

SUMMARY OF ANALYSIS (SAMPLE ID: SA35194)

Testing Location:	Customer ID: 2161	Order ID: OR10451	Sample Type: Primary
Arkansas	River Valley Relief Cultivation	Lot Number:	Matrix: Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13138886982	Mass: 7g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 05/15/2023
License: ADH 113	License: 00065C	4032H20230405SMC-3	Date Received: 05/15/2023
Cultivar (Strain) or Sample Description: SunMac			Date Completed: 05/18/2023

*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 (%)

11.1

Water Activity (aw)

0.526 @ 24.4°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	30.0	300
Δ9-THC	0.255	2.55
CBG	0.151	1.51
TOTAL CBD	-	-
TOTAL THC	26.6	266
TOTAL CANNABINOIDS	30.5	305

Terpenes (Top 5)	(%)	µg/g
d-Limonene	0.328	3280
α-Ocimene	0.298	2980
Linalool	0.193	1930
β-Caryophyllene	0.174	1740
β-Ocimene	0.149	1490
TOTAL TERPENES	1.53	15300

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: 05/16/2023 1747

Analyst: PW

Method: HPLC/DAD

Instrument: Agilent 1100

Moisture Content (%): 11.1

Water Activity (aw): 0.526 @ 24.4°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	0.209	0.487	-	-	-
CBCA	ND	ND	0.648	1.51	-	-	-
CBD	ND	ND	1.47	3.43	-	-	-
CBDV	ND	ND	0.542	1.26	-	-	-
CBDVA	ND	ND	0.236	0.551	-	-	-
CBG	0.151	1.51	0.629	1.47	-	-	-
CBGA	ND	ND	0.955	1.28	-	1.51	1.51
CBL	ND	ND	0.684	1.60	-	-	-
CBN	ND	ND	1.10	2.58	-	-	-
CBNA	ND	ND	0.507	1.18	-	-	-
Δ9-THC	ND	ND	0.547	1.28	-	-	-
Δ8-THC	0.255	2.55	0.607	1.42	-	2.55	2.55
THCA	ND	ND	0.948	2.21	-	-	-
THCV	30.0	300	0.329	0.770	-	300	300
THCVA	ND	ND	0.790	1.84	-	-	-
THCVA	0.0821	0.821	0.252	0.587	-	0.821	0.821
TOTAL	30.5	305			-	305	305
TOTAL CBC	-	-			-	-	-
TOTAL CBD	-	-			-	-	-
TOTAL CBDV	-	-			-	-	-
TOTAL CBG	0.151	1.51			-	1.51	1.51
TOTAL CBN	-	-			-	-	-
TOTAL THC	26.6	266			-	266	266
TOTAL THCV	0.0712	0.712			-	0.712	0.712



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

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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TERPENOID PROFILE

Analysis Date/Time: 05/17/2023 2016

Analyst: KF

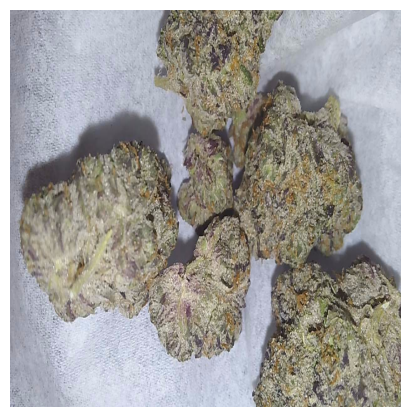
Method: GC/MS

Instrument: Agilent 7890/5975

Deviations from SOP:

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	-	-	
Camphene	125	0.0125	
δ-3-Carene	4.32	0.000432	
β-Caryophyllene	1740	0.174	
Caryophyllene oxide	-	-	
p-Cymene	137	0.0137	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	-	-	
α-Humulene	521	0.0521	
Isopulegol	-	-	
d-Limonene	3280	0.328	
Linalool	1930	0.193	
β-Myrcene	228	0.0228	
cis-Nerolidol	1040	0.104	
trans-Nerolidol	128	0.0128	
α-Ocimene	2980	0.298	
β-Ocimene	1490	0.149	
α-Pinene	412	0.0412	
β-Pinene	640	0.0640	
α-Terpinene	601	0.0601	
γ-Terpinene	-	-	
Terpinolene	36.7	0.00367	
TOTAL	15300	1.53	



Abbreviations: GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit

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"-" Not detected above RL.

