



12423 NE Whitaker Way
 Portland, OR 97230
 503-254-1794



Report Number: 23-013698/D002.R000
Report Date: 11/29/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/20/23 12:39

Customer: NW Natural Goods
Product identity: HEMP - LM 0089
Client/Metric ID: .
Laboratory ID: 23-013698-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.200		mg/4g		CBD-Total per Serving Size 25.1 mg/4g
CBD per 4g	25.1		mg/4g		
CBG per 4g	0.688		mg/4g		THC-Total per Serving Size <LOQ
					(Reported in milligrams per serving)

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

Analyte	Result (mg/kg)	Limits (mg/kg)	Status
Multi-Residue Pesticide Profile	< LOQ for all analytes		

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.



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Product identity: HEMP - LM 0089

Client/Metric ID: .

Sample Date:

Laboratory ID: 23-013698-0001

Evidence of Cooling: No

Temp: 18.8

Relinquished by: ramos

Serving Size #1: 4 g

Sample Results

Potency per 4g					
Method: J AOAC 2015 V98-6 (mod) ^b		Units mg/se		Batch: 2313030	
				Analyze: 11/21/23 9:42:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.200		mg/4g	0.127	
CBC-A per 4g	< LOQ		mg/4g	0.127	
CBC-Total per 4g	< LOQ		mg/4g	0.239	
CBD per 4g	25.1		mg/4g	0.127	B1
CBD-A per 4g	< LOQ		mg/4g	0.127	
CBD-Total per 4g	25.1		mg/4g	0.239	
CBDV per 4g	< LOQ		mg/4g	0.127	
CBDV-A per 4g	< LOQ		mg/4g	0.127	
CBDV-Total per 4g	< LOQ		mg/4g	0.238	
CBE per 4g	< LOQ		mg/4g	0.127	
CBG per 4g	0.688		mg/4g	0.127	
CBG-A per 4g	< LOQ		mg/4g	0.127	
CBG-Total per 4g	0.688		mg/4g	0.238	
CBL per 4g	< LOQ		mg/4g	0.127	
CBL-A per 4g	< LOQ		mg/4g	0.127	
CBL-Total per 4g	< LOQ		mg/4g	0.239	
CBN per 4g	< LOQ		mg/4g	0.127	
CBT per 4g	< LOQ		mg/4g	0.127	
Δ8-THCV per 4g	< LOQ		mg/4g	0.127	
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.127	
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.127	
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.255	
Δ8-THC per 4g	< LOQ		mg/4g	0.127	
Δ9-THC per 4g	< LOQ		mg/4g	0.127	
delta-9-THCP per 4g	< LOQ		mg/4g	0.127	
exo-THC per 4g	< LOQ		mg/4g	0.127	
THC-A per 4g	< LOQ		mg/4g	0.127	
THC-Total per 4g	< LOQ		mg/4g	0.239	
THCV per 4g	< LOQ		mg/4g	0.127	
THCV-A per 4g	< LOQ		mg/4g	0.127	
THCV-Total per 4g	< LOQ		mg/4g	0.239	
Total Cannabinoids per 4g	26.0		mg/4g		B1

Test results relate only to the parameters tested and to the samples as received by the laboratory. Test results meet all requirements of NELAP and the Columbia Laboratories quality assurance plan unless otherwise noted. This report shall not be reproduced, except in full, without the written consent of this laboratory. Samples will be retained for a maximum of 30 days from the receipt date unless prior arrangements have been made.

Testing in accordance with: OAR 333-007-0430



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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2312980	11/23/23 AOAC 991.14 (Petrifilm) ^P		
Total Coliforms	< LOQ		cfu/g	10	2312980	11/23/23 AOAC 991.14 (Petrifilm) ^P		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2312981	11/24/23 AOAC 2014.05 (RAPID) ^P		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2312981	11/24/23 AOAC 2014.05 (RAPID) ^P		

