

SUMMARY OF ANALYSIS (SAMPLE ID: SA33587)

Testing Location:	Customer ID: 2161	Order ID: OR10200	Sample Type: Primary
Arkansas	River Valley Relief Cultivation	Lot Number:	Matrix: Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13135531111	Mass: 23g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 11/30/2022
License: ADH 113	License: 00065C	2016H20221104RFL6	Date Received: 12/01/2022
Cultivar (Strain) or Sample Description: Race Fuel			Date Completed: 12/02/2022

*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 (%)

11.8

Water Activity (aw)

0.486 @ 23.7°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	23.3	233
CBGA	1.35	13.5
Δ9-THC	0.381	3.81
TOTAL CBD	0.0801	0.801
TOTAL THC	20.8	208
TOTAL CANNABINOIDS	25.9	259

Terpenes (Top 5)	(%)	µg/g
β-Caryophyllene	0.257	2570
d-Limonene	0.151	1510
β-Myrcene	0.130	1300
Linalool	0.121	1210
α-Humulene	0.0982	982
TOTAL TERPENES	0.974	9740

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: 12/1/2022 1912

Method: HPLC/DAD

Moisture Content (%): 11.8

Analyst: PW

Instrument: Agilent 1100

Water Activity (aw): 0.486 @ 23.72°C

<u>Cannabinoid</u>	<u>Result</u> (%)	<u>UM</u> (+/-%)	<u>Result</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	-	-	-	0.228	-	-	-
CBCA	0.209	0.0188	2.09	0.228	-	2.09	2.09
CBD	-	-	-	0.228	-	-	-
CBDV	0.0914	0.00822	0.914	0.228	-	0.914	0.914
CBDVA	-	-	-	0.228	-	-	-
CBG	0.157	0.0141	1.57	0.228	-	1.57	1.57
CBGA	1.35	0.121	13.5	0.228	-	13.5	13.5
CBL	0.149	0.0134	1.49	0.228	-	1.49	1.49
CBN	-	-	-	0.228	-	-	-
CBNA	0.119	0.0107	1.19	0.228	-	1.19	1.19
Δ9-THC	0.381	0.0343	3.81	0.228	-	3.81	3.81
Δ8-THC	-	-	-	0.228	-	-	-
THCA	23.3	2.10	233	0.228	-	233	233
THCV	-	-	-	0.228	-	-	-
THCVA	0.150	0.0135	1.50	0.228	-	1.50	1.50
TOTAL	25.9	2.33	259		-	259	259
TOTAL CBC	0.183	0.0165	1.83		-	1.83	1.83
TOTAL CBD	0.0801	0.00721	0.801		-	0.801	0.801
TOTAL CBDV	-	-	-		-	-	-
TOTAL CBG	1.34	0.121	13.4		-	13.4	13.4
TOTAL CBN	0.104	0.00939	1.04		-	1.04	1.04
TOTAL THC	20.8	1.87	208		-	208	208
TOTAL THCV	0.130	0.0117	1.30		-	1.30	1.30



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.

* CBCA, CBDVA, CBL, CBNA, and THCVA are in process of being added to our accreditation scope.

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: 12/02/2022 0033

Analyst: KF

Method: GC/MS

Instrument: Agilent 7890/5975

Deviations from SOP:

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	746	0.0746	■
Camphene	76.0	0.00760	■
δ-3-Carene	-	-	
β-Caryophyllene	2570	0.257	■
Caryophyllene oxide	101	0.0101	■
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	82.0	0.00820	■
Guaiol	-	-	
α-Humulene	982	0.0982	■
Isopulegol	-	-	
d-Limonene	1510	0.151	■
Linalool	1210	0.121	■
β-Myrcene	1300	0.130	■
cis-Nerolidol	-	-	
trans-Nerolidol	497	0.0497	■
α-Ocimene	27.1	0.00271	■
β-Ocimene	73.4	0.00734	■
α-Pinene	158	0.0158	■
β-Pinene	292	0.0292	■
α-Terpinene	-	-	
γ-Terpinene	-	-	
Terpinolene	112	0.0112	■
TOTAL	9740	0.974	



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

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"-" Not detected above RL.

