

# CERTIFICATE OF ANALYSIS

## ISO/IEC 17025:2017 ACCREDITATION #103104



Order #: 59609  
Order Name: Hemp MD  
Batch#: 30001  
Received: 08/13/2020  
Completed: 09/15/2020



Wakanna LLC  
411 E. 35TH ST  
Chicago IL, 60616  
(312) 265-0036  
thomas@wakanna.com



### Sample



0.177%  
D9-THC

6.042%  
Total CBD

1,027.4 mg  
Cannabinoids per  
unit

906.3 mg  
CBD per  
unit

1 unit = 15 ml per unit x density (1) x  
Cannabinoid concentration

### Cannabinoids Test

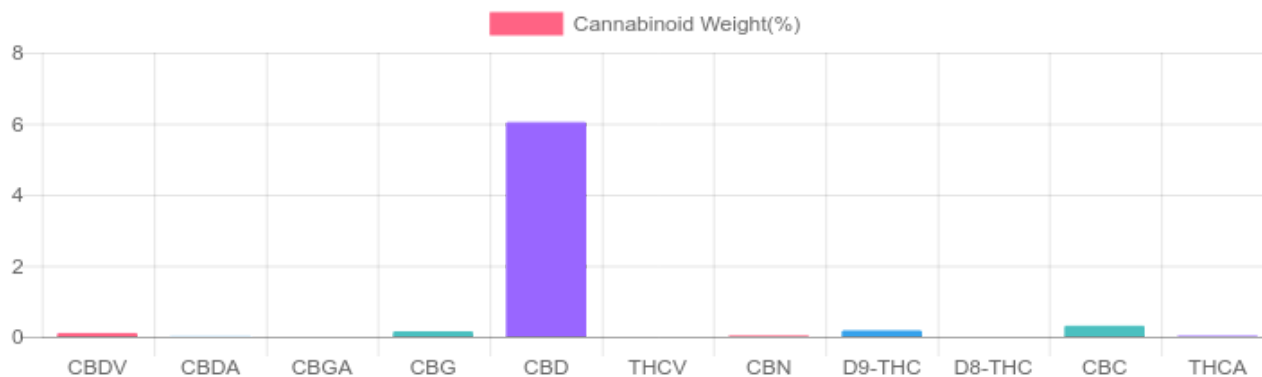
SHIMADZU INTEGRATED UPLC-PDA

GSL SOP 400

PREPARED: 08/14/2020 14:36:56

UPLOADED: 08/17/2020 11:37:13

Cannabinoids	LOQ	weight(%)	mg/g	mg/unit
D9-THC	10 PPM	0.177%	1.773	26.6
THCA	10 PPM	0.025%	0.253	3.8
CBD	10 PPM	6.042%	60.422	906.3
CBDA	20 PPM	0.011%	0.114	1.7
CBDV	20 PPM	0.103%	1.028	15.4
CBC	10 PPM	0.309%	3.091	46.4
CBN	10 PPM	0.032%	0.320	4.8
CBG	10 PPM	0.149%	1.491	22.4
CBGA	20 PPM	N/D	N/D	N/D
D8-THC	10 PPM	N/D	N/D	N/D
THCV	10 PPM	N/D	N/D	N/D
TOTAL D9-THC		0.177%	0.177%	26.6
TOTAL CBD*		6.042%	60.422	906.3
TOTAL CANNABINOIDS		6.848%	68.492	1,027.4



Reporting Limit 10 ppm

\*Total CBD = CBD + CBDA x 0.877

N/D - Not Detected, B/LOQ - Below Limit of Quantification

Dr. Andrew Hall, Ph.D., Chief Scientific Officer

Ben Witten, MS, MT., Lab Director

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1-833 TEST CBD



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### TERPENES: TOTAL (0.097%)

