

SUMMARY OF ANALYSIS (SAMPLE ID: SA2020-24800)

Testing Location: OKC 3680 E. I-240 Service Rd. Oklahoma City, OK 73135 License: LAAA-4Y4X-Z7ZZ	Customer ID: 1448 8750 84th St Noble, OK 73068 License: PAAA-VJZG-KNP6	Order ID: OR2020-7745 Lot Number: PUR01 Batch Number: 0322	Sample Type: Primary Matrix: Concentrate Mass: 2g Date Collected: 03/25/2020 Date Received: 03/25/2020 Date Completed: 03/30/2020
Cultivar (Strain) or Sample Description: Purple Berry Swirl			

*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.
 *For Oklahoma, with the new OMMR rules to be effective April 1, 2020, limits on moisture are proposed at 15% and water activity at 0.65a.

Moisture Content (%)	PASS/FAIL	Water Activity (aw)	PASS/FAIL
Not Tested	N/A	Not Tested	N/A

Cannabinoids (Top 3)	(%)	mg/g
THCa	75.8	758
Δ9-THC	1.85	19
CBDa	0.154	1.54
TOTAL CBD	0.135	1.35
TOTAL THC	68.4	684
TOTAL CANNABINOIDS	78	780

Terpenes (Top 5)	(%)	μg/g
β-Caryophyllene	3.968	39681
β-Myrcene	2.995	29954
α-Humulene	1.954	19539
d-Limonene	0.802	8020
β-Cimene	0.303	3034
TOTAL TERPENES	10.4	104315

Contaminants	PASS/FAIL
Heavy Metals:	PASS
Microbiology:	PASS
Mycotoxins:	PASS
Pesticides:	PASS
Residual Solvents:	PASS
Visual Inspection:	PASS



Scan the QR code to verify results.
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CERTIFICATE OF ANALYSIS (SAMPLE ID: SA2020-24800)

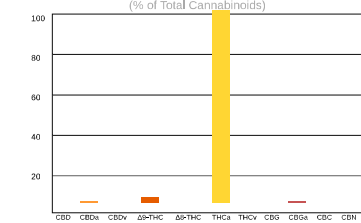
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Cultivar (Strain) or Sample Description: Purple Berry Swirl			

CANNABINOID (POTENCY) PROFILE
Analysis Date/Time: 03/26/2020 0926
Method: HPLC/DAD
Instrument: Agilent 1100
Moisture Content (%): -
Water Activity (aw): -

Cannabinoid	Result (%)	Result (mg/g)	Reporting Limit (mg/g)	Result (mg/mL)	Per Unit (mg)
CBD	-	-	0.499	-	-
CBDa	0.154	1.54	0.499	-	1.54
CBDv	-	-	0.499	-	-
Δ9-THC	1.85	18.5	0.499	-	19
Δ8-THC	-	-	0.499	-	-
THCa	75.8	758	0.499	-	758
THCv	-	-	0.499	-	-
CBC	-	-	0.499	-	-
CBG	-	-	0.499	-	-
CBGa	0.143	1.43	0.499	-	1.43
CBN	-	-	0.499	-	-
TOTAL	78	780	-	-	780
TOTAL THC	68.4	684	-	-	684
TOTAL CBD	0.135	1.35	-	-	1.35



Cannabinoid Distribution



Deviations from standard operating procedure: None

Recoveries for all analyze 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 THC = (THCa x 0.877) + Δ8-THC
 Total CBD = (CBDa x 0.877) + CBD

Percentage results are reported by mass. mg/g results are reported as mass component per mass material.

Abbreviations: UV - Ultraviolet, HPLC - High Pressure Liquid Chromatography, RL - Reporting Limit, RPD - Relative Percent Difference, RSD - Relative Standard Deviation

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TERPENOID PROFILE

Analysis Date/Time: 03/26/2020 0926
Method: HS/GC/FID (Internal Method-002)
Instrument: Agilent 6890
Deviations from SOP: None

