

CBD Topical Product Guarantee

Product Name	CBD Double Strength Cream
Product Category	Topicals/Cosmetics (Not for consumption)
Instructions for use/Preparation	Apply a small amount to the affected area. Use as needed throughout the day. Store in a cool dry place. Do not take internally. Cannabidiol use while pregnant or breastfeeding may be harmful.
CBD Source	CBD sourced from hemp grown under federally authorized state pilot program (e.g. Kentucky, Oregon, or Colorado's R&D program) or approved hemp program.
NOTE: This product is not intended to d	iagnose, treat, cure or prevent any disease
WARNING: The safety of this product he	as not been determined.
Batch Information	
Batch ID Number	20265
Batch Size	400 lbs
Units Produced per SKU	Item 54000 (2 oz): 2880 units
Manufacture date	09/21/2020
Expiration date	09/21/2022

Amison Banan	09/24/2020	
Approved by Allison Ballard / Quality Assurance Manager	·	Date



Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DATE ISSUED 09/27/2020

SAMPLE NAME: Double Strength CBD Cream 20265_#04

Infused, Non-Inhalable

CULTIVATOR / MANUFACTURER

Business Name: License Number:

Address:

SAMPLE DETAIL

Batch Number: 20265 Sample ID: 200923S001 **DISTRIBUTOR**

Business Name: Shikai Products

License Number:

Address:

Date Collected: 09/23/2020 Date Received: 09/23/2020

Batch Size: Sample Size: **Unit Mass:** Serving Size:





Scan QR code to verify authenticity of results.

CANNABINOID ANALYSIS - SUMMARY

Total THC: Not Detected

Total CBD: 10.851 mg/g

Sum of Cannabinoids: 10.862 mg/g

Total Cannabinoids: 10.862 mg/g

Total THC/CBD is calculated using the following formulas to take into account the loss of a carboxyl group during the decarboxylation step: Total THC = Δ 9THC + (THCa (0.877))

Total CBD = CBD + (CBDa (0.877))

Sum of Cannabinoids = Δ 9THC + THCa + CBD + CBDa + CBG + CBGa + THCV + THCVa + CBC + CBCa + CBDV + CBDVa + Δ 8THC + CBL + CBN Total Cannabinoids = (Δ9THC+0.877*THCa) + (CBD+0.877*CBDa) +

(CBG+0.877*CBGa) + (THCV+0.877*THCVa) + (CBC+0.877*CBCa) +

(CBDV+0.877*CBDVa) + Δ8THC + CBL + CBN

Moisture: NT

Density: NT

Viscosity: NT

SAFETY ANALYSIS - SUMMARY

Pesticides: PASS

Mycotoxins: NT

Residual Solvents: PASS

Heavy Metals: PASS

Microbial Impurities (PCR): PASS

Microbial Impurities (Plating): ND

Foreign Material: NT

Water Activity: NT

Vitamin E Acetate: NT

For quality assurance purposes. Not a Pre-Harvest Hemp Lab Test Report. These results relate only to the sample included on this report. This report shall not be reproduced, except in full, without written approval of the laboratory.

Sample Certification: California Code of Regulations Title 16 Effect Date January 16, 2019. Authority: Section 26013, Business and Professions Code. Reference: Sections 26100, 26104 and 26110, Business and Professions Code.

Decision Rule: Statements of conformity (e.g. Pass/Fail) to specifications are made in this report without taking measurement uncertainty into account. Where statements of conformity are made in this report, the following decision rules are applied: PASS - Results within limits/specifications, FAIL - Results exceed limits/specifications.

References: limit of detection (LOD), limit of quantification (LOQ), not detected (ND), not tested (NT) too numerous to count >250 cfu/plate (TNTC), colony-forming unit (cfu)

nuku Cain LQC verified by: Nikki Cain Date: 09/27/2020

oproved by: Josh Wurzer, President ate: 09/27/2020



Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DOUBLE STRENGTH CBD CREAM 20265_#04 | DATE ISSUED 09/27/2020



Tested by high-performance liquid chromatography with diode-array detection (HPLC-DAD).

Method: QSP - (1157) Analysis of Cannabinoids by HPLC-DAD

TOTAL THC: Not Detected
Total THC (Δ9THC+0.877*THCa)

TOTAL CBD: 10.851 mg/g
Total CBD (CBD+0.877*CBDa)

TOTAL CANNABINOIDS: 10.862 mg/g

Total Cannabinoids (Total THC) + (Total CBD) + (Total CBG) + (Total THCV) + (Total CBC) + (Total CBDV) + Δ 8THC + CBL + CBN

TOTAL CBG: ND
Total CBG (CBG+0.877*CBGa)

TOTAL THCV: ND
Total THCV (THCV+0.877*THCVa)

TOTAL CBC: ND
Total CBC (CBC+0.877*CBCa)

TOTAL CBDV: 0.011 mg/g
Total CBDV (CBDV+0.877*CBDVa)

CANNABINOID TEST RESULTS - 09/24/2020

	COMPOUND	LOD/LOQ (mg/g)	MEASUREMENT UNCERTAINTY (mg/g)	RESULT (mg/g)	RESULT (%)
Ī	CBD	0.004 / 0.011	±0.5198	10.851	1.0851
	CBDV	0.002 / 0.007	±0.0006	0.011	0.0011
	Δ9ΤΗС	0.002 / 0.005	N/A	ND	ND
Ī	Δ8ΤΗC	0.01 / 0.02	N/A	ND	ND
	THCa	0.001/0.002	N/A	ND	ND
	THCV	0.002 / 0.008	N/A	ND	ND
	THCVa	0.002 / 0.005	N/A	ND	ND
	CBDa	0.001 / 0.003	N/A	ND	ND
	CBDVa	0.001 / 0.003	N/A	ND	ND
	CBG	0.002 / 0.005	N/A	ND	ND
	CBGa	0.002 / 0.006	N/A	ND	ND
	CBL	0.003 / 0.008	N/A	ND	ND
	CBN	0.001 / 0.004	N/A	ND	ND
	СВС	0.003 / 0.010	N/A	ND	ND
	CBCa	0.001 / 0.004	N/A	ND	ND
	SUM OF CANNAI	BINOIDS	10.862 mg/g	1.0862%	

MOISTURE TEST RESULT	DENSITY TEST RESULT	VISCOSITY TEST RESULT
Not Tested	Not Tested	Not Tested









DOUBLE STRENGTH CBD CREAM 20265_#04 | DATE ISSUED 09/27/2020



Pesticide Analysis

CATEGORY 1 AND 2 PESTICIDES

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). *GC-MS utilized where indicated.