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

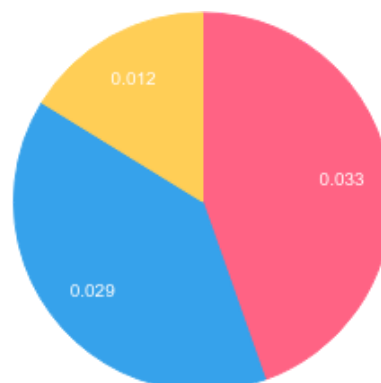
GSL SOP 404

Prepared: 09/09/2020 18:02:14

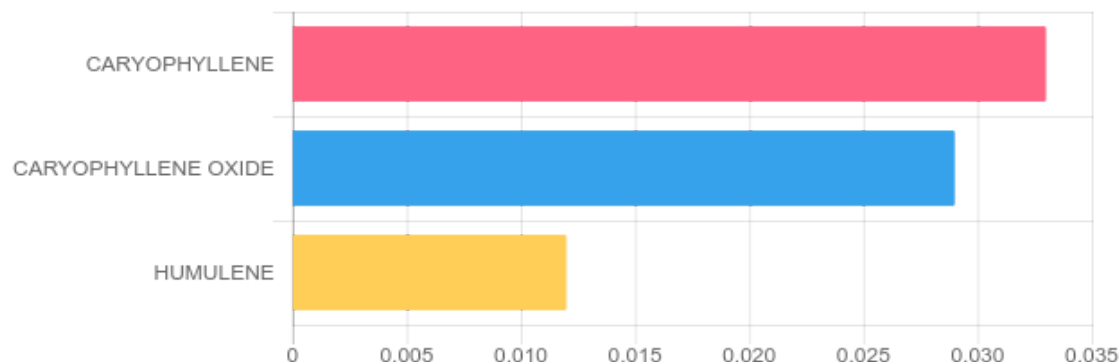
Uploaded: 09/10/2020 08:46:18

Terpene	Results (%)	LOQ (%)	LOD (%)
ALPHA-BISABOOL	B/LOQ	0.0067%	0.0063%
BETA-MYRCENE	B/LOQ	0.0067%	0.0063%
CARYOPHYLLENE	0.033%	0.0067%	0.0063%
CARYOPHYLLENE OXIDE	0.029%	0.0067%	0.0063%
HUMULENE	0.012%	0.0067%	0.0063%
LINALOOL	B/LOQ	0.0067%	0.0063%
TRANS-BETA-OCIMENE	B/LOQ	0.0067%	0.0031%
TRANS-NEROLIDOL	B/LOQ	0.0067%	0.0063%

### Terpenes Breakdown



### Top Terpenes Results:



### Tested for but not present:

ALPHA-PINENE, CAMPHENE, BETA-PINENE, 3-CARENE, ALPHA-TERPINENE, LIMONENE, P-CYMENE, CIS-BETA-OCIMENE, EUCALYPTOL, GAMMA-TERPINENE, TERPINOLENE, ISOPULEGOL, GERANIOL, CIS-NEROLIDOL, GUAJOL

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### PESTICIDE ANALYSIS:

GSL SOP 401

PREPARED: 08/26/2020 09:36:44

UPLOADED: 08/26/2020 17:02:25

GCMS-MS - Shimadzu GCMS-TQ8040

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
CAPTAN	0.700	N/D	0.003	0.001
CHLORDANE	0.100	N/D	0.003	0.001
CHLORFENAPYR	0.100	N/D	0.003	0.001
COUMAPHOS	0.100	N/D	0.003	0.001

LCMS-MS - Shimadzu LCMS-8060

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
ABAMECTIN B1A	0.100	N/D	0.005	0.001
ACEPHATE	0.100	N/D	0.001	0.001
ACEQUINOCYL	0.100	N/D	0.001	0.001
ACETAMIPRID	0.100	N/D	0.005	0.001
ALDICARB	0.100	N/D	0.005	0.001
AZOXYSTROBIN	0.100	N/D	0.001	0.001
BIFENAZATE	0.100	N/D	0.005	0.001
BIFENTHRIN	3.000	N/D	0.005	0.001
BOSCALID	0.100	N/D	0.005	0.001
CARBARYL	0.500	N/D	0.003	0.001
CARBOFURAN	0.100	N/D	0.001	0.001
CHLORANTRANILIPROLE	10.000	N/D	0.005	0.005
CHLORPYRIFOS	0.100	0.006	0.001	0.001
CLOFENTEZINE	0.100	N/D	0.001	0.001
DAMINOZIDE	0.100	N/D	0.005	0.001
DIAZINON	0.100	N/D	0.001	0.001
DICHLORVOS	0.100	N/D	0.005	0.001
DIMETHOATE	0.100	N/D	0.001	0.001
DIMETHOMORPH	2.000	N/D	0.005	0.001
ETHOPROPHOS	0.100	N/D	0.001	0.001
ETOFENPROX	0.100	N/D	0.001	0.001
ETOXAZOLE	0.100	N/D	0.010	0.005
FENHEXAMID	0.100	N/D	0.005	0.001
FENOXYCARB	0.100	N/D	0.005	0.001
FENPYROXIMATE	0.100	N/D	0.001	0.001
FIPRONIL	0.100	N/D	0.003	0.001
FLONICAMID	0.100	N/D	0.025	0.010
FLUDIOXONIL	0.100	N/D	0.003	0.001
HEXYTHIAZOX	0.100	N/D	0.005	0.001
IMAZALIL	0.100	N/D	0.005	0.001