Terpene	Result (μg/g)	Result (%)
α-Bisabolol	240	0.024
Camphene	599	0.0599
δ-3-Carene	-	-
β-Caryophyllene	39681	3.97
Caryophyllene oxide	164	0.0164
p-Cymene	-	-
Eucalyptol	-	-
Geraniol	-	-
Guaiol	-	-
α-Humulene	19539	1.95
Isopulegol	-	-
d-Limonene	8020	0.802
Linalol	-	-
β-Myrcene	29954	3
cis-Nerolidol	-	-
trans-Nerolidol	-	-
α-Cimene	-	-
β-Cimene	3034	0.303
α-Pinene	1094	0.109
β-Pinene	675	0.0675
α-Terpinene	-	-
γ-Terpinene	136	0.0136
Terpinolene	1182	0.118
TOTAL	104315	10.4



Abbreviations: HS = Headspace, GC - Gas Chromatography, MS = Mass Spectrometry, RL - Reporting Limit
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*Not detected above RL.
Reporting Limit (μg/g): 20

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RESIDUAL SOLVENT PROFILE

Analysis Date/Time: 03/26/2020 0926
Method: USP <467>
Instrument: Agilent 6890
Deviations from SOP: None

Solvent	Result (μg/g)	Action Level (μg/g)	Color Key
Acetone (67-63-1)	-	1000	RESULT < AL
Benzene (71-43-2)	2	2	1/2 AL < RESULT < AL
n-Butane (106-97-2)	-	1000	RESULTS < AL
2,2-Dimethylbutane (75-95-2)	60	60	Reporting Limit (μg/g)
2,3-Dimethylbutane (79-29-8)	60	60	1/2 of AL
Ethyl benzene (100-41-4)	430	430	"-" not detected above reporting limit
n-Heptane (142-82-5)	1000	1000	** = o,m,p-Xylene and Ethylbenzene
n-Hexane (110-54-3)	60	60	
Isobutane (75-28-5)	1000	1000	
Isopropanol (67-63-0)	1000	1000	
2-Methylbutane (78-78-4)	1000	1000	
2-Methylpentane (107-83-6)	60	60	
3-Methylpentane (96-10-0)	60	60	
n-Pentane (109-66-0)	1000	1000	
n-Pentane (74-98-6)	1000	1000	
Toluene (108-88-3)	180	180	
o-Xylene (95-47-6)	430	430	
m,p-Xylene (108-38-3 or 106-42-3)	430	430	
Xylenes* (1330-20-7)	430	430	

Solvent	Synonym(s)	Solvent	Synonym(s)	Solvent	Synonym(s)
Acetonitrile	Methyl Cyanide, ACN	2-Ethoxyethanol	Cellulosolve, Ethyl glycol	Methanol	Methyl alcohol
1-Butanol	n-Butanol, Butyl Alcohol	Ethyl ether	Diethyl ether, Ether	2-Methylbutane	Isopentane
2-Butanol	sec-Butyl alcohol	Ethyl acetate	Ethyl Ac	Methylene chloride	Dichloromethane
2-Butanone	Methyl ethyl ketone, MEK	Ethyl benzene	Phenylbenzene	2-Methylpentane	Isobexane
1,2-Dimethoxyethane	Monoglyme	Ethylene oxide	Oxirane	1-Pentanol	n-Amyl alcohol
2,3-Dimethylbutane	Neohexane	2-Methylpropane	Tetrahydrofuran	Propyl alcohol	Propyl alcohol
2,3-Dimethylbutane	Diisopropyl	Isopropanol, IPA	Tetramethylene sulfone	THF	Tetrahydrofuran
N,N-Dimethylformamide	DMF	Isopropyl Acetate	Acetic acid isopropyl ester	Sulfidate	Sulfidate
Dimethylsulfoxide	DMSO			Xylene	Dimethyl benzene

Abbreviations: HS-Headspace, GC-Gas Chromatography, MS-Mass Spectrometry, RL-Reporting Limit, AL-Action Level
 CAS-Chemical Abstract Services
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Customer ID: 1448
Noble Nectar
8750 84th St
Noble, OK 73068
License: PAAA-VJZG-KNP6

Order ID: OR2020-7745
Lot Number: PUR01
Batch Number: 0322

Sample Type: Primary
Matrix: Concentrate
Mass: 2g
Date Collected: 03/25/2020
Date Received: 03/25/2020

Cultivar (Strain) or Sample Description: Purple Berry Swirl
Date Completed: 03/30/2020


