

SUMMARY OF ANALYSIS (SAMPLE ID: SA32083)

Testing Location:	Customer ID: 2161	Order ID: OR9977	Sample Type: Primary
Arkansas	River Valley Relief Cultivation	Lot Number:	Matrix: Flower
232 S. Broadview St.	5601 Old Greenwood Rd Suite C	M00065C13136745780	Mass: 23g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 08/17/2022
License: ADH 113	License: 00065C	6006H20220701CBS2	Date Received: 08/17/2022
Cultivar (Strain) or Sample Description: Crunch Berries			Date Completed: 08/20/2022

*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 (%)

13.1

Water Activity (aw)

0.505 @ 25.0°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	20.6	206
Δ9-THC	0.740	7.40
CBGA	0.418	4.18
TOTAL CBD	0.0313	0.313
TOTAL THC	18.8	188
TOTAL CANNABINOIDS	22.0	220

Terpenes (Top 5)	(%)	µg/g
α-Pinene	0.636	6360
β-Myrcene	0.475	4750
β-Caryophyllene	0.316	3160
β-Pinene	0.301	3010
d-Limonene	0.168	1680
TOTAL TERPENES	2.32	23200

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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Mandatory Flower

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Kyle W. Felling
Kyle W. Felling, Ph.D.
Laboratory Director

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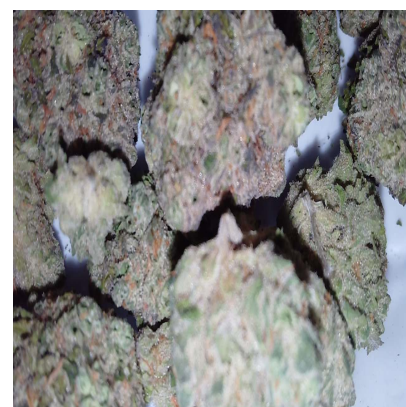
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CANNABINOID (POTENCY) PROFILE (SOP: SOP-CANN-001)

Analysis Date/Time: 8/20/2022 1145 **Method:** HPLC/DAD **Moisture Content (%):** 13.1
Analyst: PW **Instrument:** Agilent 1100 **Water Activity (aw):** 0.505 @ 25.04°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	-	-	-	0.234	-	-	-
CBCA	-	-	-	0.234	-	-	-
CBD	-	-	-	0.234	-	-	-
CBDA	0.0357	0.00357	0.357	0.234	-	0.357	0.357
CBDV	-	-	-	0.234	-	-	-
CBDVA	-	-	-	0.234	-	-	-
CBG	0.145	0.0189	1.45	0.234	-	1.45	1.45
CBGA	0.418	0.0460	4.18	0.234	-	4.18	4.18
CBL	-	-	-	0.234	-	-	-
CBN	-	-	-	0.234	-	-	-
CBNA	-	-	-	0.234	-	-	-
Δ9-THC	0.740	0.126	7.40	0.234	-	7.40	7.40
Δ8-THC	-	-	-	0.234	-	-	-
THCA	20.6	2.06	206	0.234	-	206	206
THCV	-	-	-	0.234	-	-	-
THCVA	0.111	0.00554	1.11	0.234	-	1.11	1.11
TOTAL	22.0	2.26	220		-	220	220
TOTAL CBC	-	-	-		-	-	-
TOTAL CBD	0.0313	0.00313	0.313		-	0.313	0.313
TOTAL CBDV	-	-	-		-	-	-
TOTAL CBG	0.512	0.0593	5.12		-	5.12	5.12
TOTAL CBN	-	-	-		-	-	-
TOTAL THC	18.8	1.93	188		-	188	188
TOTAL THC V	0.0960	0.00480	0.960		-	0.960	0.960



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 = (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 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.