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
CYFLUTHRIN	2.000	N/D	0.003	0.001
CYPERMETHRIN	1.000	N/D	0.003	0.001
PARATHION-METHYL	0.100	N/D	0.003	0.001
PENTACHLORONITROBENZENE	0.100	N/D	0.003	0.001

Pesticide	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
IMIDACLOPRID	5.000	N/D	0.005	0.001
KRESOXIM-METHYL	0.100	N/D	0.010	0.005
MALATHION	0.500	N/D	0.005	0.001
METALAXYL	2.000	N/D	0.001	0.001
METHIOCARB	0.100	N/D	0.005	0.001
METHOMYL	1.000	N/D	0.001	0.001
MEVINPHOS	0.100	N/D	0.001	0.001
MYCLOBUTANIL	0.100	N/D	0.005	0.001
NALED	0.100	N/D	0.005	0.001
OXAMYL	0.500	N/D	0.001	0.001
PACLOBUTRAZOL	0.100	N/D	0.005	0.001
PERMETHRINS	0.500	N/D	0.005	0.001
PHOSMET	0.100	N/D	0.005	0.001
PIPERONYL	3.000	N/D	0.001	0.001
BUTOXIDE				
PRALLETHRIN	0.100	N/D	0.005	0.005
PROPICONAZOLE	0.100	N/D	0.010	0.005
PROPOXUR	0.100	N/D	0.001	0.001
PYRETHRINS				
(PYRETHRIN I)	0.500	N/D	0.005	0.005
PYRIDABEN	0.100	N/D	0.005	0.001
SPINETORAM	0.100	N/D	0.001	0.001
SPINOSAD	0.100	N/D	0.001	0.001
SPIROMESIFEN	0.100	N/D	0.005	0.001
SPIROTETRAMAT	0.100	N/D	0.001	0.001
SPIROXAMINE	0.100	N/D	0.001	0.001
TEBUCONAZOLE	0.100	N/D	0.005	0.001
THIACLOPRID	0.100	N/D	0.001	0.001
THIAMETHOXAM	5.000	N/D	0.001	0.001
TRIFLOXYSTROBIN	0.100	N/D	0.001	0.001

N/D = Not Detected, A/LOQ = Above LOQ Level, B/LOQ = Below LOQ Level, B/LOD = Below LOD Level

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Ben Witten, MS, MT., Lab Director

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### RESIDUAL SOLVENTS:

