THC V = (THCVA x 0.867) + THC V

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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Kyle W. Felling
Laboratory Director

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TERPENOID PROFILE

Analysis Date/Time: 12/12/2023 2018

Analyst: KF

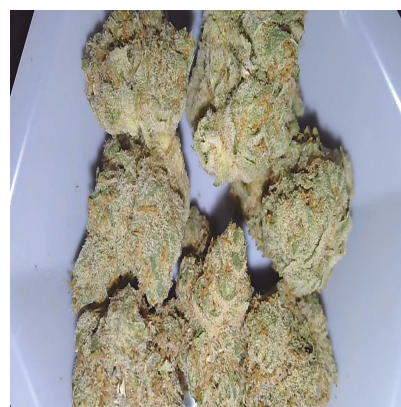
Method: GC/MS

Instrument: Agilent 7890/5975

Deviations from SOP:

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	617	0.0617	
Camphene	88.2	0.00882	
δ-3-Carene	558	0.0558	
β-Caryophyllene	1790	0.179	
Caryophyllene oxide	ND	-	
p-Cymene	ND	-	
Eucalyptol	ND	-	
Geraniol	ND	-	
Guaiol	ND	-	
α-Humulene	646	0.0646	
Isopulegol	ND	-	
d-Limonene	1760	0.176	
Linalool	1180	0.118	
β-Myrcene	500	0.0500	
cis-Nerolidol	235	0.0235	
trans-Nerolidol	ND	-	
α-Ocimene	ND	-	
β-Ocimene	911	0.0911	
α-Pinene	529	0.0529	
β-Pinene	2290	0.229	
α-Terpinene	206	0.0206	
γ-Terpinene	176	0.0176	
Terpinolene	6020	0.602	
TOTAL	17500	1.75	



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): 73.5

"-" Not detected above LOD.

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 12/12/2023 1611

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)	-	0.0438	0.351	0.5	Kresoxim-methyl (143390-89-0)	-	0.0438	0.351	0.4
Acephate (30560-19-1)	-	0.0438	0.351	0.4	Malathion (121-75-5)	-	0.0438	0.351	0.2
Acetaminophen (57960-19-7)	-	0.0438	0.351	2	Metalaxyl (57837-19-1)	-	0.0438	0.351	0.2
Acetamiprid (135410-20-7)	-	0.0438	0.351	0.2	Methiocarb (2032-65-7)	-	0.0438	0.351	0.2
Aldicarb (116-06-3)	-	0.0438	0.351	0.4	Methomyl (16752-77-5)	-	0.0438	0.351	0.4
Azoxystrobin (131860-33-8)	-	0.0438	0.351	0.2	Methyl parathion (298-0-0)	-	0.0438	0.351	0.2
Bifenazate (149877-41-8)	-	0.0438	0.351	0.2	MGK 264 (113-48-4)	-	0.0438	0.351	0.2
Bifenthrin (82657-04-3)	-	0.0438	0.351	0.2	Myclobutanil (88671-89-0)	-	0.0438	0.351	0.2
Boscalid (188425-85-6)	-	0.0438	0.351	0.4	Naled (300-76-5)	-	0.0438	0.351	0.5
Carbaryl (63-25-2)	-	0.0438	0.351	0.2	Oxamyl (23135-22-0)	-	0.0438	0.351	1
Carbofuran (1563-66-2)	-	0.0438	0.351	0.2	Paclobutrazol (76738-62-0)	-	0.0438	0.351	0.4
Chlorantraniliprole (800008-45-7)	-	0.0438	0.351	0.2	Permethrins (52645-53-1)	-	0.0438	0.351	0.2
Chlorfenapyr (122453-73-0)	-	0.0438	0.351	1	Phosmet (732-11-6)	-	0.0438	0.351	0.2
Chlorpyrifos (2921-88-2)	-	0.0438	0.351	0.2	Piperonyl butoxide (51-03-6)	-	0.0438	0.351	2
Clofentezine (74115-24-5)	-	0.0438	0.351	0.2	Prallethrin (2331-36-9)	-	0.0438	0.351	0.2
Cyfluthrin (68359-37-5)	-	0.0438	0.351	1	Propiconazole (60207-90-1)	-	0.0438	0.351	0.4
Cypermethrin (52315-07-8)	-	0.0438	0.351	1	Propoxur (114-26-1)	-	0.0438	0.351	0.2
Daminozide (1596-84-5)	-	0.0438	0.351	1	Pyrethrins (8003-34-7)	-	0.0438	0.351	1
DDVP (62-73-7)	-	0.0438	0.351	0.1	Pyridaben (96489-71-3)	-	0.0438	0.351	0.2
Diazinon (333-41-5)	-	0.0438	0.351	0.2	Spinosad (168316-95-8)	-	0.0438	0.351	0.2
Dimethoate (60-51-5)	-	0.0438	0.351	0.2	Spiromesifen (283594-90-1)	-	0.0438	0.351	0.2
Ethoprophos (13194-48-4)	-	0.0438	0.351	0.2	Spirotetramat (203313-25-1)	-	0.0438	0.351	0.2
Etofenprox (80844-07-1)	-	0.0438	0.351	0.4	Spiroxamine (118134-30-8)	-	0.0438	0.351	0.4
Etazoxazole (153233-91-1)	-	0.0438	0.351	0.2	Tebuconazole (80443-41-0)	-	0.0438	0.351	0.4
Fenoxycarb (72490-01-8)	-	0.0438	0.351	0.2	Thiacloprid (111988-49-9)	-	0.0438	0.351	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0438	0.351	0.4	Thiamethoxam (153719-23-4)	-	0.0438	0.351	0.2
Fipronil (120068-37-3)	-	0.0438	0.351	0.4	Trifloxystrobin (141517-21-7)	-	0.0438	0.351	0.2
Flonicamid (158062-67-0)	-	0.0438	0.351	1					
Fludioxinil (131341-86-1)	-	0.0438	0.351	0.4					
Hexythiazox (78587-05-0)	-	0.0438	0.351	1					
Imazalil (35554-44-0)	-	0.0438	0.351	0.2					
Imidacloprid (138261-41-3)	-	0.0438	0.351	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)

Analysis Date/Time: 12/13/2023 0852 (ICP/OES)	Method: ICP/MS	Deviations from SOP:
Analysis Date/Time: - (DMA)	Instrument: Agilent 7500ce	None
Analyst: KF		

Heavy Metal	Result (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Action Level (µg/kg)
Arsenic (As)	-	56.3	89.2	200
Cadmium (Cd)	-	56.3	89.2	200
Lead (Pb)	-	56.3	89.2	500
Mercury (Hg)	-	56.3	89.2	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

RESULT < AL
RESULT > AL

"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: 12/13/2023 1007
Analyst: PW
Method: Hardy Diagnostics CompactDry
Instrument: Thermo Incubator
Deviations from SOP: None

Bacteria/Microbe	Result (CFU/g)	Action Level (CFU/g)
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

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