

**SUMMARY OF ANALYSIS (SAMPLE ID: SA38443)**

<b>Testing Location:</b> Arkansas 232 S. Broadview St. Greenbrier, AR 72058 License: ADH 113	<b>Customer ID:</b> 2161 River Valley Relief Cultivation 5601 Old Greenwood Rd Suite C Fort Smith, AR 72903 License: 00065C	<b>Order ID:</b> OR11111 <b>Lot Number:</b> M00065C13138189660 <b>Production Run:</b> 6069H20240709SMC-1	<b>Sample Type:</b> Primary <b>Matrix:</b> Flower <b>Mass:</b> 23g <b>Date Collected:</b> 07/22/2024 <b>Date Received:</b> 07/23/2024 <b>Date Completed:</b> 07/24/2024
<b>Cultivar (Strain) or Sample Description:</b> SunMac			

\*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 (%)**

10.1

**Water Activity (aw)**

0.442 @ 24.3°C

**PASS/FAIL**

**PASS**

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

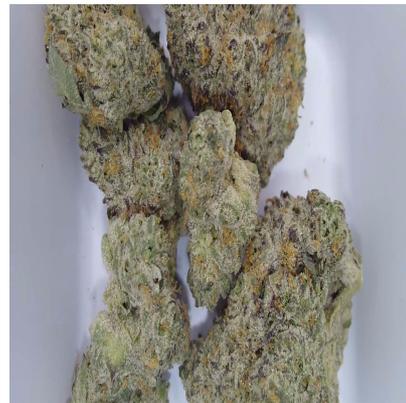
Moisture content levels less than 15% are recommended but the sample does not fail. Water activity levels must be less than 0.65aw.

<b>Cannabinoids (Top 3)</b>	<b>(%)</b>	<b>mg/g</b>
THCA	32.8	328
CBGA	2.44	24.4
THCVA	0.101	1.01
TOTAL CBD	-	-
TOTAL THC	28.8	288
TOTAL CANNABINOIDS	35.5	355

<b>Terpenes (Top 5)</b>	<b>(%)</b>	<b>µg/g</b>
β-Caryophyllene	0.826	8260
d-Limonene	0.651	6510
Linalool	0.415	4150
α-Humulene	0.330	3300
β-Pinene	0.120	1200
TOTAL TERPENES	2.54	25400

<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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<b>Cultivar (Strain) or Sample Description:</b> SunMac			<b>Date Completed:</b> 07/24/2024

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

**Analysis Date/Time:** 07/23/2024 1420      **Method:** HPLC/DAD      **Moisture Content (%):** 10.1  
**Analyst:** PW      **Instrument:** Agilent 1100      **Water Activity (aw):** 0.442 @ 24.3°C

<u>Cannabinoid</u>	<u>Result (%)</u>	<u>Result (mg/g)</u>	<u>LOD (mg/g)</u>	<u>LOQ (mg/g)</u>	<u>Result (mg/mL)</u>	<u>Per Serving (mg)</u>	<u>Per Unit (mg)</u>
CBC	ND	ND	0.0450	0.105	-	-	-
CBCA	ND	ND	0.140	0.326	-	-	-
CBD	ND	ND	0.317	0.741	-	-	-
CBDV	ND	ND	0.117	0.273	-	-	-
CBDVA	ND	ND	0.136	0.317	-	-	-
CBG	0.0685	0.685	0.206	0.481	-	0.616	0.616
CBGA	2.44	24.4	0.292	0.344	-	22.0	22.0
CBL	ND	ND	0.238	0.556	-	-	-
CBN	ND	ND	0.109	0.255	-	-	-
CBNA	ND	ND	0.118	0.275	-	-	-
Δ9-THC	ND	ND	0.131	0.305	-	-	-
Δ8-THC	ND	ND	0.204	0.477	-	-	-
THCA	32.8	328	0.0710	0.166	-	295	295
THCV	ND	ND	0.170	0.397	-	-	-
THCVA	0.101	1.01	0.0544	0.127	-	0.910	0.910
<b>TOTAL</b>	<b>35.5</b>	<b>355</b>				<b>319</b>	<b>319</b>
<b>TOTAL CBC</b>	-	-				-	-
<b>TOTAL CBD</b>	-	-				-	-
<b>TOTAL CBDV</b>	-	-				-	-
<b>TOTAL CBG</b>	2.22	22.2				19.9	19.9
<b>TOTAL CBN</b>	-	-				-	-
<b>TOTAL THC</b>	28.8	288				259	259
<b>TOTAL THC V</b>	0.0878	0.878				0.789	0.789