Method: QSP - (1212) Analysis of Pesticides and Mycotoxins by LC-MS or QSP - (1213) Analysis of Pesticides by GC-MS

CATEGORY 1 PESTICIDE TEST RESULTS - 09/26/2020 PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Aldicarb				NT	
Carbofuran				NT	
Chlordane*				NT	
Chlorfenapyr*				NT	
Chlorpyrifos	0.02 / 0.06	≥LOD	N/A	ND	PASS
Coumaphos				NT	
Daminozide				NT	
DDVP (Dichlorvos)				NT	
Dimethoate				NT	
Ethoprop(hos)				NT	
Etofenprox				NT	
Fenoxycarb				NT	
Fipronil				NT	
lmazalil				NT	
Methiocarb				NT	
Methyl parathion				NT	
Mevinphos				NT	
Paclobutrazol				NT	
Propoxur				NT	
Spiroxamine			ΓM	NT	
Thiacloprid				NT	

CATEGORY 2 PESTICIDE TEST RESULTS - 09/26/2020 PASS

Abamectin	0.03 / 0.10	0.3	N/A	ND	PASS
Acephate				NT	
Acequinocyl				NT	
Acetamiprid				NT	
Azoxystrobin	0.01 / 0.04	40	N/A	ND	PASS
Bifenazate	0.01 / 0.02	5	N/A	ND	PASS
Bifenthrin	0.01 / 0.02	0.5	N/A	ND	PASS
Boscalid	0.02 / 0.06	10	N/A	ND	PASS
Captan				NT	
Carbaryl				NT	
Chlorantraniliprole				NT	

Continued on next page







CERTIFICATE OF ANALYSIS

DOUBLE STRENGTH CBD CREAM 20265_#04 | DATE ISSUED 09/27/2020



Pesticide Analysis Continued

CATEGORY 1 AND 2 PESTICIDES

Pesticide and plant growth regulator analysis utilizing high-performance liquid chromatography-mass spectrometry (HPLC-MS) or gas chromatography-mass spectrometry (GC-MS). *GC-MS utilized where indicated.

Method: QSP - (1212) Analysis of Pesticides and Mycotoxins by LC-MS or QSP - (1213) Analysis of Pesticides by GC-MS

CATEGORY 2 PESTICIDE TEST RESULTS - 09/26/2020 continued PASS

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (μg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
Clofentezine				NT	
Cyfluthrin				NT	
Cypermethrin	0.1 / 0.3	1	N/A	ND	PASS
Diazinon				NT	
Dimethomorph				NT	
Etoxazole	0.010 / 0.028	1.5	N/A	ND	PASS
Fenhexamid				NT	
Fenpyroximate				NT	
Flonicamid				NT	
Fludioxonil				NT	
Hexythiazox	0.01 / 0.04	2	N/A	ND	PASS
Imidacloprid	0.01 / 0.04	3	N/A	ND	PASS
Kresoxim-methyl				NT	
Malathion	0.02 / 0.05	5	N/A	ND	PASS
Metalaxyl				NT	
Methomyl				NT	
Myclobutanil	0.03 / 0.1	9	N/A	ND	PASS
Naled				NT	
Oxamyl				NT	
Pentachloronitrobenzene*			TM	NT	
Permethrin	0.03 / 0.09	20	N/A	ND	PASS
Phosmet				NT	
Piperonylbutoxide	0.003 / 0.009	8	N/A	ND	PASS
Prallethrin				NT	
Propiconazole	0.01 / 0.03	20	N/A	ND	PASS
Pyrethrins				NT	
Pyridaben				NT	
Spinetoram				NT	
Spinosad				NT	
Spiromesifen	0.02 / 0.05	12	N/A	ND	PASS
Spirotetramat				NT	
Tebuconazole	0.02 / 0.07	2	N/A	ND	PASS
Thiamethoxam				NT	
Trifloxystrobin	0.01 / 0.03	30	N/A	ND	PASS





CERTIFICATE OF ANALYSIS

DOUBLE STRENGTH CBD CREAM 20265_#04 | DATE ISSUED 09/27/2020



Residual Solvents Analysis

CATEGORY 1 AND 2 RESIDUAL SOLVENTS

Residual Solvent analysis utilizing gas chromatography-mass spectrometry (GC-MS).

Method: QSP - (1204) Analysis of Residual Solvents by GC-MS

CATEGORY 1 RESIDUAL SOLVENTS TEST RESULTS - 09/25/2020 PASS

COMPOUND	LOD/LOQ (μg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (µg/g)	RESULT
1,2-Dichloroethane	0.05 / 0.1	1	N/A	ND	PASS
Benzene	0.03 / 0.09	1	N/A	ND	PASS
Chloroform	0.1 / 0.2	1	N/A	ND	PASS
Ethylene Oxide	0.1/0.4	1	N/A	ND	PASS
Methylene chloride	0.3/0.9	1	N/A	ND	PASS
Trichloroethylene	0.1 / 0.3	1	N/A	ND	PASS

CATEGORY 2 RESIDUAL SOLVENTS TEST RESULTS - 09/25/2020 PASS

Acetone	20/50	5000	N/A	ND	PASS
Acetonitrile	2/7	410	N/A	ND	PASS
Butane	10/50	5000	N/A	ND	PASS
Ethanol	20 / 50	5000	N/A	ND	PASS
Ethyl acetate	20/60	5000	N/A	ND	PASS
Ethyl ether	20 / 50	5000	N/A	ND	PASS
Heptane	20/60	5000	N/A	ND	PASS
Hexane	2/5	290	N/A	ND	PASS
Isopropyl Alcohol	10 / 40	5000	N/A	ND	PASS
Methanol	50 / 200	3000	N/A	ND	PASS
Pentane	20/50	5000	N/A	ND	PASS
Propane	10/20	5000	N/A	ND	PASS
Toluene	7/21	890	N/A	ND	PASS
Total Xylenes	50 / 160	2170	N/A	ND	PASS



Heavy Metals Analysis

Heavy metal analysis utilizing inductively coupled plasma-mass spectrometry (ICP-MS).