Solvents Method: Residual Solvents by GC/MS^P Units µg/g Batch 2313070 Analyze 11/27/23 10:13 AM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass	
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane (Isopentane)	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethyl butane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200		
2,3-Dimethyl butane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0		
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass	
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	5000	400	pass	
Cyclohexane	< LOQ	3880	200	pass		Ethyl acetate	< LOQ	5000	200	pass	
Ethyl benzene	< LOQ		200			Ethyl ether	< LOQ	5000	200	pass	
Ethylene glycol	< LOQ	620	200	pass		Ethylene oxide	< LOQ	50.0	20.0	pass	
Hexanes (sum)	< LOQ	290	150	pass		Isopropyl acetate	< LOQ	5000	200	pass	
Isopropyl benzene (Cumene)	< LOQ	70.0	30.0	pass		m,p-Xylene	< LOQ		200		
Methanol	< LOQ	3000	200	pass		Methylene chloride	< LOQ	600	60.0	pass	
Methylpropane (Isobutane)	< LOQ		200			n-Butane	< LOQ		200		
n-Heptane	< LOQ	5000	200	pass		n-Hexane	< LOQ		30.0		
n-Pentane	< LOQ		200			o-Xylene	< LOQ		200		
Pentanes (sum)	< LOQ	5000	600	pass		Propane	< LOQ	5000	200	pass	
Tetrahydrofuran	< LOQ	720	100	pass		Toluene	< LOQ	890	100	pass	
Total Xylenes	< LOQ		400			Total Xylenes and Ethyl benzene	< LOQ	2170	600	pass	

Pesticides Method: AOAC 2007.01 & EN 15662 (mod)^P Units mg/kg Batch 2313093 Analyze 11/29/23 01:01 PM

Analyte	Result	Limits	Status	Notes
Multi-Residue Pesticide Profile	< LOQ for all analytes			



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Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Arsenic*	< LOQ	0.200	mg/kg	0.0182	2313045	11/22/23 AOAC 2013.06 (mod.) ^p	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0182	2313045	11/22/23 AOAC 2013.06 (mod.) ^p	pass	
Lead*	< LOQ	0.500	mg/kg	0.0182	2313045	11/22/23 AOAC 2013.06 (mod.) ^p	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00911	2313045	11/22/23 AOAC 2013.06 (mod.) ^p	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	17.1		g/100g	0.10	2313015	11/21/23 AOAC 925.10 (mod.) ^p		
Water Activity	0.636		Aw	0.030	2312998	11/21/23 AOAC 978.18 ^p		



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Abbreviations

Limits: Action Levels per OAR-333-007-0400, OAR-333-007-0210, OAR-333-007-0220, CCR title 16-division 42. BCC-section 5723

Limit(s) of Quantitation (LOQ): The minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.

^p = ISO/IEC 17025:2017 accredited method.

[¥] = TNI accredited analyte.

Units of Measure

cfu/g = Colony forming units per gram

g = g

g/100g = Grams per 100 Grams

µg/g = Microgram per gram

mg/kg = Milligram per kilogram = parts per million (ppm)

mg/4g = Milligram per 4g

% = Percentage of sample

Aw = Water Activity

% wt = µg/g divided by 10,000

Glossary of Qualifiers

B1: The sample concentration is greater than 5 times the blank concentration.

Approved Signatory

Derrick Tanner
General Manager



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Cannabis Multi-Residue Profile, Limits of Quantitation