* 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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Kyle W. Felling
 Kyle W. Felling, Ph.D.
 Laboratory Director



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TERPENOID PROFILE

Analysis Date/Time: 8/19/2022 1840

Method: GC/MS

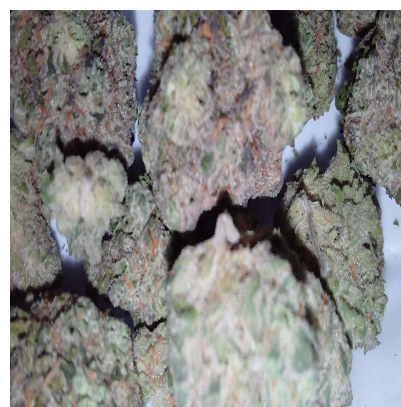
Deviations from SOP:

Analyst: KF

Instrument: Agilent 7890/5975

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	768	0.0768	
Camphene	146	0.0146	
δ-3-Carene	-	-	
β-Caryophyllene	3160	0.316	
Caryophyllene oxide	133	0.0133	
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	-	-	
α-Humulene	1320	0.132	
Isopulegol	-	-	
d-Limonene	1680	0.168	
Linalool	1410	0.141	
β-Myrcene	4750	0.475	
cis-Nerolidol	252	0.0252	
trans-Nerolidol	47.6	0.00476	
α-Ocimene	43.2	0.00432	
β-Ocimene	-	-	
α-Pinene	6360	0.636	
β-Pinene	3010	0.301	
α-Terpinene	-	-	
γ-Terpinene	-	-	
Terpinolene	117	0.0117	
TOTAL	23200	2.32	



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

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"-" Not detected above RL.