Method: QSP - (1160) Analysis of Heavy Metals by ICP-MS

HEAVY METALS TEST RESULTS - 09/24/2020 **⊘ PASS**

COMPOUND	LOD/LOQ (µg/g)	ACTION LIMIT (µg/g)	MEASUREMENT UNCERTAINTY (μg/g)	RESULT (μg/g)	RESULT
Cadmium	0.02 / 0.05	0.5	N/A	ND	PASS
Lead	0.04 / 0.1	0.5	N/A	ND	PASS
Arsenic	0.02 / 0.1	1.5	N/A	ND	PASS
Mercury	0.002 / 0.01	3	N/A	ND	PASS





Hemp Quality Assurance Testing

CERTIFICATE OF ANALYSIS

DOUBLE STRENGTH CBD CREAM 20265_#04 | DATE ISSUED 09/27/2020



Microbial Impurities Analysis

PCR AND PLATING

Analysis conducted by polymerase chain reaction (PCR) and fluorescence detection of microbial impurities.

Method: QSP - (1221) Analysis of Microbial Impurities

Analysis conducted by $3M^{TM}$ Petrifilm and plate counts of microbial impurities.

Method: QSP - (6794) Plating with $3M^{TM}$ PetrifilmTM

MICROBIAL IMPURITIES TEST RESULTS (PCR) - 09/26/2020

COMPOUND	ACTION LIMIT	RESULT	RESULT
Shiga toxin-producing Escherichia coli		NT	
Salmonella spp.		NT	
Aspergillus fumigatus		NT	
Aspergillus flavus		NT	
Aspergillus niger		NT	
Aspergillus terreus		NT	

MICROBIAL IMPURITIES TEST RESULTS (PLATING) - 09/26/2020 ND

COMPOUND	RESULT (cfu/g)
Aerobic Plate Count	ND
Total Yeast and Mold	ND



CERTIFICATE OF ANALYSIS:

CRYSTALLINE CANNABIDIOL



Product Name

CC - Crystalline Cannabidiol

Batch Number

190004AC

Manufacture Date

October 1, 2019

Expiration Date

October 1 2021

Botanical Source

Industrial hemp, grown and processed in Kentucky, USA in compliance with Section 7415 of the Farm Bill and applicable Kentucky State Law and State Department of Agriculture regulations.

Product Description

This product is hemp derived crystalline cannabidiol, isolated through CO_2 extraction and crystal precipitation.

Qualitative Analysis

OBSERVATION	METHOD	RESULT
Foreign Matter	Gross Visual	Absent
Color	Gross Visual	White to Pale Yellow
Molds & Mildews	Gross Visual	Absent
Smell	Olfactory	Odorless to Slight Terpenoid
Product Feel	Tactile	Fine Powder

Quantitative Analysis

Cannabinoid Analysis**

RESULT: PASS

IDENTIFICATION	METHOD	RESULT
Cannabinoid	UPLC-PDA	%wt/wt
Cannabidivarin (CBDV)	UPLC-PDA	0.10%
Cannabidiol (CBD)	UPLC-PDA	99.17%
Cannabidiolic Acid (CBDA)	UPLC-PDA	0.00%
Cannabinol (CBN)	UPLC-PDA	0.00%
Δ -9-Tetrahydrocannabinol (Δ -9-THC)	UPLC-PDA	0.00%
Cannabichromene (CBC)	UPLC-PDA	0.00%
Tetrahydrocannabinolic Acid (THCA)	UPLC-PDA	0.00%
Cannabigerol Acid (CBGA)	UPLC-PDA	0.00%
Cannabigerol (CBG)	UPLC-PDA	0.00%
Δ -8-Tetrahydrocannabinol (Δ -8-THC)	UPLC-PDA	0.00%

^{**}Denotes third party analysis. Source data available upon request.

LOQ Limit of quantitation

N/D None detected above the limits of detection



Certificate ID: 69804

Received: 10/31/19

Client Sample ID: 190004AC

Lot Number: 190004AC

Matrix: Isolates - CBD





Authorization:

Signature:

Elizabeth R. Wagoner, Lab Director

Epulgra

Date:

11/11/2019







80585

The data contained within this report was collected in accordance with the requirements of ISO/IEC17025:2017. I attest that the information contained within the report has been reviewed for accuracy and checked against the quality control requirements for each method. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

CN: Cannabinoid Profile & Potency [WI-10-17 & WI-10-17-01]

Analyst: RAS

Test Date: 11/5/2019

The client sample was analyzed for plant-based cannabinoids by Liquid Chromatography (LC). Due to the unique precision and accuracy demands of assay testing for highly purified materials, samples were prepared in class-A volumetric glassware and quantitated against a single point calibration function. Five replicate injections of cannabidiol (CBD) certified reference standard are averaged to derive the calibration function and verify injection precision less than 2% RSD. For components other than CBD, the relative response factor of the identified component is used for quantitation. Relative response factors are calculated from certified reference standards. Relative percent difference (RPD) of the Laboratory Duplicate for this sample preparation batch was less than 2%. Assay values exceeding 100.00% are scientifically valid and result from the unavoidable accumulation of uncertainty at every stage of sampling and analysis.

69804-CN

ID	Weight %	Concentration (mg/g)			
D9-THC	ND	ND			
THCV	ND	ND			
CBD	99.17	991.69			
CBDV	0.10	0.98			
CBG	ND	ND			
CBC	ND	ND			
CBN	ND	ND			
THCA	ND	ND			
CBDA	ND	ND			
CBGA	ND	ND			
D8-THC	ND	ND			
exo-THC	ND	ND			
Total	99.27	992.67	0%	Cannabinoids (wt%)	99.2%
Max THC	ND	ND			
Max CBD	99.17	991.69			

Limit of Quantitation (LOQ) = 0.05 wt%

Max THC (and Max CBD) are calculated values for total cannabinoids after heating, assuming complete decarboxylation of the acid to the neutral form. It is calculated based on the weight loss of the acid group during decarboxylation: Max THC = (0.877 x THCA) + THC. This calculation does not include other cannabinoid isomers (eg. D8-THC and exo-THC). ND = None detected above the limits of detection (LOD), which is half of LOQ.