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Abamectin	0.100	Clethodim	0.050	Endrin	0.100
Acephate	0.100	Clethodim Sulfone	0.050	EPN	0.050
Acetamiprid	0.020	Clethodim Sulfoxide	0.050	EPIC	0.100
Acetochlor	0.100	Cb fenfentazine	0.020	Esfenvalerate/ Fenvalerate	0.200
Acrinathrin	0.100	Cb mazone	0.020	Etaconazole	0.100
Alachlor	0.100	Cb thianidin	0.200	Ethalfuralin	0.100
Aldicarb	0.100	Cumaphos	0.050	Ethiofencarb	0.050
Aldicarb sulfoxide	0.100	Crtoxypfos	0.020	Ethion	0.200
Aldoxycarb (Aldicarb-sulfone)	0.100	Cyarazine	0.020	Ethirimol	0.100
Aldrin	0.100	Cyazofenphos	0.020	Ethofumesate	0.050
Ametoctradin	0.020	Cyatranylprole	0.050	Ethoprophos	0.020
Ametryn	0.500	Cyazflamid	0.020	Etofenprox	0.020
Aspon	0.100	Cytoate	0.100	Etoazole	0.020
Asulam	0.100	Cyfluthrin	0.200	Eridiazole	0.100
Atrazine	0.100	Cyhalothrin, lambda	0.200	Erimfos	0.020
Atrazine-desethyl	0.100	Cymoxanil	0.050	Famoxadone	0.200
Azinphos-ethyl	0.020	Cypermethrin	0.200	Famphur	0.100
Azinphos-methyl	0.020	Cyprodinil	0.100	Fenamidone	0.020
Azoxystrobin	0.020	Dadhal	0.100	Fenamiphos	0.020
Beralaxyl	0.020	Damnozide	0.100	Fenamiphos sulfone	0.020
Berdicarb	0.020	DCEMU	0.050	Fenamiphos sulfoxide	0.020
Berfluralin	0.100	DDD, op'	0.100	Fenazaquin	0.100
Berxacor	0.050	DDD, p,p'	0.100	Fenbuconazole	0.100
Bersulide	0.050	DDE, o,p'	0.100	Fenchlorphos	0.100
BHC alpha isomer	0.100	DDE, p,p'	0.100	Fenchlorphos-oxon	0.100
BHC beta isomer	0.100	DDT, o,p'	0.100	Fenhexam d	0.100
BHC delta isomer	0.500	DDT, p,p'	0.100	Fenitrothion	0.100
Bifenazate	0.020	DEF (Tribufos)	0.100	Fenobucarb	0.050
Bifenthrin	0.020	Deltamethrin	0.100	Fenoxycarb	0.020
Boscalid	0.020	Desmedipham	0.100	Fenpropathrin	0.050
Bromophos-ethyl	0.100	Diallate	0.100	Fenpyroximate	0.020
Bromophos-methyl	0.200	Diazinon	0.020	Fenson	0.100
Bromopropylate	0.100	Diazoxon	0.100	Fensulfiothion	0.020
Bromuconazole	0.100	Dichlobenil	0.100	Fensulfiothion oxon	0.020
Bupirimate	0.020	D chlorfluaniid	0.100	Fensulfiothion sulfone	0.100
Buprofezin	0.050	D chlorvos	0.100	Fensulfiothion-oxon-sulfone	0.020
Butachlor	0.500	D clobutrazol	0.050	Fenthion	0.050
Butralin	0.200	D cofol	0.100	Fenthion oxon	0.020
Butylate	0.100	Dicrotophos	0.050	Fenthion oxon sulfone	0.100
Cadusafos	0.020	Deldrin	0.100	Fenthion sulfone	0.050
Captan	1.000	Dethofencarb	0.020	Fenuron	0.020
Carbaryl	0.050	D ethyltoluam de (DEET)	0.050	Fipronil	0.100
Carbendazim	0.100	Difenoconazole	0.100	Fonicamid	0.100
Carbofuran	0.020	Dimethenamid	0.050	Fuchloralin	0.100
Carbophenothion	0.200	Dimethoate	0.050	Flucythrinate	0.100
Carboxin	0.020	D methomorph	0.050	Fludioxonil	0.200
Carfentrazone-ethyl	0.100	D niconazole	0.200	Flufenacet	0.020
Chlorantrilprole	0.020	D notefuran	0.200	Flumioxazin	0.100
Chordane, cis-	0.200	D oxathion	0.100	Flumeturon	0.020
Chordane, trans-	0.200	D phenamid	0.020	Fluopicolide	0.050
Chorfenapyr	0.500	D phenylamine	0.100	Fluopyram	0.020
Chorfenoson	0.200	Disulfoton	0.100	Fluoxastrobin	0.050
Chorfenvinphos	0.050	Disulfoton sulfone	0.100	Flupyradfurone	0.020
Chorbenzilate	0.100	Disulfoton sulfoxide	0.100	Fluridone	0.100
Choroneb	0.200	Duron	0.050	Flusilazole	0.020
Chorpyrifos	0.050	Edifenphos	0.050	Flutolanil	0.020
Chorpyrifos-methyl	0.200	Endosulfan alpha	0.200	Flutriafol	0.020
CIPC	1.000	Endosulfan beta	0.200	Fluvalinate, tau-	0.100
		Endosulfan sulfate	0.100	Fluxapyroxad	0.020