**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

Percentage results are reported by mass.

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

*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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<b>Cultivar (Strain) or Sample Description:</b> SunMac			<b>Date Completed:</b> 07/24/2024

**TERPENOID PROFILE**

**Analysis Date/Time:** 07/23/2024 1903  
**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	86.8	0.00868	
Camphene	192	0.0192	
δ-3-Carene	ND	-	
β-Caryophyllene	8260	0.826	█
Caryophyllene oxide	204	0.0204	
p-Cymene	ND	-	
Eucalyptol	ND	-	
Geraniol	161	0.0161	
Guaiol	ND	-	
α-Humulene	3300	0.330	█
Isopulegol	50.9	0.00509	
d-Limonene	6510	0.651	█
Linalool	4150	0.415	█
β-Myrcene	428	0.0428	
cis-Nerolidol	ND	-	
trans-Nerolidol	<LOQ	-	
α-Ocimene	86.3	0.00863	
β-Ocimene	<LOQ	-	
α-Pinene	677	0.0677	
β-Pinene	1200	0.120	█
α-Terpinene	ND	-	
γ-Terpinene	ND	-	
Terpinolene	80.1	0.00801	
<b>TOTAL</b>	<b>25400</b>	<b>2.54</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): 49.3**

"-" Not detected above LOD.

*Kyle W. Felling*  
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**PESTICIDES PROFILE (SOP: SOP-PEST-001)**

**Analysis Date/Time:** 07/23/2024 1520      **Method:** LC/MS/MS      **Deviations from SOP:** None  
**Analyst:** KF      **Instrument:** Shimadzu LC-8050