EA: Elemental Analysis [WI-10-13]

Analyst: CJS

Test Date: 11/7/2019

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

69804-EA

Symbol	Metal	Conc. $^{1}(\mu g/kg)$	RL (µg/kg)	Limits ² (µg/kg)	Status
Al	Aluminum	1,296	50		
As	Arsenic	ND	50	200	PASS
Cd	Cadmium	ND	50	200	PASS
Ca	Calcium	3,981	500	<u>-</u>	
Cr	Chromium	ND	50	300	PASS
Co	Cobalt	ND	50	300	PASS
Cu	Copper	76	50	3,000	PASS
Fe	Iron	900	50	-	
Pb	Lead	ND	50	500	PASS
Mg	Magnesium	11,543	50		
Mn	Manganese	ND	50	-	
Hg	Mercury	ND	50	100	PASS
Mo	Molybdenum	ND	50	1,000	PASS
Ni	Nickel	ND	50	500	PASS
P	Phosphorus	8,047	500	-	
K	Potassium	45,090	500	-	
Se	Selenium	ND	50	-	
Ag	Silver	ND	50	700	PASS
S	Sulfur	1,244	500	-	
Sn	Tin	ND	500	6,000	PASS
Zn	Zinc	362	50	-	

¹⁾ ND = None detected to the Method Detection Limit (MDL)

²⁾ USP recommended maximum daily limits for inhalational drug product.

MB1: Microbiological Contaminants [WI-10-09]

Analyst: MM

Test Date: 11/1/2019

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

69804-MB1

Symbol	Analysis	Results	Units	Limits*	Status
AC	Total Aerobic Bacterial Count	<100	CFU/g	100,000 CFU/g	PASS
CC	Total Coliform Bacterial Count	<100	CFU/g	1,000 CFU/g	PASS
EB	Total Bile Tolerant Gram Negative Count	<100	CFU/g	1,000 CFU/g	PASS
YM	Total Yeast & Mold	<100	CFU/g	10,000 CFU/g	PASS

Note: All recorded Microbiological tests are within the established limits.

MB2: Pathogenic Bacterial Contaminants [WI-10-10]

Analyst: LabAdmin

Test Date: 11/2/2019

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

69804-MB2

Test ID	Analysis	Results	Units	Limits*	Status
69804-ECPT	E. coli (O157)	Negative	NA	Non Detected	PASS
69804-SPT	Salmonella	Negative	NA	Non Detected	PASS

Note: All recorded pathogenic bacteria tests passed.

MY: Mycotoxin Testing [WI-10-05]

Analyst: AKR

Test Date: 11/7/2019

This test method was performed in accordance with the requirements of ISO/IEC 17025. These results relate only to the test article listed in this report. Reports may not be reproduced except in their entirety.

69804-MY

Test ID	Date	Results	MDL	Limits	Status*	
Total Aflatoxin	11/7/2019	< MDL	2 ppb	< 20 ppb	PASS	
Total Ochratoxin	11/7/2019	< MDL	3 ppb	< 20 ppb	PASS	

TP: Terpenes Profile [WI-10-27]

Analyst: JR

Test Date: 11/6/2019

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations. All values are semiquantitative estimates based on recorded peak areas relative to terpene calibration data.

69804-TP

Compound	ppm	Terpene Profile		Compound	ppm	Terpene P	rofile
beta-myrcene				camphene			
isopulegol				L-fenchone			
menthol				beta-pinene			
cis-nerolidol				eucalyptol			
trans-nerolidol				alpha-terpinene			
gamma-terpinene				delta-3-carene			
alpha-bisabolol				alpha-pinene			
linalool				D-limonene			
beta-caryophyllene				geraniol			
caryophyllene oxide				cis-beta-ocimene			
guaiol				alpha-ocimene			
sabinene				alpha-phellandrene			
alpha-humulene				terpinolene			
p-cymene							
рр	om 0.00	5.00	10.00		0.00	5.00	10.00
Total Terpene: <0.	.1 wt%						

VC: Analysis of Volatile Organic Compounds [WI-10-28]

Analyst: JR

Test Date: 11/4/2019

The client sample was analyzed by Head-Space Gas Chromatography (HS-GC). The collected data was compared to data collected for certified reference standards at known concentrations.

69804-VC

Compound	CAS	Amount 1	Limit ²	RL	Status
Propane	74-98-6	ND	1,000 ppm	100	PASS
Isobutane	75-28-5	ND	1,000 ppm	100	PASS
Butane	106-97-8	ND	1,000 ppm	100	PASS
Methanol	67-56-1	ND	3,000 ppm	100	PASS
Pentane	109-66-0	ND	5,000 ppm	100	PASS
Ethanol	64-17-5	ND	5,000 ppm	100	*
Acetone	67-64-1	ND	5,000 ppm	100	PASS
Isopropanol	67-63-0	ND	5,000 ppm	100	PASS
Acetonitrile	75-05-8	ND	410 ppm	100	PASS
Hexane	110-54-3	ND	290 ppm	100	PASS
Heptane	142-82-5	ND	5,000 ppm	100	PASS

¹⁾ ND = Not detected at a level greater than the Reporting Limit (RL).

END OF REPORT

²⁾ In ppm, based on USP recommended limits for residual solvents, adopted by the Massachusetts Department of Public Health for cannabis concentrates and extracts on 3/31/16. Butane/Propane limits are based on limits established for state of Colorado.

^(*) For ethanol, as many formulations contain flavorings based on ethanol extracts of natural products, no status has been assigned.



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GenCanna Global Report Number: P193049

4274 Colby Rd. **Report Date:** October 17, 2019

Winchester, KY 40391 Client Project ID:

