

SUMMARY OF ANALYSIS (SAMPLE ID: SA32084)

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	M00065C13138539946	Mass: 23g
Greenbrier, AR 72058	Fort Smith, AR 72903	Production Run:	Date Collected: 08/17/2022
License: ADH 113	License: 00065C	6006H20220701CBS3	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 (%)

13.0

Water Activity (aw)

0.511 @ 25.1°C

PASS/FAIL

PASS

Moisture content/water activity action levels are referenced from the State of Arkansas MMJ testing guidelines.

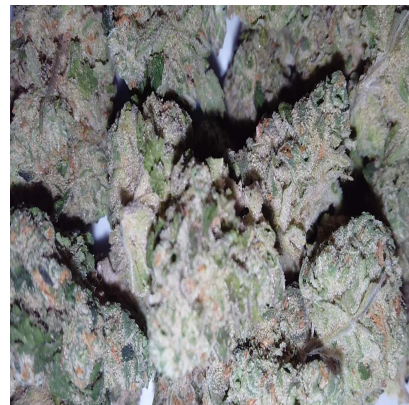
Moisture content levels less than 15% are recommended but the sample does not fail. Water activity levels must be less than 0.65aw.

Cannabinoids (Top 3)	(%)	mg/g
THCA	21.4	214
Δ9-THC	0.848	8.48
CBGA	0.375	3.75
TOTAL CBD	0.0321	0.321
TOTAL THC	19.6	196
TOTAL CANNABINOIDS	23.0	230

Terpenes (Top 5)	(%)	µg/g
α-Pinene	0.696	6960
β-Myrcene	0.452	4520
β-Caryophyllene	0.343	3430
β-Pinene	0.330	3300
d-Limonene	0.165	1650
TOTAL TERPENES	2.43	24300

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

REPORT OF LABORATORY ANALYSIS

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

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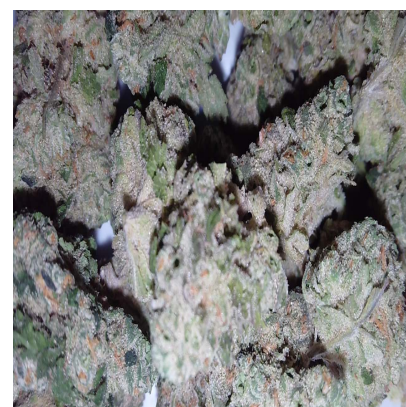
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CANNABINOID (POTENCY) PROFILE (SOP: SOP-CANN-001)

Analysis Date/Time: 8/20/2022 1156 **Method:** HPLC/DAD **Moisture Content (%):** 13
Analyst: PW **Instrument:** Agilent 1100 **Water Activity (aw):** 0.5115 @ 25.05°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	-	-	-	0.187	-	-	-
CBCA	-	-	-	0.187	-	-	-
CBD	-	-	-	0.187	-	-	-
CBDA	0.0367	0.00367	0.367	0.187	-	0.367	0.367
CBDV	-	-	-	0.187	-	-	-
CBDVA	0.0325	0.00292	0.325	0.187	-	0.325	0.325
CBG	0.157	0.0204	1.57	0.187	-	1.57	1.57
CBGA	0.375	0.0412	3.75	0.187	-	3.75	3.75
CBL	-	-	-	0.187	-	-	-
CBN	-	-	-	0.187	-	-	-
CBNA	-	-	-	0.187	-	-	-
Δ9-THC	0.848	0.144	8.48	0.187	-	8.48	8.48
Δ8-THC	-	-	-	0.187	-	-	-
THCA	21.4	2.14	214	0.187	-	214	214
THCV	-	-	-	0.187	-	-	-
THCVA	0.114	0.00569	1.14	0.187	-	1.14	1.14
TOTAL	23.0	2.36	230		-	230	230
TOTAL CBC	-	-	-		-	-	-
TOTAL CBD	0.0321	0.00321	0.321		-	0.321	0.321
TOTAL CBDV	0.0282	0.00253	0.282		-	0.282	0.282
TOTAL CBG	0.486	0.0566	4.86		-	4.86	4.86
TOTAL CBN	-	-	-		-	-	-
TOTAL THC	19.6	2.02	196		-	196	196
TOTAL THCV	0.0987	0.00493	0.987		-	0.987	0.987