Reporting Limit (µg/g): 19.1

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 12/01/2022 2047

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)	-	0.0191	0.152	0.5	Kresoxim-methyl (143390-89-0)	-	0.0191	0.152	0.4
Acephate (30560-19-1)	-	0.0191	0.152	0.4	Malathion (121-75-5)	-	0.0191	0.152	0.2
Acetaminophen (57960-19-7)	-	0.0191	0.152	2	Metalaxyl (57837-19-1)	-	0.0191	0.152	0.2
Acetamiprid (135410-20-7)	-	0.0191	0.152	0.2	Methiocarb (2032-65-7)	-	0.0191	0.152	0.2
Aldicarb (116-06-3)	-	0.0191	0.152	0.4	Methomyl (16752-77-5)	-	0.0191	0.152	0.4
Azoxystrobin (131860-33-8)	-	0.0191	0.152	0.2	Methyl parathion (298-0-0)	-	0.0191	0.152	0.2
Bifenazate (149877-41-8)	-	0.0191	0.152	0.2	MGK 264 (113-48-4)	-	0.0191	0.152	0.2
Bifenthrin (82657-04-3)	-	0.0191	0.152	0.2	Myclobutanil (88671-89-0)	-	0.0191	0.152	0.2
Boscalid (188425-85-6)	-	0.0191	0.152	0.4	Naled (300-76-5)	-	0.0191	0.152	0.5
Carbaryl (63-25-2)	-	0.0191	0.152	0.2	Oxamyl (23135-22-0)	-	0.0191	0.152	1
Carbofuran (1563-66-2)	-	0.0191	0.152	0.2	Paclobutrazol (76738-62-0)	-	0.0191	0.152	0.4
Chlorantraniliprole (800008-45-7)	-	0.0191	0.152	0.2	Permethrins (52645-53-1)	-	0.0191	0.152	0.2
Chlorfenapyr (122453-73-0)	-	0.0191	0.152	1	Phosmet (732-11-6)	-	0.0191	0.152	0.2
Chlorpyrifos (2921-88-2)	-	0.0191	0.152	0.2	Piperonyl butoxide (51-03-6)	-	0.0191	0.152	2
Clofentezine (74115-24-5)	-	0.0191	0.152	0.2	Prallethrin (2331-36-9)	-	0.0191	0.152	0.2
Cyfluthrin (68359-37-5)	-	0.0191	0.152	1	Propiconazole (60207-90-1))	-	0.0191	0.152	0.4
Cypermethrin (52315-07-8)	-	0.0191	0.152	1	Propoxur (114-26-1)	-	0.0191	0.152	0.2
Daminozide (1596-84-5)	-	0.0191	0.152	1	Pyrethrins (8003-34-7)	-	0.0191	0.152	1
DDVP (62-73-7)	-	0.0191	0.152	0.1	Pyridaben (96489-71-3)	-	0.0191	0.152	0.2
Diazinon (333-41-5)	-	0.0191	0.152	0.2	Spinosad (168316-95-8)	-	0.0191	0.152	0.2
Dimethoate (60-51-5)	-	0.0191	0.152	0.2	Spiromesifen (283594-90-1)	-	0.0191	0.152	0.2
Ethoprophos (13194-48-4)	-	0.0191	0.152	0.2	Spirotetramat (203313-25-1)	-	0.0191	0.152	0.2
Etofenprox (80844-07-1)	-	0.0191	0.152	0.4	Spiroxamine (118134-30-8)	-	0.0191	0.152	0.4
Etoazole (153233-91-1)	-	0.0191	0.152	0.2	Tebuconazole (80443-41-0)	-	0.0191	0.152	0.4
Fenoxycarb (72490-01-8)	-	0.0191	0.152	0.2	Thiacloprid (111988-49-9)	-	0.0191	0.152	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0191	0.152	0.4	Thiamethoxam (153719-23-4)	-	0.0191	0.152	0.2
Fipronil (120068-37-3)	-	0.0191	0.152	0.4	Trifloxystrobin (141517-21-7)	-	0.0191	0.152	0.2
Flonicamid (158062-67-0)	-	0.0191	0.152	1					
Fludioxinil (131341-86-1)	-	0.0191	0.152	0.4					
Hexythiazox (78587-05-0)	-	0.0191	0.152	1					
Imazalil (35554-44-0)	-	0.0191	0.152	0.2					
Imidacloprid (138261-41-3)	-	0.0191	0.152	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-200.7)

Analysis Date/Time: 12/02/2022 0552 (ICP/OES)	Method: ICP/OES	Deviations from SOP:
Analysis Date/Time: - (DMA)	Instrument: Agilent 720-ES	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)	-	59.4	94.0	200
Cadmium (Cd)	-	59.4	94.0	200
Lead (Pb)	-	59.4	94.0	500
Mercury (Hg)	-	59.4	94.0	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

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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: 12/2/2022 0631	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	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

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