

SUMMARY OF ANALYSIS (SAMPLE ID: SA42031)

Testing Location: Arkansas 232 S. Broadview St. Greenbrier, AR 72058 License: ADH 113	Customer ID: 2161 River Valley Relief Cultivation 5601 Old Greenwood Rd Suite C Fort Smith, AR 72903 License: 00065C	Order ID: OR11761 Lot Number: M00065C13130446917 Production Run: 6104H20250707MUD-3	Sample Type: Primary Matrix: Flower Mass: 11g Date Collected: 08/21/2025 Date Received: 08/21/2025
Cultivar (Strain) or Sample Description: Mulberry Diesel			Date Completed: 08/25/2025

*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.

*Where provided, statements of conformity (e.g. Pass/Fail) are made in accordance with ILAC G8, Binary Statement for Simple Acceptance Rule (w=0, AL=TL). PASS: when the result is within the acceptance interval. FAIL: when the result is outside the acceptance interval

Moisture Content (%)

10.1

Water Activity (aw)

0.447 @ 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	26.4	264
CBGA	1.21	12.1
Δ9-THC	0.166	1.66
TOTAL CBD	0.000	0.000
TOTAL THC	23.2	232
TOTAL CANNABINOIDS	28.0	280

Terpenes (Top 5)	(%)	ppm
d-Limonene	0.855	8550
β-Caryophyllene	0.471	4710
α-Humulene	0.353	3530
Linalool	0.262	2620
β-Myrcene	0.253	2530
TOTAL TERPENES	2.64	26400

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



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: 08/22/2025 1529 **Method:** HPLC/DAD **Moisture Content (%):** 10.1
Analyst: PW **Instrument:** Agilent 1100 **Water Activity (aw):** 0.447 @ 24.4°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	0.0442	0.103	-	0.000	0.000
CBCA	ND	ND	0.137	0.320	-	0.000	0.000
CBD	ND	ND	0.311	0.727	-	0.000	0.000
CBDA	ND	ND	0.115	0.268	-	0.000	0.000
CBDV	ND	ND	0.0500	0.117	-	0.000	0.000
CBDVA	ND	ND	0.133	0.311	-	0.000	0.000
CBG	0.143	1.43	0.202	0.472	-	1.29	1.29
CBGA	1.21	12.1	0.287	0.338	-	10.9	10.9
CBL	ND	ND	0.234	0.545	-	0.000	0.000
CBN	ND	ND	0.107	0.251	-	0.000	0.000
CBNA	ND	ND	0.116	0.270	-	0.000	0.000
Δ9-THC	0.166	1.66	0.129	0.300	-	1.49	1.49
Δ8-THC	ND	ND	0.201	0.468	-	0.000	0.000
THCA	26.4	264	0.0697	0.163	-	237	237
THCV	ND	ND	0.167	0.390	-	0.000	0.000
THCVA	0.158	1.58	0.0535	0.124	-	1.42	1.42
TOTAL	28.0	280			-	252	252
TOTAL CBC	0.000	0.000			-	0.000	0.000
TOTAL CBD	0.000	0.000			-	0.000	0.000
TOTAL CBDV	0.000	0.000			-	0.000	0.000
TOTAL CBG	1.21	12.1			-	10.9	10.9
TOTAL CBN	0.000	0.000			-	0.000	0.000
TOTAL THC	23.2	232			-	209	209
TOTAL THCV	0.137	1.37			-	1.23	1.23



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

"-" Not reported for this sample.

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.
Dry percent = Wet percent / (1-(Moisture Content/100))

Total CBC = (CBCA x 0.877) + CBC
Total CBD = (CBDA 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, ND - Not Detected (less than LOD)

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Cultivar (Strain) or Sample Description: Mulberry Diesel **Date Completed:** 08/25/2025

TERPENOID PROFILE

Analysis Date/Time: 08/22/2025 1746
Analyst: KF

Method: GC/MS
Instrument: Agilent 7890/5975

Deviations from SOP:
None

<u>Terpene</u>	<u>Result (ppm)</u>	<u>Result (%)</u>	
α-Bisabolol	109	0.0109	
Camphene	235	0.0235	
δ-3-Carene	ND	-	
β-Caryophyllene	4710	0.471	■
Caryophyllene oxide	137	0.0137	
p-Cymene	<LOQ	-	
Eucalyptol	<LOQ	-	
Geraniol	ND	-	
Guaiol	ND	-	
α-Humulene	3530	0.353	■
Isopulegol	ND	-	
d-Limonene	8550	0.855	■
Linalool	2620	0.262	■
β-Myrcene	2530	0.253	■
cis-Nerolidol	ND	-	
trans-Nerolidol	1280	0.128	
α-Ocimene	<LOQ	-	
β-Ocimene	53.1	0.00531	
α-Pinene	1010	0.101	
β-Pinene	1570	0.157	■
α-Terpinene	ND	-	
γ-Terpinene	<LOQ	-	
Terpinolene	101	0.0101	
TOTAL	26400	2.64	



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 (ppm): 48.4

"-" Not detected above LOD.

