

SUMMARY OF ANALYSIS (SAMPLE ID: SA37634)

Testing Location:	Customer ID: 2161	Order ID: OR10961	Sample Type: Primary
Arkansas	River Valley Relief Cultivation	Lot Number:	Matrix: Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13135476643	Mass: 19g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 04/15/2024
License: ADH 113	License: 00065C	4060H20240329GP2-2	Date Received: 04/15/2024
Cultivar (Strain) or Sample Description: Grape Pie #2			Date Completed: 04/17/2024

*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 (%)

12.1

Water Activity (aw)

0.493 @ 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	27.5	275
CBGA	1.20	12.0
Δ9-THC	0.194	1.94
TOTAL CBD	-	-
TOTAL THC	24.3	243
TOTAL CANNABINOIDS	29.2	292

Terpenes (Top 5)	(%)	µg/g
d-Limonene	0.463	4630
α-Pinene	0.212	2120
β-Caryophyllene	0.156	1560
β-Pinene	0.148	1480
β-Ocimene	0.0971	971
TOTAL TERPENES	1.34	13400

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: 04/16/2024 1224
Analyst: PW
Method: HPLC/DAD
Instrument: Agilent 1100
Moisture Content (%): 12.1
Water Activity (aw): 0.493 @ 24.2°C

<u>Cannabinoid</u>	<u>Result</u> <u>(%)</u>	<u>Result</u> <u>(mg/g)</u>	<u>LOD</u> <u>(mg/g)</u>	<u>LOQ</u> <u>(mg/g)</u>	<u>Result</u> <u>(mg/mL)</u>	<u>Per</u> <u>Serving</u> <u>(mg)</u>	<u>Per</u> <u>Unit</u> <u>(mg)</u>
CBC	ND	ND	0.0437	0.102	-	-	-
CBCA	ND	ND	0.136	0.317	-	-	-
CBD	ND	ND	0.308	0.719	-	-	-
CBDV	ND	ND	0.113	0.265	-	-	-
CBDVA	ND	ND	0.0494	0.115	-	-	-
CBG	ND	ND	0.132	0.308	-	-	-
CBGA	0.176	1.76	0.200	0.467	-	1.55	1.55
CBL	1.20	12.0	0.284	0.335	-	10.5	10.5
CBN	ND	ND	0.231	0.540	-	-	-
CBNA	ND	ND	0.106	0.248	-	-	-
CBNA	ND	ND	0.115	0.267	-	-	-
Δ9-THC	0.194	1.94	0.127	0.297	-	1.71	1.71
Δ8-THC	ND	ND	0.199	0.463	-	-	-
THCA	27.5	275	0.0690	0.161	-	242	242
THCV	ND	ND	0.166	0.386	-	-	-
THCVA	0.160	1.60	0.0529	0.123	-	1.41	1.41
TOTAL	29.2	292			-	257	257
TOTAL CBC	-	-			-	-	-
TOTAL CBD	-	-			-	-	-
TOTAL CBDV	-	-			-	-	-
TOTAL CBG	1.23	12.3			-	10.8	10.8
TOTAL CBN	-	-			-	-	-
TOTAL THC	24.3	243			-	214	214
TOTAL THCV	0.139	1.39			-	1.22	1.22



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, Ph.D.
Laboratory Director

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Cultivar (Strain) or Sample Description: Grape Pie #2			Date Completed: 04/17/2024

TERPENOID PROFILE

Analysis Date/Time: 04/16/2024 1644

Method: GC/MS

Deviations from SOP:

Analyst: KF

Instrument: Agilent 7890/5975

None

Terpene	Result (µg/g)	Result (%)
α-Bisabolol	199	0.0199
Camphene	182	0.0182
δ-3-Carene	ND	-
β-Caryophyllene	1560	0.156
Caryophyllene oxide	ND	-
p-Cymene	ND	-
Eucalyptol	ND	-
Geraniol	53.2	0.00532
Guaiol	564	0.0564
α-Humulene	674	0.0674
Isopulegol	ND	-
d-Limonene	4630	0.463
Linalool	427	0.0427
β-Myrcene	367	0.0367
cis-Nerolidol	ND	-
trans-Nerolidol	<LOQ	-
α-Ocimene	51.2	0.00512
β-Ocimene	971	0.0971
α-Pinene	2120	0.212
β-Pinene	1480	0.148
α-Terpinene	ND	-
γ-Terpinene	ND	-
Terpinolene	126	0.0126
TOTAL	13400	1.34



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): 47.9

"-" Not detected above LOD.