PESTICIDES PROFILE

Analysis Date/Time: 03/26/2020 0926
Analyst: DJ

Method: LC/MS/MS
Instrument: Waters Acquity/TQD

Deviations from SOP: None

Pesticide	Result (ug/g)	Action Level (ug/g)	Color Key
Abamectin (71751-41-2)	-	0.5	RESULT < 1/2 AL
Azoxystrobin (131860-33-8)	-	0.5	1/2 AL < RESULT < AL
Bifenazate* (149877-41-8)	-	0.5	RESULT > AL
Etiozazole (153233-91-1)	-	0.5	Reporting Limit (ug/g)
Imazalil (35554-44-0)	-	0.5	1/2 of AL
Imidacloprid (138261-41-3)	-	0.5	"-" not detected above reporting limit
Malathion (121-75-5)	-	0.5	"*" analyzed by GC/MS (all others analyzed by LC/MS/MS)
Myclobutanil (88671-89-0)	-	0.5	Permethrins measured as the cumulative residue of the cis- and trans-permethrin isomers.
Permethrin* (52645-53-1)	-	0.5	
Spinosad A (168316-95-8)	-	0.5	
Spinosad D (168316-95-8)	-	0.5	
Spiromesifen (203594-90-1)	-	0.5	
Spirotetramat (203313-25-1)	-	0.5	
Tebuconazole (80443-1-0)	-	0.5	



Abbreviations: LC - Liquid Chromatography, GC - Gas Chromatography, MS - Mass Spectrometry, RL - Reporting Limit, AL - Action Level, CAS - Chemical Abstract Services

Pesticide	Synonyms(s)	Pesticide	Synonyms(s)	Pesticide	Synonyms(s)
Cyfluthrin	Baythroid	Methidathion	Systhane	Propiconazole	Tilt
DWP	Dichlorvos	Naled	Dibrom	Propoxur	Baygon
Ethofenprox	Prophos	Phosmet	Imidan		

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MYCOTOXIN PROFILE

Analysis Date/Time: 03/26/2020 0926
Analyst: DJ

Method: LC/MS/MS
Instrument: Waters Acquity/TQD

Deviations from SOP: None

Mycotoxin	Result (ug/kg)	Action Level (ug/kg)
Aflatoxin B1	-	20
Aflatoxin B2	-	20
Aflatoxin G1	-	20
Aflatoxin G2	-	20
Ochratoxin A	-	20



Abbreviations: EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level

Color Key

RESULT < 1/2 AL

1/2 AL < RESULT < AL

RESULT > AL

Reporting Limit (CFU/g)

1

"-" not detected above reporting limit

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Order ID: OR2020-7745
Lot Number: PUR01
Batch Number: 0322

Sample Type: Primary
Matrix: Concentrate
Mass: 2g
Date Collected: 03/25/2020
Date Received: 03/25/2020

Cultivar (Strain) or Sample Description: Purple Berry Swirl
Date Completed: 03/30/2020


HEAVY METAL PROFILE

Analysis Date/Time: 03/26/2020 0926
Analyst: CC

Method: ICP/MS
Instrument: PerkinElmer Elan 9000

Deviations from SOP: None

Heavy Metal	Result (ug/kg)	Action Level (ug/kg)
Arsenic (As)	-	400
Cadmium (Cd)	-	440
Lead (Pb)	-	1000
Mercury (Hg)	-	200



Abbreviations: ICP - Inductively-Coupled Plasma, OES - Optical Emission Spectroscopy, MS - Mass Spectrometry, RL - Reporting Limit, AL - Action Level

Color Key

RESULT < 1/2 AL

1/2 AL < RESULT < AL

RESULT > AL

Reporting Limit (ug/kg)

50

"-" not detected above reporting limit

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Date Completed: 03/30/2020


MICROBIOLOGICAL PROFILE

Analysis Date/Time: 03/26/2020 0926
Analyst: KB

Method: Hardy Diagnostics CompactDry
Instrument: Thermo Incubator

Deviations from SOP: None

Bacteria/Microbe	Result (CFU/g)	Action Level (CFU/g)
Aerobic Plate Count, Total	Absent	-
Escherichia Coli (E. Coli)	Absent	1
Mold	Absent	10000
Yeast	Absent	10000
Salmonella spp.	Absent	1



Abbreviations: EC - Escherichia Coli, CFU - Colony-Forming Unit, RL - Reporting Limit, AL - Action Level, NT - Not Tested

Color Key

RESULT < 1/2 AL

1/2 AL < RESULT < AL

RESULT > AL

Reporting Limit (CFU/g)

1

"-" not detected above reporting limit

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