Headspace GCMS - Shimadzu GCMS QP2020 with HS20

GSL SOP 405

Prepared: 08/25/2020 15:11:46

Uploaded: 08/26/2020 14:46:09

Residual Solvent	Action Level (ppm)	Results (ppm)	LOQ (ppm)	LOD (ppm)
1,1-DICHLOROETHENE	8	N/D	0.63	0.63
1,2-DICHLOROETHANE	2	N/D	0.12	0.02
ACETONE	5,000	N/D	140	20
ACETONITRILE	410	N/D	25	1
BENZENE	1	N/D	1	0.5
BUTANE	5,000	N/D	50	10
CHLOROFORM	1	N/D	1	0.5
CIS 1,2-DICHLOROETHENE	5	N/D	0.73	0.18
ETHANOL	5,000	B/LOQ	140	20
ETHYL ACETATE	5,000	N/D	140	20
ETHYL ETHER	5,000	N/D	140	20
ETHYLENE OXIDE	1	N/D	0	0
ISOPROPYL ALCOHOL	5,000	N/D	140	20
METHANOL	3,000	N/D	100	20
METHYLENE CHLORIDE	125	N/D	0.15	0.15
N-HEPTANE	5,000	N/D	140	20
N-HEXANE	290	N/D	18	10
PENTANE	5,000	N/D	140	20
PROPANE	5,000	N/D	20	1
TOLUENE	890	N/D	53	1
TRANS 1,2-DICHLOROETHENE	5	N/D	0.73	0.18
TRICHLOROETHENE	1	N/D	1	0.5
XYLENES	150	N/D	130	20

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### Microbial Analysis:

Microbial Analysis GSL SOP 406

PCR - Agilent AriaMX

Uploaded: 08/27/2020 17:02:43

### MICROBIAL ANALYSIS:

PCR - Agilent AriaMX

Test	SOP	Test Method	Device Used	LOD	Allowable Criteria	Actual Result	Pass/Fail
ASPERGILLUS FUMIGATUS***	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
ASPERGILLUS TERREUS***	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
ASPERGILLUS FLAVUS***	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
ASPERGILLUS NIGER***	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
STEC E. COLI*	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
SALMONELLA*	406.01	USP 61/62†	ARIAMX PCR	1 CFU/G**	DETECT/NOT DETECTED	NOT DETECTED	PASS
TOTAL YEAST AND MOLD	406.01	USP 61/62†	ARIAMX PCR	CFU/G BY SAMPLE TYPE**	10,000 CFU/G	NOT DETECTED	PASS
AEROBIC BACTERIA COUNT	406.01	USP 61/62†	ARIAMX PCR	CFU/G BY SAMPLE TYPE**	100,000 CFU/G	NOT DETECTED	PASS
ENTEROBACTERIACEAE	406.01	USP 61/62†	ARIAMX PCR	CFU/G BY SAMPLE TYPE**	1,000 CFU/G	NOT DETECTED	PASS
COLIFORM	406.01	USP 61/62†	ARIAMX PCR	CFU/G BY SAMPLE TYPE**	1,000 CFU/G	NOT DETECTED	PASS

† USP 61 (enumeration of bacteria TAC, TYM, and ENT/Coliform), USP 62 (identifying specific species E.coli Aspergillus etc)

\* STEC and Salmonella run as Multiplex

\*\* CFU/g Calculation based on MIP/Extract matrix

\*\*\* Flavus = 2 Copies of DNA / Fumigatis = 2 Copies of DNA Niger = 20 Copies of DNA / Terrus = 10 copies of DNA

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### Mycotoxin Analysis:

LC-MS - Shimadzu LCMS-8060  
GSL SOP 401

Uploaded: 08/26/2020 13:46:50

Analyte	Action Lvl (ppb)	Results (ppb)
AFLATOXIN B1	20	N/D
AFLATOXIN B2	20	N/D
AFLATOXIN G1	20	N/D
AFLATOXIN G2	20	N/D
OCHRATOXIN A	20	N/D

LOQ is 1ppb, LOD is 1ppb

### Moisture Analysis:

Shimadzu MOC63U Moisture Balance - GSL SOP 411

Uploaded: 09/09/2020 22:28:11

#### Moisture %

3.0%

### Heavy Metals Analysis:

ICP-MS - Shimadzu ICPMS-2030  
GSL SOP 403

Uploaded: 09/15/2020 08:50:36

Metal	Action Level (ppb)	Result (ppb)
ARSENIC (AS)	200	B/LOQ
CADMIUM (CD)	200	B/LOQ
MERCURY (HG)	100	B/LOQ
LEAD (PB)	500	B/LOQ

Lower Limit of Quantitation (LOQ) is 75 ppb

### Water Activity:

HD-3A Water Activity Meter - GSL SOP 407

Uploaded: 09/09/2020 22:40:47

#### Water

0.60

### Filth and Foreign Materials Analysis:

Microscope - Amscope Simul-Focal Trinocular Stereo Zoom Microscope - GSL SOP 409

Uploaded: 09/09/2020 22:07:56

Pass: No Foreign Materials Detected

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