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



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TERPENOID PROFILE

Analysis Date/Time: 8/19/2022 1905

Method: GC/MS

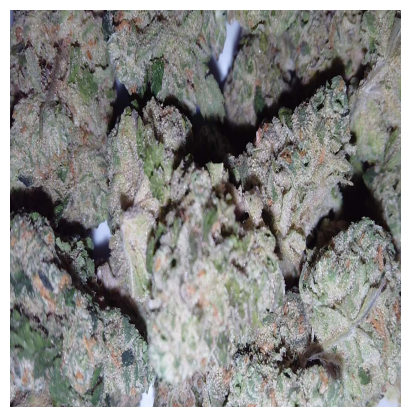
Deviations from SOP:

Analyst: KF

Instrument: Agilent 7890/5975

None

Terpene	Result (µg/g)	Result (%)	
α-Bisabolol	770	0.0770	
Camphene	165	0.0165	
δ-3-Carene	-	-	
β-Caryophyllene	3430	0.343	
Caryophyllene oxide	146	0.0146	
p-Cymene	-	-	
Eucalyptol	-	-	
Geraniol	-	-	
Guaiol	-	-	
α-Humulene	1440	0.144	
Isopulegol	-	-	
d-Limonene	1650	0.165	
Linalool	1530	0.153	
β-Myrcene	4520	0.452	
cis-Nerolidol	269	0.0269	
trans-Nerolidol	52.4	0.00524	
α-Ocimene	23.5	0.00235	
β-Ocimene	-	-	
α-Pinene	6960	0.696	
β-Pinene	3300	0.330	
α-Terpinene	-	-	
γ-Terpinene	-	-	
Terpinolene	56.3	0.00563	
TOTAL	24300	2.43	



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

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"-" Not detected above RL.

Reporting Limit (µg/g): 19.8

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PESTICIDES PROFILE (SOP: SOP-PEST-001)