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 04/16/2024 1241

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)	-	0.0478	0.382	0.5	Kresoxim-methyl (143390-89-0)	-	0.0478	0.382	0.4
Acephate (30560-19-1)	-	0.0478	0.382	0.4	Malathion (121-75-5)	-	0.0478	0.382	0.2
Acetamiprid (135410-20-7)	-	0.0478	0.382	2	Metalaxyl (57837-19-1)	-	0.0478	0.382	0.2
Aldicarb (116-06-3)	-	0.0478	0.382	0.4	Methiocarb (2032-65-7)	-	0.0478	0.382	0.2
Azoxystrobin (131860-33-8)	-	0.0478	0.382	0.2	Methomyl (16752-77-5)	-	0.0478	0.382	0.4
Bifenazate (149877-41-8)	-	0.0478	0.382	0.2	Methyl parathion (298-0-0)	-	0.0478	0.382	0.2
Bifenthrin (82657-04-3)	-	0.0478	0.382	0.2	MGK 264 (113-48-4)	-	0.0478	0.382	0.2
Boscalid (188425-85-6)	-	0.0478	0.382	0.4	Myclobutanil (88671-89-0)	-	0.0478	0.382	0.2
Carbaryl (63-25-2)	-	0.0478	0.382	0.2	Naled (300-76-5)	-	0.0478	0.382	0.5
Carbofuran (1563-66-2)	-	0.0478	0.382	0.2	Oxamyl (23135-22-0)	-	0.0478	0.382	1
Chlorantraniliprole (800008-45-7)	-	0.0478	0.382	0.2	Paclobutrazol (76738-62-0)	-	0.0478	0.382	0.4
Chlorfenapyr (122453-73-0)	-	0.0478	0.382	1	Permethrins (52645-53-1)	-	0.0478	0.382	0.2
Chlorpyrifos (2921-88-2)	-	0.0478	0.382	0.2	Phosmet (732-11-6)	-	0.0478	0.382	0.2
Clofentezine (74115-24-5)	-	0.0478	0.382	0.2	Piperonyl butoxide (51-03-6)	-	0.0478	0.382	2
Cyfluthrin (68359-37-5)	-	0.0478	0.382	1	Prallethrin (2331-36-9)	-	0.0478	0.382	0.2
Cypermethrin (52315-07-8)	-	0.0478	0.382	1	Propiconazole (60207-90-1))	-	0.0478	0.382	0.4
Daminozide (1596-84-5)	-	0.0478	0.382	1	Propoxur (114-26-1)	-	0.0478	0.382	0.2
DDVP (62-73-7)	-	0.0478	0.382	0.1	Pyrethrins (8003-34-7)	-	0.0478	0.382	1
Diazinon (333-41-5)	-	0.0478	0.382	0.2	Pyridaben (96489-71-3)	-	0.0478	0.382	0.2
Dimethoate (60-51-5)	-	0.0478	0.382	0.2	Spinosad (168316-95-8)	-	0.0478	0.382	0.2
Ethoprophos (13194-48-4)	-	0.0478	0.382	0.2	Spiromesifen (283594-90-1)	-	0.0478	0.382	0.2
Etofenprox (80844-07-1)	-	0.0478	0.382	0.4	Spirotetramat (203313-25-1)	-	0.0478	0.382	0.2
Etoxazole (153233-91-1)	-	0.0478	0.382	0.2	Spiroxamine (118134-30-8)	-	0.0478	0.382	0.4
Fenoxycarb (72490-01-8)	-	0.0478	0.382	0.2	Tebuconazole (80443-41-0)	-	0.0478	0.382	0.4
(E)-Fenpyroximate (134098-61-6)	-	0.0478	0.382	0.4	Thiacloprid (111988-49-9)	-	0.0478	0.382	0.2
Fipronil (120068-37-3)	-	0.0478	0.382	0.4	Thiamethoxam (153719-23-4)	-	0.0478	0.382	0.2
Flonicamid (158062-67-0)	-	0.0478	0.382	1	Trifloxystrobin (141517-21-7)	-	0.0478	0.382	0.2
Fludioxinil (131341-86-1)	-	0.0478	0.382	0.4					
Hexythiazox (78587-05-0)	-	0.0478	0.382	1					
Imazalil (35554-44-0)	-	0.0478	0.382	0.2					
Imidacloprid (138261-41-3)	-	0.0478	0.382	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: 04/16/2024 1650 (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)	-	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

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: 04/16/2024 1327	Method: Hardy Diagnostics CompactDry	Deviations from SOP:
Analyst: PW	Instrument: Thermo Incubator	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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