Reporting Limit (µg/g): 166

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 05/17/2023 1609

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)	-	0.0457	0.365	0.5	Kresoxim-methyl (143390-89-0)	-	0.0457	0.365	0.4
Acephate (30560-19-1)	-	0.0457	0.365	0.4	Malathion (121-75-5)	-	0.0457	0.365	0.2
Acetaminophen (57960-19-7)	-	0.0457	0.365	2	Metalaxyl (57837-19-1)	-	0.0457	0.365	0.2
Acetamiprid (135410-20-7)	-	0.0457	0.365	0.2	Methiocarb (2032-65-7)	-	0.0457	0.365	0.2
Aldicarb (116-06-3)	-	0.0457	0.365	0.4	Methomyl (16752-77-5)	-	0.0457	0.365	0.4
Azoxystrobin (131860-33-8)	-	0.0457	0.365	0.2	Methyl parathion (298-0-0)	-	0.0457	0.365	0.2
Bifenazate (149877-41-8)	-	0.0457	0.365	0.2	MGK 264 (113-48-4)	-	0.0457	0.365	0.2
Bifenthrin (82657-04-3)	-	0.0457	0.365	0.2	Myclobutanil (88671-89-0)	-	0.0457	0.365	0.2
Boscalid (188425-85-6)	-	0.0457	0.365	0.4	Naled (300-76-5)	-	0.0457	0.365	0.5
Carbaryl (63-25-2)	-	0.0457	0.365	0.2	Oxamyl (23135-22-0)	-	0.0457	0.365	1
Carbofuran (1563-66-2)	-	0.0457	0.365	0.2	Paclobutrazol (76738-62-0)	-	0.0457	0.365	0.4
Chlorantraniliprole (800008-45-7)	-	0.0457	0.365	0.2	Permethrins (52645-53-1)	-	0.0457	0.365	0.2
Chlorfenapyr (122453-73-0)	-	0.0457	0.365	1	Phosmet (732-11-6)	-	0.0457	0.365	0.2
Chlorpyrifos (2921-88-2)	-	0.0457	0.365	0.2	Piperonyl butoxide (51-03-6)	-	0.0457	0.365	2
Clofentezine (74115-24-5)	-	0.0457	0.365	0.2	Prallethrin (2331-36-9)	-	0.0457	0.365	0.2
Cyfluthrin (68359-37-5)	-	0.0457	0.365	1	Propiconazole (60207-90-1)	-	0.0457	0.365	0.4
Cypermethrin (52315-07-8)	-	0.0457	0.365	1	Propoxur (114-26-1)	-	0.0457	0.365	0.2
Daminozide (1596-84-5)	-	0.0457	0.365	1	Pyrethrins (8003-34-7)	-	0.0457	0.365	1
DDVP (62-73-7)	-	0.0457	0.365	0.1	Pyridaben (96489-71-3)	-	0.0457	0.365	0.2
Diazinon (333-41-5)	-	0.0457	0.365	0.2	Spinosad (168316-95-8)	-	0.0457	0.365	0.2
Dimethoate (60-51-5)	-	0.0457	0.365	0.2	Spiromesifen (283594-90-1)	-	0.0457	0.365	0.2
Ethoprophos (13194-48-4)	-	0.0457	0.365	0.2	Spirotetramat (203313-25-1)	-	0.0457	0.365	0.2
Etofenprox (80844-07-1)	-	0.0457	0.365	0.4	Spiroxamine (118134-30-8)	-	0.0457	0.365	0.4
Etazoxole (153233-91-1)	-	0.0457	0.365	0.2	Tebuconazole (80443-41-0)	-	0.0457	0.365	0.4
Fenoxycarb (72490-01-8)	-	0.0457	0.365	0.2	Thiacloprid (111988-49-9)	-	0.0457	0.365	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0457	0.365	0.4	Thiamethoxam (153719-23-4)	-	0.0457	0.365	0.2
Fipronil (120068-37-3)	-	0.0457	0.365	0.4	Trifloxystrobin (141517-21-7)	-	0.0457	0.365	0.2
Flonicamid (158062-67-0)	-	0.0457	0.365	1					
Fludioxinil (131341-86-1)	-	0.0457	0.365	0.4					
Hexythiazox (78587-05-0)	-	0.0457	0.365	1					
Imazalil (35554-44-0)	-	0.0457	0.365	0.2					
Imidacloprid (138261-41-3)	-	0.0457	0.365	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: 05/15/2023 1715 (ICP/OES)	Method: ICP/MS	Deviations from SOP:
Analysis Date/Time: - (DMA)	Instrument: Agilent 7500ce	None
Analyst: 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)	-	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

RESULT < AL
RESULT > AL

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"-" 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: 05/16/2023 1213
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	1
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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