Analysis Date/Time: 8/19/2022 1729

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)	-	0.0198	0.158	0.5	Kresoxim-methyl (143390-89-0)	-	0.0198	0.158	0.4
Acephate (30560-19-1)	-	0.0198	0.158	0.4	Malathion (121-75-5)	-	0.0198	0.158	0.2
Acetamiprid (135410-20-7)	-	0.0198	0.158	0.2	Metalaxyl (57837-19-1)	-	0.0198	0.158	0.2
Aldicarb (116-06-3)	-	0.0198	0.158	0.4	Methiocarb (2032-65-7)	-	0.0198	0.158	0.2
Azoxystrobin (131860-33-8)	-	0.0198	0.158	0.2	Methomyl (16752-77-5)	-	0.0198	0.158	0.4
Bifenazate (149877-41-8)	-	0.0198	0.158	0.2	Methyl parathion (298-0-0)	-	0.0198	0.158	0.2
Bifenthrin (82657-04-3)	-	0.0198	0.158	0.2	MGK 264 (113-48-4)	-	0.0198	0.158	0.2
Boscalid (188425-85-6)	-	0.0198	0.158	0.4	Myclobutanil (88671-89-0)	-	0.0198	0.158	0.2
Carbaryl (63-25-2)	-	0.0198	0.158	0.2	Naled (300-76-5)	-	0.0198	0.158	0.5
Carbofuran (1563-66-2)	-	0.0198	0.158	0.2	Oxamyl (23135-22-0)	-	0.0198	0.158	1
Chlorantraniliprole (800008-45-7)	-	0.0198	0.158	0.2	Paclobutrazol (76738-62-0)	-	0.0198	0.158	0.4
Chlorfenapyr (122453-73-0)	-	0.0198	0.158	1	Permethrins (52645-53-1)	-	0.0198	0.158	0.2
Chlorpyrifos (2921-88-2)	-	0.0198	0.158	0.2	Phosmet (732-11-6)	-	0.0198	0.158	0.2
Clofentezine (74115-24-5)	-	0.0198	0.158	0.2	Piperonyl butoxide (51-03-6)	-	0.0198	0.158	2
Cyfluthrin (68359-37-5)	-	0.0198	0.158	1	Prallethrin (2331-36-9)	-	0.0198	0.158	0.2
Cypermethrin (52315-07-8)	-	0.0198	0.158	1	Propiconazole (60207-90-1))	-	0.0198	0.158	0.4
Daminozide (1596-84-5)	-	0.0198	0.158	1	Propoxur (114-26-1)	-	0.0198	0.158	0.2
DDVP (62-73-7)	-	0.0198	0.158	0.1	Pyrethrins (8003-34-7)	-	0.0198	0.158	1
Diazinon (333-41-5)	-	0.0198	0.158	0.2	Pyridaben (96489-71-3)	-	0.0198	0.158	0.2
Dimethoate (60-51-5)	-	0.0198	0.158	0.2	Spinosad (168316-95-8)	-	0.0198	0.158	0.2
Ethoprophos (13194-48-4)	-	0.0198	0.158	0.2	Spiromesifen (283594-90-1)	-	0.0198	0.158	0.2
Etofenprox (80844-07-1)	-	0.0198	0.158	0.4	Spirotetramat (203313-25-1)	-	0.0198	0.158	0.2
Etoazole (153233-91-1)	-	0.0198	0.158	0.2	Spiroxamine (118134-30-8)	-	0.0198	0.158	0.4
Fenoxycarb (72490-01-8)	-	0.0198	0.158	0.2	Tebuconazole (80443-41-0)	-	0.0198	0.158	0.4
(E)-Fenpyroximate (134098-61-6)	-	0.0198	0.158	0.4	Thiacloprid (111988-49-9)	-	0.0198	0.158	0.2
Fipronil (120068-37-3)	-	0.0198	0.158	0.4	Thiamethoxam (153719-23-4)	-	0.0198	0.158	0.2
Flonicamid (158062-67-0)	-	0.0198	0.158	1	Trifloxystrobin (141517-21-7)	-	0.0198	0.158	0.2
Fludioxinil (131341-86-1)	-	0.0198	0.158	0.4					
Hexythiazox (78587-05-0)	-	0.0198	0.158	1					
Imazalil (35554-44-0)	-	0.0198	0.158	0.2					
Imidacloprid (138261-41-3)	-	0.0198	0.158	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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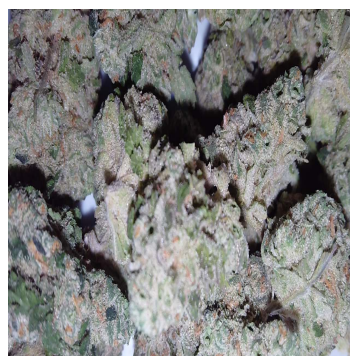
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HEAVY METAL PROFILE (SOP: SOP-ICP-200.7)

Analysis Date/Time: 08/19/2022 0950 (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)	-	56.9	90.0	200
Cadmium (Cd)	-	56.9	90.0	200
Lead (Pb)	-	56.9	90.0	500
Mercury (Hg)	-	56.9	90.0	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

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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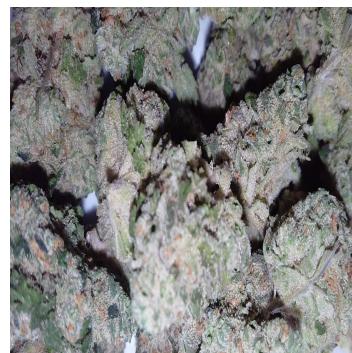
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MICROBIOLOGICAL PROFILE (SOP: SOP-Micro-001)

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	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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