Reporting Limit (µg/g): 19.9

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 8/19/2022 1713

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)	-	0.0199	0.159	0.5	Kresoxim-methyl (143390-89-0)	-	0.0199	0.159	0.4
Acephate (30560-19-1)	-	0.0199	0.159	0.4	Malathion (121-75-5)	-	0.0199	0.159	0.2
Acetaminophen (57960-19-7)	-	0.0199	0.159	2	Metalaxyl (57837-19-1)	-	0.0199	0.159	0.2
Acetamiprid (135410-20-7)	-	0.0199	0.159	0.2	Methiocarb (2032-65-7)	-	0.0199	0.159	0.2
Aldicarb (116-06-3)	-	0.0199	0.159	0.4	Methomyl (16752-77-5)	-	0.0199	0.159	0.4
Azoxystrobin (131860-33-8)	-	0.0199	0.159	0.2	Methyl parathion (298-0-0)	-	0.0199	0.159	0.2
Bifenazate (149877-41-8)	-	0.0199	0.159	0.2	MGK 264 (113-48-4)	-	0.0199	0.159	0.2
Bifenthrin (82657-04-3)	-	0.0199	0.159	0.2	Myclobutanil (88671-89-0)	-	0.0199	0.159	0.2
Boscalid (188425-85-6)	-	0.0199	0.159	0.4	Naled (300-76-5)	-	0.0199	0.159	0.5
Carbaryl (63-25-2)	-	0.0199	0.159	0.2	Oxamyl (23135-22-0)	-	0.0199	0.159	1
Carbofuran (1563-66-2)	-	0.0199	0.159	0.2	Paclobutrazol (76738-62-0)	-	0.0199	0.159	0.4
Chlorantraniliprole (800008-45-7)	-	0.0199	0.159	0.2	Permethrins (52645-53-1)	-	0.0199	0.159	0.2
Chlorfenapyr (122453-73-0)	-	0.0199	0.159	1	Phosmet (732-11-6)	-	0.0199	0.159	0.2
Chlorpyrifos (2921-88-2)	-	0.0199	0.159	0.2	Piperonyl butoxide (51-03-6)	-	0.0199	0.159	2
Clofentezine (74115-24-5)	-	0.0199	0.159	0.2	Prallethrin (2331-36-9)	-	0.0199	0.159	0.2
Cyfluthrin (68359-37-5)	-	0.0199	0.159	1	Propiconazole (60207-90-1))	-	0.0199	0.159	0.4
Cypermethrin (52315-07-8)	-	0.0199	0.159	1	Propoxur (114-26-1)	-	0.0199	0.159	0.2
Daminozide (1596-84-5)	-	0.0199	0.159	1	Pyrethrins (8003-34-7)	-	0.0199	0.159	1
DDVP (62-73-7)	-	0.0199	0.159	0.1	Pyridaben (96489-71-3)	-	0.0199	0.159	0.2
Diazinon (333-41-5)	-	0.0199	0.159	0.2	Spinosad (168316-95-8)	-	0.0199	0.159	0.2
Dimethoate (60-51-5)	-	0.0199	0.159	0.2	Spiromesifen (283594-90-1)	-	0.0199	0.159	0.2
Ethoprophos (13194-48-4)	-	0.0199	0.159	0.2	Spirotetramat (203313-25-1)	-	0.0199	0.159	0.2
Etofenprox (80844-07-1)	-	0.0199	0.159	0.4	Spiroxamine (118134-30-8)	-	0.0199	0.159	0.4
Etoazole (153233-91-1)	-	0.0199	0.159	0.2	Tebuconazole (80443-41-0)	-	0.0199	0.159	0.4
Fenoxycarb (72490-01-8)	-	0.0199	0.159	0.2	Thiacloprid (111988-49-9)	-	0.0199	0.159	0.2
(E)-Fenpyroximate (134098-61-6)	-	0.0199	0.159	0.4	Thiamethoxam (153719-23-4)	-	0.0199	0.159	0.2
Fipronil (120068-37-3)	-	0.0199	0.159	0.4	Trifloxystrobin (141517-21-7)	-	0.0199	0.159	0.2
Flonicamid (158062-67-0)	-	0.0199	0.159	1					
Fludioxinil (131341-86-1)	-	0.0199	0.159	0.4					
Hexythiazox (78587-05-0)	-	0.0199	0.159	1					
Imazalil (35554-44-0)	-	0.0199	0.159	0.2					
Imidacloprid (138261-41-3)	-	0.0199	0.159	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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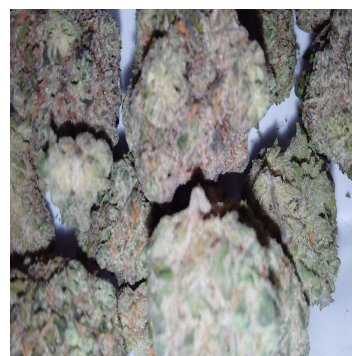
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HEAVY METAL PROFILE (SOP: SOP-ICP-200.7)

Analysis Date/Time: 08/19/2022 0947 (ICP/OES)	Method: ICP/OES	Deviations from SOP:
Analysis Date/Time: - (DMA)	Instrument: Agilent 720-ES	None
Analyst: KF		

Heavy Metal	Result (µg/kg)	LOD (µg/kg)	LOQ (µg/kg)	Action Level (µg/kg)
Arsenic (As)	-	57.4	90.9	200
Cadmium (Cd)	-	57.4	90.9	200
Lead (Pb)	-	57.4	90.9	500
Mercury (Hg)	-	57.4	90.9	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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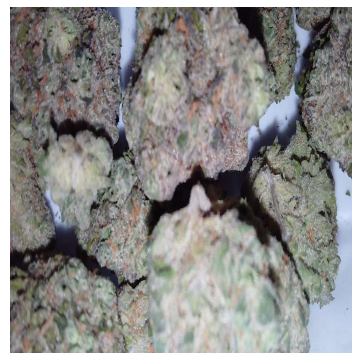
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MICROBIOLOGICAL PROFILE (SOP: SOP-Micro-001)

Analysis Date/Time: 8/19/2022 1314	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	Present	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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