 Client Sample ID:
 190004AC
 Sample Date:
 10/02/2019

 PAL Sample ID:
 P193049-01
 Received Date:
 10/03/2019

Extraction Date: 10/03/2019

Certificate of Analysis

Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes	Analysis Date	Analyte	Amount Detected	LOQ (mg/kg)	Notes
JASBC 69(3	3):121-126, 2011 (GC-	-MS/MS)							
10/08/2019	a-BHC	ND	0.20		10/08/2019	Aldrin	ND	0.20	
10/08/2019	b-BHC	ND	0.20		10/08/2019	Benfluralin	ND	0.20	
10/08/2019	Bolstar	ND	0.20		10/08/2019	Bromopropylate	ND	0.20	
10/08/2019	Captan	ND	4.0		10/08/2019	Chlordane	ND	0.20	
10/08/2019	Chlorfenapyr	ND	0.20		10/08/2019	Chloroneb	ND	0.20	
10/08/2019	Chlorothalonil	ND	0.20		10/08/2019	Chlorpropham	ND	0.20	
10/08/2019	Chlorpyrifos	ND	0.20		10/08/2019	Chlorpyrifos-methyl	ND	0.20	
10/08/2019	cis-Nonachlor	ND	0.20		10/08/2019	Cyfluthrin	ND	1.0	
10/08/2019	Cypermethrin	ND	1.0		10/08/2019	Dacthal	ND	0.20	
10/08/2019	d-BHC	ND	0.20		10/08/2019	Deltamethrin	ND	1.0	
10/08/2019	Diazinon	ND	0.20		10/08/2019	Dichlobenil	ND	0.20	
10/08/2019	Dichlorofenthion	ND	0.20		10/08/2019	Dichlorvos	ND	0.20	
10/08/2019	Diclofop-methyl	ND	0.20		10/08/2019	Dicloran	ND	1.0	
10/08/2019	Dicofol	ND	0.20		10/08/2019	Diphenamid	ND	0.20	
10/08/2019	Dithiopyr	ND	0.20		10/08/2019	Esfenvalerate	ND	0.20	
10/08/2019	Ethalfluralin	ND	0.20		10/08/2019	Ethofumesate	ND	0.20	
10/08/2019	Ethoprophos	ND	0.20		10/08/2019	Ethoxyquin	ND	0.20	
10/08/2019	Etoxazole	ND	0.20		10/08/2019	Etridiazole	ND	0.20	
10/08/2019	Fenarimol	ND	0.20		10/08/2019	Fenvalerate	ND	0.20	
10/08/2019	Fipronil	ND	0.20		10/08/2019	Fludioxonil	ND	0.20	
10/08/2019	Flutolanil	ND	0.20		10/08/2019	g-BHC	ND	0.20	
10/08/2019	Heptachlor	ND	0.20		10/08/2019	Heptachlor epoxide	ND	0.20	
10/08/2019	Hexachlorobenzene	ND	0.20		10/08/2019	Kresoxim-methyl	ND	0.20	
10/08/2019	lambda-Cyhalothrin	ND	0.57		10/08/2019	Malathion	ND	0.20	
10/08/2019	Mefenoxam	ND	0.20		10/08/2019	Metolachlor	ND	0.20	
10/08/2019	MGK-264	ND	0.20		10/08/2019	Myclobutanil	ND	0.20	
10/08/2019	o-Phenylphenol	ND	0.40		10/08/2019	Oxadiazon	ND	0.20	
10/08/2019	Oxyfluorfen	ND	0.40		10/08/2019	p,p'-DDD	ND	0.20	
10/08/2019	p,p'-DDE	ND	0.20		10/08/2019	p,p'-DDT	ND	0.20	
10/08/2019	Paclobutrazol	ND	0.20		10/08/2019	Parathion-methyl	ND	0.20	
10/08/2019	Pendimethalin	ND	0.20		10/08/2019	Pentachlorophenyl methyl sulfide	ND	0.20	
10/08/2019	Permethrin	ND	0.40		10/08/2019	Pirimicarb	ND	0.20	
10/08/2019	Procymidone	ND	0.20		10/08/2019	Prodiamine	ND	0.40	
10/08/2019	Pronamide	ND	0.20		10/08/2019	Pyriproxyfen	ND	0.20	
10/08/2019	Quinoxyfen	ND	0.20		10/08/2019	Spirodiclofen	ND	0.20	
10/08/2019	Tetraconazole	ND	0.20		10/08/2019	trans-Nonachlor	ND	0.20	



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GenCanna Global **Report Number:** P193049

4274 Colby Rd. **Report Date:** October 17, 2019

Client Project ID:

Client Sample ID: 190004AC **Sample Date:** 10/02/2019 **PAL Sample ID:** P193049-01 **Received Date:** 10/03/2019

Extraction Date: 10/03/2019

Certificate of Analysis (Continued)

