

**SUMMARY OF ANALYSIS (SAMPLE ID: SA36814)**

<b>Testing Location:</b>	<b>Customer ID:</b> 2161	<b>Order ID:</b> OR10801	<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	M00065C13130423951	<b>Mass:</b> 23g
Greenbrier, AR 72058	Fort Smith, AR 72903	<b>Production Run:</b>	<b>Date Collected:</b> 01/04/2024
License: ADH 113	License: 00065C	7049H20231122SMC-1	<b>Date Received:</b> 01/04/2024
<b>Cultivar (Strain) or Sample Description:</b> SunMac			<b>Date Completed:</b> 01/08/2024

\*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 (%)**

10.8

**Water Activity (aw)**

0.444 @ 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	30.4	304
CBGA	1.45	14.5
Δ9-THC	0.251	2.51
TOTAL CBD	-	-
TOTAL THC	26.9	269
TOTAL CANNABINOIDS	32.2	322

<b>Terpenes (Top 5)</b>	<b>(%)</b>	<b>µg/g</b>
d-Limonene	0.265	2650
Linalool	0.184	1840
β-Caryophyllene	0.0879	879
β-Pinene	0.0618	618
α-Humulene	0.0495	495
TOTAL TERPENES	0.766	7660

<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



**CERTIFICATE OF ANALYSIS (SAMPLE ID: SA36814)**

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

**Analysis Date/Time:** 01/05/2024 1720

**Method:** HPLC/DAD

**Moisture Content (%):** 10.8

**Analyst:** PW

**Instrument:** Agilent 1100

**Water Activity (aw):** 0.444 @ 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	0.0437	0.102	-	-	-
CBCA	ND	ND	0.136	0.317	-	-	-
CBD	ND	ND	0.308	0.720	-	-	-
CBDV	ND	ND	0.113	0.265	-	-	-
CBDVA	ND	ND	0.0495	0.115	-	-	-
CBG	ND	ND	0.132	0.308	-	-	-
CBGA	0.0718	0.718	0.200	0.467	-	0.641	0.641
CBL	1.45	14.5	0.284	0.335	-	13.0	13.0
CBN	ND	ND	0.231	0.540	-	-	-
CBNA	ND	ND	0.106	0.248	-	-	-
Δ9-THC	ND	ND	0.115	0.267	-	-	-
Δ8-THC	0.251	2.51	0.127	0.297	-	2.24	2.24
THCA	ND	ND	0.199	0.464	-	-	-
THCV	30.4	304	0.0690	0.161	-	271	271
THCVA	ND	ND	0.166	0.386	-	-	-
THCVA	0.0643	0.643	0.0529	0.123	-	0.574	0.574
<b>TOTAL</b>	<b>32.2</b>	<b>322</b>			-	<b>287</b>	<b>287</b>
<b>TOTAL CBC</b>	-	-			-	-	-
<b>TOTAL CBD</b>	-	-			-	-	-
<b>TOTAL CBDV</b>	-	-			-	-	-
<b>TOTAL CBG</b>	1.35	13.5			-	12.0	12.0
<b>TOTAL CBN</b>	-	-			-	-	-
<b>TOTAL THC</b>	26.9	269			-	240	240
<b>TOTAL THCV</b>	0.0558	0.558			-	0.497	0.497



**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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*Kyle W. Felling*  
Kyle W. Felling, Ph.D.  
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### TERPENOID PROFILE

**Analysis Date/Time:** 01/06/2024 0625

**Analyst:** KF

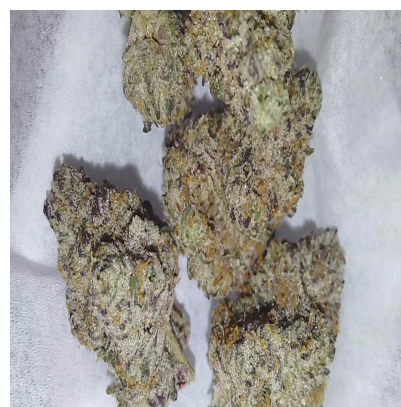
**Method:** GC/MS

**Instrument:** Agilent 7890/5975

**Deviations from SOP:**

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	<LOQ	-	
Camphene	145	0.0145	
δ-3-Carene	5.97	0.000597	
β-Caryophyllene	879	0.0879	
Caryophyllene oxide	4.48	0.000448	
p-Cymene	15.7	0.00157	
Eucalyptol	2.98	0.000298	
Geraniol	5.97	0.000597	
Guaiol	ND	-	
α-Humulene	495	0.0495	
Isopulegol	ND	-	
d-Limonene	2650	0.265	
Linalool	1840	0.184	
β-Myrcene	238	0.0238	
cis-Nerolidol	ND	-	
trans-Nerolidol	71.6	0.00716	
α-Ocimene	53.7	0.00537	
β-Ocimene	73.1	0.00731	
α-Pinene	492	0.0492	
β-Pinene	618	0.0618	
α-Terpinene	8.21	0.000821	
γ-Terpinene	10.4	0.00104	
Terpinolene	55.2	0.00552	
<b>TOTAL</b>	<b>7660</b>	<b>0.766</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):** 1.87

"-" Not detected above LOD.