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Cultivar (Strain) or Sample Description: Mulberry Diesel **Date Completed:** 08/25/2025

PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 08/22/2025 1623
Analyst: KF

Method: LC/MS/MS
Instrument: Shimadzu LC-8050

Deviations from SOP:
None

Pesticide	Result (ppm)	LOD (ppm)	LOQ (ppm)	Action Level (ppm)	Pesticide	Result (ppm)	LOD (ppm)	LOQ (ppm)	Action Level (ppm)
Abamectin (71751-41-2)	-	0.0481	0.385	0.5	Kresoxim-methyl (143390-89-0)	-	0.0481	0.385	0.4
Acephate (30560-19-1)	-	0.0481	0.385	0.4	Malathion (121-75-5)	-	0.0481	0.385	0.2
Acetaminocyl (57960-19-7)	-	0.0481	0.385	2	Metalaxyl (57837-19-1)	-	0.0481	0.385	0.2
Acetamiprid (135410-20-7)	-	0.0481	0.385	0.2	Methiocarb (2032-65-7)	-	0.0481	0.385	0.2
Aldicarb (116-06-3)	-	0.0481	0.385	0.4	Methomyl (16752-77-5)	-	0.0481	0.385	0.4
Azoxystrobin (131860-33-8)	-	0.0481	0.385	0.2	Methyl parathion (298-0-0)	-	0.0481	0.385	0.2
Bifenazate (149877-41-8)	-	0.0481	0.385	0.2	MGK 264 (113-48-4)	-	0.0481	0.385	0.2
Bifenthrin (82657-04-3)	-	0.0481	0.385	0.2	Myclobutanil (88671-89-0)	-	0.0481	0.385	0.2
Boscalid (188425-85-6)	-	0.0481	0.385	0.4	Naled (300-76-5)	-	0.0481	0.385	0.5
Carbaryl (63-25-2)	-	0.0481	0.385	0.2	Oxamyl (23135-22-0)	-	0.0481	0.385	1
Carbofuran (1563-66-2)	-	0.0481	0.385	0.2	Pacllobutrazol (76738-62-0)	-	0.0481	0.385	0.4
Chlorantraniliprole (800008-45-7)	-	0.0481	0.385	0.2	Permethrins (52645-53-1)	-	0.0481	0.385	0.2
Chlorfenapyr (122453-73-0)	-	0.0481	0.385	1	Phosmet (732-11-6)	-	0.0481	0.385	0.2
Chlorpyrifos (2921-88-2)	-	0.0481	0.385	0.2	Piperonyl butoxide (51-03-6)	-	0.0481	0.385	2
Clofentezine (74115-24-5)	-	0.0481	0.385	0.2	Prallethrins (2331-36-9)	-	0.0481	0.385	0.2
Cyfluthrin (68359-37-5)	-	0.0481	0.385	1	Propiconazole (60207-90-1)	-	0.0481	0.385	0.4
Cypermethrin (52315-07-8)	-	0.0481	0.385	1	Propoxur (114-26-1)	-	0.0481	0.385	0.2
Daminozide (1596-84-5)	-	0.0481	0.385	1	Pyrethrins (8003-34-7)	-	0.0481	0.385	1
DDVP (62-73-7)	-	0.0481	0.385	0.1	Pyridaben (96489-71-3)	-	0.0481	0.385	0.2
Diazinon (333-41-5)	-	0.0481	0.385	0.2	Spinosad (168316-95-8)	-	0.0481	0.385	0.2
Dimethoate (60-51-5)	-	0.0481	0.385	0.2	Spiromesifen (283594-90-1)	-	0.0481	0.385	0.2
Ethoprophos (13194-48-4)	-	0.0481	0.385	0.2	Spirotetramat (203313-25-1)	-	0.0481	0.385	0.2
Etofenprox (80844-07-1)	-	0.0481	0.385	0.4	Spiroxamine (118134-30-8)	-	0.0481	0.385	0.4
Etoxazole (153233-91-1)	-	0.0481	0.385	0.2	Tebuconazole (80443-41-0)	-	0.0481	0.385	0.4
Fenoxycarb (72490-01-8)	-	0.0481	0.385	0.2	Thiacloprid (111988-49-9)	-	0.0481	0.385	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0481	0.385	0.4	Thiamethoxam (153719-23-4)	-	0.0481	0.385	0.2
Fipronil (120068-37-3)	-	0.0481	0.385	0.4	Trifloxystrobin (141517-21-7)	-	0.0481	0.385	0.2
Fonicamid (158062-67-0)	-	0.0481	0.385	1					
Fludioxinil (131341-86-1)	-	0.0481	0.385	0.4					
Hexythiazox (78587-05-0)	-	0.0481	0.385	1					
Imazalil (35554-44-0)	-	0.0481	0.385	0.2					
Imidacloprid (138261-41-3)	-	0.0481	0.385	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: 08/22/2025 1435	Method: ICP/MS Instrument: Agilent 7700x	Deviations from SOP: None
Analyst: KF		

<u>Heavy Metal</u>	<u>Result (ppb)</u>	<u>LOD (ppb)</u>	<u>LOQ (ppb)</u>	<u>Action Level (ppb)</u>
Arsenic (As)	ND	58.9	93.2	200
Cadmium (Cd)	ND	58.9	93.2	200
Lead (Pb)	ND	58.9	93.2	500
Mercury (Hg)	ND	58.9	93.2	100



Abbreviations: ICP - Inductively-Coupled Plasma, MS - Mass Spectrometry, 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

"ND" not detected above LOD

Reporting limit is 1/2 the action level of each analyte.

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: 08/22/2025 1302 **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

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