ASBC 69(3):121-126, 2011 (GC-MS/MS) (Continued) 1008/2019 Trifloratin ND	Analysis Date	Analyto	Amount Detected	LOQ	Notes	Analysis Date	Analyto	Amount Detected	LOQ	Notes
No. No.	Date	Analyte	Detected	(mg/kg)	Notes	Date	Analyte	Detected	(mg/kg)	notes
Name	JASBC 69(3):121-126, 2011 (GC-	MS/MS) (Con	tinued)						
1008/2019 3-Hydroxyearbofuran ND 0.20 1008/2019 Abameetin ND 1.0	10/08/2019	Trifluralin	ND	0.20						
1008/2019 Acequate ND	JASBC 69(3):121-126, 2011 (LC-	MS/MS)							
1008/2019 Acetamiprid ND 0.20 1008/2019 Aldicarb Sulfoxide ND 0.20 1008/2019 Aldicarb Sulfoxide ND 0.20 1008/2019 Articine ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Carbofuram ND 0.20 1008/2019 Celthodism ND 0.20 1008/2019 Distriction ND 0.20 1008/2019	10/08/2019	3-Hydroxycarbofuran	ND	0.20		10/08/2019	Abamectin	ND	1.0	
1008/2019 Aldicarb Sulfone ND 0.20 1008/2019 Aldicarb Sulfoxide ND 0.20 1008/2019 Ametoctradin ND 0.20 1008/2019 Arazine ND 0.20 1008/2019 Bendiocarb ND 0.40 1008/2019 Bensulide ND 0.20 1008/2019 Bendiocarb ND 0.20 1008/2019 Bienthrin ND 0.20 1008/2019 Sienazate ND 0.20 1008/2019 Bienthrin ND 0.20 1008/2019 Carbayl ND 0.20 1008/2019 Carfeditazine ND 0.20 1008/2019 Carbofuran ND 0.20 1008/2019 Carfeditazine ND 0.20 1008/2019 Calcontratiliprole ND 0.20 1008/2019 Celthodim ND 0.20 1008/2019 Cyanzarine ND 0.20 1008/2019 Cyantramiliprole ND 0.20 1008/2019 Syunzarine ND 0.20 </td <td>10/08/2019</td> <td>Acephate</td> <td>ND</td> <td>0.80</td> <td></td> <td>10/08/2019</td> <td>Acequinocyl-Hydroxy</td> <td>ND</td> <td>1.0</td> <td></td>	10/08/2019	Acephate	ND	0.80		10/08/2019	Acequinocyl-Hydroxy	ND	1.0	
1008/2019 Ametoctradin ND 0.20 1008/2019 Atrazine ND 0.20 1008/2019 Azoxystrobin ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bromacil ND 0.20 1008/2019 Bromacil ND 0.20 1008/2019 Carbendazim ND 0.20 1008/2019 Carbenfuran ND 0.20 1008/2019 Clofenatrantiliprole ND 0.20 1008/2019 Clofenatrantiliprole ND 0.20 1008/2019 Clofenatrantiliprole ND 0.20 1008/2019 Cyanazine ND 0.20 1008/2019 Cyflufenamid ND 0.20 1008/2019 Cyflufenamid ND 0.20 1008/2019 Cyflufenamid ND 0.20 1008/2019 Cymoxanil ND 0.20 1008/2019 Cymoxanil ND 0.20 1008/2019 Dimethoate ND 0.20 1008/2019 Dimet	10/08/2019	Acetamiprid	ND	0.20		10/08/2019	Aldicarb	ND	0.20	
1008/2019 Azinphos-methyl ND 0.40 1008/2019 Azoxystrobin ND 0.20 1008/2019 Bendiocarb ND 0.20 1008/2019 Bienthirin ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bienthirin ND 0.20 1008/2019 Carbaryl ND 0.20 1008/2019 Carbendazin ND 0.20 1008/2019 Carbenfuran ND 0.20 1008/2019 Carbendazin ND 0.20 1008/2019 Carbenfuran ND 0.20 1008/2019 Clethodim ND 0.20 1008/2019 Clofentezine ND 0.20 1008/2019 Clothadimidin ND 0.20 1008/2019 Cyanzarine ND 0.20 1008/2019 Cyantraniliprole ND 0.20 1008/2019 Cyanzarine ND 0.20 1008/2019 Cyantraniliprole ND 0.20 1008/2019 Cyflufenamid ND 0.20	10/08/2019	Aldicarb Sulfone	ND	0.20		10/08/2019	Aldicarb Sulfoxide	ND	0.20	
1008/2019 Bendiocarb ND 0.20 1008/2019 Bensulide ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bifenazate ND 0.20 1008/2019 Bosealid ND 0.20 1008/2019 Bosealid ND 0.20 1008/2019 Carborlara ND 0.20 1008/2019 Carborlaran ND 0.20 1008/2019 Carfentrazone-ethyl ND 0.20 1008/2019 Colfentezine ND 0.20 1008/2019 Colfentezine ND 0.20 1008/2019 Colfentezine ND 0.20 1008/2019 Colfentezine ND 0.20 1008/2019 Cyanzarine ND 0.20 1008/2019 Cymoxanil ND 0.20 1008/2019 Cymoxanil ND 0.20 1008/2019 Dimetofate ND 0.20 1008/2019 Enamiphos sulfone ND 0.20	10/08/2019	Ametoctradin	ND	0.20		10/08/2019	Atrazine	ND	0.20	
1008/2019 Bifenazate ND 0.20 10/08/2019 Bifenthrin ND 0.20 10/08/2019 Boscalid ND 0.20 10/08/2019 Bromacil ND 0.20 10/08/2019 Carbaryl ND 0.20 10/08/2019 Carbendazim ND 0.20 10/08/2019 Carbofuran ND 0.20 10/08/2019 Carfentrazone-ethyl ND 0.20 10/08/2019 Chlorantraniliprole ND 0.20 10/08/2019 Clethadim ND 0.40 10/08/2019 Clofentezine ND 0.20 10/08/2019 Clethadimin ND 0.20 10/08/2019 Cyanzine ND 0.20 10/08/2019 Cyeloate ND 0.20 10/08/2019 Cymurali ND 0.20 10/08/2019 Cylumetoren ND 0.20 10/08/2019 Cymurali ND 0.20 10/08/2019 Dimethoren ND 0.20 10/08/2019 Diffubenzuron ND 0.	10/08/2019	Azinphos-methyl	ND	0.40		10/08/2019	Azoxystrobin	ND	0.20	
1008/2019 Boscalid ND 0.20 10/08/2019 Carbenyl ND 0.20 1008/2019 Carbofuran ND 0.20 10/08/2019 Carbendazim ND 0.20 1008/2019 Carbofuran ND 0.20 10/08/2019 Carfentrazone-ethyl ND 0.20 1008/2019 Clofentezine ND 0.20 10/08/2019 Clothodim ND 0.40 1008/2019 Clofentezine ND 0.20 10/08/2019 Clothianidin ND 0.20 1008/2019 Cyazofamid ND 0.20 10/08/2019 Cycloate ND 0.40 1008/2019 Cymenanid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 1008/2019 Cymoxanii ND 0.20 10/08/2019 Daminozide ND 0.20 1008/2019 Diffubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 1008/2019 Disulfoton sulfone ND 0.	10/08/2019	Bendiocarb	ND	0.20		10/08/2019	Bensulide	ND	0.20	
10/08/2019 Carbaryl ND 0.20 10/08/2019 Carbendazim ND 0.20 10/08/2019 Carbofuran ND 0.20 10/08/2019 Carbentrazone-ethyl ND 0.20 10/08/2019 Chlorantraniliprole ND 0.20 10/08/2019 Clethodim ND 0.40 10/08/2019 Cyanazine ND 0.20 10/08/2019 Cyantraniliprole ND 0.20 10/08/2019 Cyanziani ND 0.20 10/08/2019 Cycloate ND 0.40 10/08/2019 Cyanzianid ND 0.20 10/08/2019 Cycloate ND 0.40 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 0.20 10/08/2019 Dirutenamid ND 0.20 10/08/2019 Daminozide ND 0.20 10/08/2019 Dirutenamid ND 0.20 10/08/2019 Dimethoamorph ND 0.20 10/08/2019 Disulfoton sulfone ND </td <td>10/08/2019</td> <td>Bifenazate</td> <td>ND</td> <td>0.20</td> <td></td> <td>10/08/2019</td> <td>Bifenthrin</td> <td>ND</td> <td>0.20</td> <td></td>	10/08/2019	Bifenazate	ND	0.20		10/08/2019	Bifenthrin	ND	0.20	
10/08/2019 Carbofuran ND 0.20 10/08/2019 Carfentrazone-ethyl ND 0.20 10/08/2019 Chlorantraniliprole ND 0.20 10/08/2019 Clethodim ND 0.40 10/08/2019 Clofentezine ND 0.20 10/08/2019 Clothianidin ND 0.20 10/08/2019 Cyanzariane ND 0.20 10/08/2019 Cyantraniliprole ND 0.40 10/08/2019 Cyglufenamid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 10/08/2019 Cymoxanii ND 0.20 10/08/2019 Daminozide ND 0.20 10/08/2019 DCPMU ND 0.20 10/08/2019 Dimetofen ND 0.20 10/08/2019 Diflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 Fenamiphos sulfone	10/08/2019	Boscalid	ND	0.20		10/08/2019	Bromacil	ND	0.20	
10/08/2019 Chlorantraniliprole ND 0.20 10/08/2019 Clethodim ND 0.40 10/08/2019 Clofentezine ND 0.20 10/08/2019 Clothianidin ND 0.20 10/08/2019 Cyanzaine ND 0.20 10/08/2019 Cyantraniliprole ND 0.20 10/08/2019 Cyazofamid ND 0.20 10/08/2019 Cydunetofen ND 0.40 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 0.20 10/08/2019 DCPMU ND 0.20 10/08/2019 Diazoxon ND 0.20 10/08/2019 Diflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Elofenprox ND 0.20 10/08/2019 Fementifons sulfone ND 0.20 10/08/2019 Elenamiphos sulfone ND	10/08/2019	Carbaryl	ND	0.20		10/08/2019	Carbendazim	ND	0.20	