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)	-	0.0491	0.393	0.5	Kresoxim-methyl (143390-89-0)	-	0.0491	0.393	0.4
Acephate (30560-19-1)	-	0.0491	0.393	0.4	Malathion (121-75-5)	-	0.0491	0.393	0.2
Acetamiprid (135410-20-7)	-	0.0491	0.393	0.2	Metalaxyl (57837-19-1)	-	0.0491	0.393	0.2
Aldicarb (116-06-3)	-	0.0491	0.393	0.4	Methiocarb (2032-65-7)	-	0.0491	0.393	0.2
Azoxystrobin (131860-33-8)	-	0.0491	0.393	0.2	Methomyl (16752-77-5)	-	0.0491	0.393	0.4
Bifenazate (149877-41-8)	-	0.0491	0.393	0.2	Methyl parathion (298-0-0)	-	0.0491	0.393	0.2
Bifenthrin (82657-04-3)	-	0.0491	0.393	0.2	MGK 264 (113-48-4)	-	0.0491	0.393	0.2
Boscalid (188425-85-6)	-	0.0491	0.393	0.4	Myclobutanil (88671-89-0)	-	0.0491	0.393	0.2
Carbaryl (63-25-2)	-	0.0491	0.393	0.2	Naled (300-76-5)	-	0.0491	0.393	0.5
Carbofuran (1563-66-2)	-	0.0491	0.393	0.2	Oxamyl (23135-22-0)	-	0.0491	0.393	1
Chlorantraniliprole (800008-45-7)	-	0.0491	0.393	0.2	Pacllobutrazol (76738-62-0)	-	0.0491	0.393	0.4
Chlorfenapyr (122453-73-0)	-	0.0491	0.393	1	Permethrins (52645-53-1)	-	0.0491	0.393	0.2
Chlorpyrifos (2921-88-2)	-	0.0491	0.393	0.2	Phosmet (732-11-6)	-	0.0491	0.393	0.2
Clofentezine (74115-24-5)	-	0.0491	0.393	0.2	Piperonyl butoxide (51-03-6)	-	0.0491	0.393	2
Cyfluthrin (68359-37-5)	-	0.0491	0.393	1	Prallethrins (2331-36-9)	-	0.0491	0.393	0.2
Cypermethrin (52315-07-8)	-	0.0491	0.393	1	Propiconazole (60207-90-1))	-	0.0491	0.393	0.4
Daminozide (1596-84-5)	-	0.0491	0.393	1	Propoxur (114-26-1)	-	0.0491	0.393	0.2
DDVP (62-73-7)	-	0.0491	0.393	0.1	Pyrethrins (8003-34-7)	-	0.0491	0.393	1
Diazinon (333-41-5)	-	0.0491	0.393	0.2	Pyridaben (96489-71-3)	-	0.0491	0.393	0.2
Dimethoate (60-51-5)	-	0.0491	0.393	0.2	Spinosad (168316-95-8)	-	0.0491	0.393	0.2
Ethoprophos (13194-48-4)	-	0.0491	0.393	0.2	Spiromesifen (283594-90-1)	-	0.0491	0.393	0.2
Etofenprox (80844-07-1)	-	0.0491	0.393	0.4	Spirotetramat (203313-25-1)	-	0.0491	0.393	0.2
Etoxazole (153233-91-1)	-	0.0491	0.393	0.2	Spiroxamine (118134-30-8)	-	0.0491	0.393	0.4
Fenoxycarb (72490-01-8)	-	0.0491	0.393	0.2	Tebuconazole (80443-41-0)	-	0.0491	0.393	0.4
(E)-Fenpyroximate (134098-61-6)	-	0.0491	0.393	0.4	Thiacloprid (111988-49-9)	-	0.0491	0.393	0.2
Fipronil (120068-37-3)	-	0.0491	0.393	0.4	Thiamethoxam (153719-23-4)	-	0.0491	0.393	0.2
Fonicamid (158062-67-0)	-	0.0491	0.393	1	Trifloxystrobin (141517-21-7)	-	0.0491	0.393	0.2
Fludioxinil (131341-86-1)	-	0.0491	0.393	0.4					
Hexythiazox (78587-05-0)	-	0.0491	0.393	1					
Imazalil (35554-44-0)	-	0.0491	0.393	0.2					
Imidacloprid (138261-41-3)	-	0.0491	0.393	0.4					



**Color Key**

**RESULT < AL** (Green background)

**RESULT > AL** (Red background)

"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

<b>Pesticide</b>	<b>Synonym(s)</b>	<b>Pesticide</b>	<b>Synonym(s)</b>	<b>Pesticide</b>	<b>Synonym(s)</b>
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> 07/24/2024

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

<b>Analysis Date/Time:</b> 07/23/2024 1804	<b>Method:</b> ICP/MS <b>Instrument:</b> Agilent 7500ce	<b>Deviations from SOP:</b> None
<b>Analyst:</b> KF		

<u>Heavy Metal</u>	<u>Result (µg/kg)</u>	<u>LOD (µg/kg)</u>	<u>LOQ (µg/kg)</u>	<u>Action Level (µg/kg)</u>
Arsenic (As)	-	59.7	94.6	200
Cadmium (Cd)	-	59.7	94.6	200
Lead (Pb)	-	59.7	94.6	500
Mercury (Hg)	-	59.7	94.6	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:** 07/24/2024 0957      **Method:** Hardy Diagnostics CompactDry      **Deviations from SOP:**  
**Analyst:** PW      **Instrument:** Thermo Incubator      None

<u>Bacteria/Microbe</u>	<u>Result (CFU/g)</u>	<u>Action Level (CFU/g)</u>
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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