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

**Analysis Date/Time:** 01/05/2024 1740

**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)	-	0.0476	0.381	0.5	Kresoxim-methyl (143390-89-0)	-	0.0476	0.381	0.4
Acephate (30560-19-1)	-	0.0476	0.381	0.4	Malathion (121-75-5)	-	0.0476	0.381	0.2
Acetaminophen (57960-19-7)	-	0.0476	0.381	2	Metalaxyl (57837-19-1)	-	0.0476	0.381	0.2
Acetamiprid (135410-20-7)	-	0.0476	0.381	0.2	Methiocarb (2032-65-7)	-	0.0476	0.381	0.2
Aldicarb (116-06-3)	-	0.0476	0.381	0.4	Methomyl (16752-77-5)	-	0.0476	0.381	0.4
Azoxystrobin (131860-33-8)	-	0.0476	0.381	0.2	Methyl parathion (298-0-0)	-	0.0476	0.381	0.2
Bifenazate (149877-41-8)	-	0.0476	0.381	0.2	MGK 264 (113-48-4)	-	0.0476	0.381	0.2
Bifenthrin (82657-04-3)	-	0.0476	0.381	0.2	Myclobutanil (88671-89-0)	-	0.0476	0.381	0.2
Boscalid (188425-85-6)	-	0.0476	0.381	0.4	Naled (300-76-5)	-	0.0476	0.381	0.5
Carbaryl (63-25-2)	-	0.0476	0.381	0.2	Oxamyl (23135-22-0)	-	0.0476	0.381	1
Carbofuran (1563-66-2)	-	0.0476	0.381	0.2	Paclobutrazol (76738-62-0)	-	0.0476	0.381	0.4
Chlorantraniliprole (800008-45-7)	-	0.0476	0.381	0.2	Permethrins (52645-53-1)	-	0.0476	0.381	0.2
Chlorfenapyr (122453-73-0)	-	0.0476	0.381	1	Phosmet (732-11-6)	-	0.0476	0.381	0.2
Chlorpyrifos (2921-88-2)	-	0.0476	0.381	0.2	Piperonyl butoxide (51-03-6)	-	0.0476	0.381	2
Clofentezine (74115-24-5)	-	0.0476	0.381	0.2	Prallethrin (2331-36-9)	-	0.0476	0.381	0.2
Cyfluthrin (68359-37-5)	-	0.0476	0.381	1	Propiconazole (60207-90-1))	-	0.0476	0.381	0.4
Cypermethrin (52315-07-8)	-	0.0476	0.381	1	Propoxur (114-26-1)	-	0.0476	0.381	0.2
Daminozide (1596-84-5)	-	0.0476	0.381	1	Pyrethrins (8003-34-7)	-	0.0476	0.381	1
DDVP (62-73-7)	-	0.0476	0.381	0.1	Pyridaben (96489-71-3)	-	0.0476	0.381	0.2
Diazinon (333-41-5)	-	0.0476	0.381	0.2	Spinosad (168316-95-8)	-	0.0476	0.381	0.2
Dimethoate (60-51-5)	-	0.0476	0.381	0.2	Spiromesifen (283594-90-1)	-	0.0476	0.381	0.2
Ethoprophos (13194-48-4)	-	0.0476	0.381	0.2	Spirotetramat (203313-25-1)	-	0.0476	0.381	0.2
Etofenprox (80844-07-1)	-	0.0476	0.381	0.4	Spiroxamine (118134-30-8)	-	0.0476	0.381	0.4
Etoazole (153233-91-1)	-	0.0476	0.381	0.2	Tebuconazole (80443-41-0)	-	0.0476	0.381	0.4
Fenoxycarb (72490-01-8)	-	0.0476	0.381	0.2	Thiacloprid (111988-49-9)	-	0.0476	0.381	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0476	0.381	0.4	Thiamethoxam (153719-23-4)	-	0.0476	0.381	0.2
Fipronil (120068-37-3)	-	0.0476	0.381	0.4	Trifloxystrobin (141517-21-7)	-	0.0476	0.381	0.2
Flonicamid (158062-67-0)	-	0.0476	0.381	1					
Fludioxinil (131341-86-1)	-	0.0476	0.381	0.4					
Hexythiazox (78587-05-0)	-	0.0476	0.381	1					
Imazalil (35554-44-0)	-	0.0476	0.381	0.2					
Imidacloprid (138261-41-3)	-	0.0476	0.381	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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<b>Cultivar (Strain) or Sample Description:</b> SunMac			<b>Date Completed:</b> 01/08/2024

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

<b>Analysis Date/Time:</b> 01/05/2024 2028 (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		

<u>Heavy Metal</u>	<u>Result</u> (µg/kg)	<u>LOD</u> (µg/kg)	<u>LOQ</u> (µg/kg)	<u>Action Level</u> (µg/kg)
Arsenic (As)	-	59.3	93.9	200
Cadmium (Cd)	-	59.3	93.9	200
Lead (Pb)	-	59.3	93.9	500
Mercury (Hg)	-	59.3	93.9	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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License: ADA 05_H273	License: 00065C	7049H20231122SMC-1	<b>Date Received:</b> 01/04/2024
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**MICROBIOLOGICAL PROFILE (SOP: SOP-Micro-001)**

**Analysis Date/Time:** 01/06/2024 1130      **Method:** Hardy Diagnostics CompactDry      **Deviations from SOP:**  
**Analyst:** PW      **Instrument:** Thermo Incubator      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.  
 A value of "-" for the action level means that analyte is not currently regulated by the regulations referenced above.

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