10/08/2019 Clofentezine ND 0.20 10/08/2019 Clothianidin ND 0.20 10/08/2019 Cyanazine ND 0.20 10/08/2019 Cyantraniliprole ND 0.20 10/08/2019 Cyazofamid ND 0.20 10/08/2019 Cycloate ND 0.40 10/08/2019 Cyflufenamid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 1.0 10/08/2019 DCPMU ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Diinethomorph ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Dinotefuran ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Enderpros ND 0.20 10/08/2019 Fenamiphos sulfone ND	10/08/2019	Carbofuran	ND	0.20		10/08/2019	Carfentrazone-ethyl	ND	0.20	
10/08/2019 Cyanazine ND 0.20 10/08/2019 Cyantraniliprole ND 0.20 10/08/2019 Cyazofamid ND 0.20 10/08/2019 Cycloate ND 0.40 10/08/2019 Cyflufenamid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 1.0 10/08/2019 DCPMU ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Diflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Dimethoare ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Elofenprox ND 0.20 10/08/2019 Fanamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenazaquin <	10/08/2019	Chlorantraniliprole	ND	0.20		10/08/2019	Clethodim	ND	0.40	
10/08/2019 Cyazofamid ND 0.20 10/08/2019 Cycloate ND 0.40 10/08/2019 Cyflufenamid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 1.0 10/08/2019 DCPMU ND 0.20 10/08/2019 Diazoxon ND 0.20 10/08/2019 Diffubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Dinotefuran ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 Fenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenazaquin ND	10/08/2019	Clofentezine	ND	0.20		10/08/2019	Clothianidin	ND	0.20	
10/08/2019 Cyflufenamid ND 0.20 10/08/2019 Cyflumetofen ND 0.20 10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 1.0 10/08/2019 DCPMU ND 0.20 10/08/2019 Diazoxon ND 0.20 10/08/2019 Diflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 Jennothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Fenaniphor sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenazquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND	10/08/2019	Cyanazine	ND	0.20		10/08/2019	Cyantraniliprole	ND	0.20	
10/08/2019 Cymoxanil ND 0.20 10/08/2019 Daminozide ND 1.0 10/08/2019 DCPMU ND 0.20 10/08/2019 Diazoxon ND 0.20 10/08/2019 Diflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 d-Phenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfone <	10/08/2019	Cyazofamid	ND	0.20		10/08/2019	Cycloate	ND	0.40	
10/08/2019 DCPMU ND 0.20 10/08/2019 Diazoxon ND 0.20 10/08/2019 Diffubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Dinotefuran ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 d-Phenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fluopicolide ND </td <td>10/08/2019</td> <td>Cyflufenamid</td> <td>ND</td> <td>0.20</td> <td></td> <td>10/08/2019</td> <td>Cyflumetofen</td> <td>ND</td> <td>0.20</td> <td></td>	10/08/2019	Cyflufenamid	ND	0.20		10/08/2019	Cyflumetofen	ND	0.20	
10/08/2019 Difflubenzuron ND 0.20 10/08/2019 Dimethoate ND 0.20 10/08/2019 Dimethomorph ND 0.20 10/08/2019 Dinotefuran ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 d-Phenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Fluoricantid ND 0.20 10/08/2019 Fluopyram	10/08/2019	Cymoxanil	ND	0.20		10/08/2019	Daminozide	ND	1.0	
10/08/2019 Dimethomorph ND 0.20 10/08/2019 Dinotefuran ND 0.20 10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 d-Phenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram	10/08/2019	DCPMU	ND	0.20		10/08/2019	Diazoxon	ND	0.20	
10/08/2019 Disulfoton sulfone ND 0.20 10/08/2019 Diuron ND 0.20 10/08/2019 Etofenprox	10/08/2019	Diflubenzuron	ND	0.20		10/08/2019	Dimethoate	ND	0.20	
10/08/2019 d-Phenothrin ND 0.50 10/08/2019 Etofenprox ND 0.20 10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Flonicamid ND 1.0 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad <td< td=""><td>10/08/2019</td><td>Dimethomorph</td><td>ND</td><td>0.20</td><td></td><td>10/08/2019</td><td>Dinotefuran</td><td>ND</td><td>0.20</td><td></td></td<>	10/08/2019	Dimethomorph	ND	0.20		10/08/2019	Dinotefuran	ND	0.20	
10/08/2019 Famphur ND 0.20 10/08/2019 Fenamidone ND 0.20 10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Flonicamid ND 1.0 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone	10/08/2019	Disulfoton sulfone	ND	0.20		10/08/2019	Diuron	ND	0.20	
10/08/2019 Fenamiphos sulfone ND 0.20 10/08/2019 Fenamiphos sulfoxide ND 0.20 10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flupyradifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Flutiafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	d-Phenothrin	ND	0.50		10/08/2019	Etofenprox	ND	0.20	
10/08/2019 Fenazaquin ND 0.20 10/08/2019 Fenbuconazole ND 0.20 10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Flonicamid ND 1.0 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Famphur	ND	0.20		10/08/2019	Fenamidone	ND	0.20	
10/08/2019 Fenoxycarb ND 0.20 10/08/2019 Fenpropathrin ND 0.20 10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Flonicamid ND 1.0 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flurjadifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fenamiphos sulfone	ND	0.20		10/08/2019	Fenamiphos sulfoxide	ND	0.20	
10/08/2019 Fenpyroximate ND 0.20 10/08/2019 Flonicamid ND 1.0 10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flupyradifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fenazaquin	ND	0.20		10/08/2019	Fenbuconazole	ND	0.20	
10/08/2019 Fluometuron ND 0.20 10/08/2019 Fluopicolide ND 0.20 10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Fluryadifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fenoxycarb	ND	0.20		10/08/2019	Fenpropathrin	ND	0.20	
10/08/2019 Fluopyram ND 0.20 10/08/2019 Fluoxastrobin ND 0.20 10/08/2019 Flupyradifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fenpyroximate	ND	0.20		10/08/2019	Flonicamid	ND	1.0	
10/08/2019 Flupyradifurone ND 0.20 10/08/2019 Fluridone ND 0.20 10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fluometuron	ND	0.20		10/08/2019	Fluopicolide	ND	0.20	
10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Fluopyram	ND	0.20		10/08/2019	Fluoxastrobin	ND	0.20	
10/08/2019 Flutriafol ND 0.20 10/08/2019 Fluvalinate ND 0.20 10/08/2019 Fluxapyroxad ND 0.20 10/08/2019 Formetanate HCl ND 0.20 10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019	Flupyradifurone	ND	0.20		10/08/2019	Fluridone	ND	0.20	
10/08/2019 Hexazinone ND 0.20 10/08/2019 Hexythiazox ND 0.20	10/08/2019		ND	0.20		10/08/2019	Fluvalinate	ND	0.20	
•	10/08/2019	Fluxapyroxad	ND	0.20		10/08/2019	Formetanate HCl	ND	0.20	
10/08/2019 Imazalil ND 0.20 10/08/2019 Imidacloprid ND 0.20	10/08/2019	Hexazinone	ND	0.20		10/08/2019	Hexythiazox	ND	0.20	
	10/08/2019	Imazalil	ND	0.20		10/08/2019	•	ND	0.20	



Winchester, KY 40391

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GenCanna Global Report Number: P193049

4274 Colby Rd. Report Date: October 17, 2019

Client Project ID:

 Client Sample ID:
 190004AC
 Sample Date:
 10/02/2019

 PAL Sample ID:
 P193049-01
 Received Date:
 10/03/2019

Extraction Date: 10/03/2019

Certificate of Analysis (Continued)

Analysis		Amount	LOQ		Analysis		Amount	LOQ	
Date	Analyte	Detected	(mg/kg)	Notes	Date	Analyte	Detected	(mg/kg)	Notes
ASBC 69(3):121-126, 2011 (LC	-MS/MS) (Con	tinued)						
10/08/2019	Indaziflam	ND	0.20		10/08/2019	Indoxacarb	ND	0.20	
10/08/2019	Isoxaben	ND	0.20		10/08/2019	Linuron	ND	0.20	
10/08/2019	Malaoxon	ND	0.20		10/08/2019	Mandipropamid	ND	0.20	
10/08/2019	Metconazole	ND	0.20		10/08/2019	Methamidophos	ND	0.80	
10/08/2019	Methidathion	ND	0.20		10/08/2019	Methiocarb	ND	0.20	
10/08/2019	Methomyl	ND	0.20		10/08/2019	Methoxyfenozide	ND	0.20	
10/08/2019	Metrafenone	ND	0.20		10/08/2019	Mevinphos	ND	0.20	
10/08/2019	Norflurazon	ND	0.20		10/08/2019	Novaluron	ND	0.20	
10/08/2019	Omethoate	ND	0.20		10/08/2019	Oxadixyl	ND	1.0	
10/08/2019	Oxamyl	ND	0.20		10/08/2019	Oxydemeton-Methyl	ND	0.20	
10/08/2019	Penthiopyrad	ND	0.20		10/08/2019	Phorate Sulfone	ND	1.0	
10/08/2019	Phorate Sulfoxide	ND	0.20		10/08/2019	Phosalone	ND	0.20	
10/08/2019	Phosmet	ND	0.20		10/08/2019	Phosphamidon	ND	0.20	
0/08/2019	Piperonyl Butoxide	ND	1.0		10/08/2019	Pirimiphos-methyl	ND	0.20	
10/08/2019	Prallethrin	ND	0.20		10/08/2019	Prometon	ND	0.20	
0/08/2019	Prometryn	ND	0.20		10/08/2019	Propamocarb	ND	0.20	
10/08/2019	Propargite	ND	0.20		10/08/2019	Propiconazole	ND	0.40	
10/08/2019	Propoxur	ND	0.20		10/08/2019	Pymetrozine	ND	0.20	
10/08/2019	Pyraclostrobin	ND	0.20		10/08/2019	Pyraflufen-ethyl	ND	0.20	
10/08/2019	Pyrethrin	ND	1.0		10/08/2019	Pyridaben	ND	0.20	
10/08/2019	Pyrimethanil	ND	0.20		10/08/2019	Rotenone	ND	0.20	
10/08/2019	Sethoxydim	ND	0.40		10/08/2019	Siduron	ND	0.20	
10/08/2019	Simazine	ND	0.20		10/08/2019	Simetryn	ND	0.20	
10/08/2019	Spinetoram	ND	0.20		10/08/2019	Spinosad	ND	0.20	
10/08/2019	Spiromesifen	ND	0.40		10/08/2019	Spirotetramat	ND	0.20	
10/08/2019	Spiroxamine	ND	0.20		10/08/2019	Sulfoxaflor	ND	0.20	
10/08/2019	Tebuconazole	ND	0.20		10/08/2019	Tebufenozide	ND	0.20	
10/08/2019	Tebuthiuron	ND	0.20		10/08/2019	Terbuthylazine	ND	0.20	
10/08/2019	Thiabendazole	ND	0.20		10/08/2019	Thiacloprid	ND	0.20	
10/08/2019	Thiamethoxam	ND	0.20		10/08/2019	Thiobencarb	ND	0.20	
10/08/2019	Thiodicarb	ND	0.20		10/08/2019	Tolfenpyrad	ND	0.20	
10/08/2019	Triadimefon	ND	0.20		10/08/2019	Triadimenol	ND	0.40	
10/08/2019	Trifloxystrobin	ND	0.20		10/08/2019	Triflumizole	ND	0.20	



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GenCanna Global Report Number: P193049

4274 Colby Rd. **Report Date:** October 17, 2019

Winchester, KY 40391 Client Project ID:

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 190004AC
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 P193049-01
 Received Date:
 10/03/2019

Extraction Date: 10/03/2019

Notes and Definitions

NotesDefinitionLOQLimit of QuantitationNDNot Detected

* Not included under current scope of accreditation

The results contained in this report relate only to the items tested.

The results reflect the condition of the samples as received by PAL.

Samples will be stored for a minimum of 60 days after the final report is issued, as described in our Quality Manual.

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