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Cannabis Multi-Residue Profile, Limits of Quantitation

Compound	LOQ(mg/kg)	Compound	LOQ(mg/kg)	Compound	LOQ(mg/kg)
Fomesafen	0.100	Mexacarbate	0.020	Propamocarb	0.050
Fonofos	0.100	MGK 264	0.020	Proparil	0.050
Forchlorfenuron	0.050	Mirex	0.100	Propargite	0.050
Formetanate	0.050	Molinate	0.050	Propazine	0.020
Furathiocarb	0.020	Monocrotophos	0.100	Propetamphos	0.050
Heptachlor	0.100	Monolinuron	0.020	Propham	0.050
Heptachlor epoxide	0.100	Myclobutanil	0.050	Propiconazole	0.050
Heptenophos	0.100	Naled	0.100	Propoxur	0.050
Hexachlorobenzene	0.100	Napropamide	0.050	Propoxycarbazone Na	0.050
Hexaconazole	0.100	Neburon	0.020	Propyzamide	0.050
Hexazinone	0.100	Nitrapyrin	0.100	Prthiofos	0.100
Hexythiazox	0.020	Norflurazon	0.050	Pyraclostrobin	0.020
Imazalil	0.100	Omethoate	0.100	Pyrazophos	0.050
Imidacloprid	0.100	O-Phenylphenol	0.100	Pyrethrins	0.050
Indaziflam	0.020	Oxadixyl	0.100	Pyridaben	0.020
Indoxacarb	0.020	Oxamyl	0.100	Pyridafol	0.100
Iprobenfos	0.100	Oxamyl-oxime	0.100	Pyridate	0.020
Iprodione	0.100	Oxychlorane	0.100	Pyrimethanil	0.050
Isobenzan	0.100	Oxydemeton-Methyl	0.100	Pyriproxifen	0.020
Isocarbophos	0.500	Oxythioquinox	0.200	Pyroxasulfone	0.020
Isodrin	0.100	Padobutrazol	0.050	Pyroxulam	0.020
Isofenphos	0.050	Paraoxon-ethyl	0.020	Quinalphos	0.050
Isofenphos-methyl	0.020	Paraoxon methyl	0.100	Quinoxyfen	0.050
Isofenphos oxon	0.050	Parathion ethyl	0.100	Quintozene (PQNB)	0.200
Isoprocarb	0.020	Parathion methyl	0.200	Resmethrin	0.050
Isopropalin	0.200	Perconazole	0.050	Rotenone	0.050
Isoprothiolane	0.050	Perdimethalin	0.050	S421	0.100
Isoproturon	0.050	Perflufen	0.020	Smaazine	0.100
Isoxaben	0.050	Pertachloroaniline	0.100	Smectryl	0.200
Isoxaflutole	0.050	Pertachloroanisole	0.100	Spinetoram	0.020
Kresoxim-methyl	0.050	Pentachlorobenzene (PCB)	0.100	Spinosad	0.050
Lactofen	0.500	Pentachlorothiobenzene (PCTA)	0.100	Spirodiclofen	0.100
Lenacl	0.100	Perthiopyrad	0.020	Spiromesifen	0.050
Lindane (gammaBHC)	0.100	Permethrin	0.050	Spirotetramat	0.050
Linuron	0.020	Pethane	0.100	Spiroxamine	0.020
Malaaxon	0.050	Phenmedipharm	0.050	Sulfotep	0.050
Malathion	0.050	Phanthoate	0.050	Sulfoxaflor	0.050
Mandipropamid	0.020	Phorate	0.050	Sulprofos	0.020
Mecarbam	0.020	Phorate Sulfone	0.050	Tebuconazole	0.100
Mepanipyrim	0.050	Phorate Sulfoxide	0.050	Tebufenozide	0.020
Merphos	0.500	Phosalone	0.050	Tebuthiuron	0.020
Metalaxyl	0.050	Phosmet	0.100	Tecnazene	0.100
Metaldehyde	0.050	Phosphamidon	0.050	Tefluthrin	0.100
Metconazole	0.100	Phoxim	0.050	Terbufos	0.020
Methadifos	0.100	Pinoxaden	0.020	Terbufos sulfone	0.050
Methamidophos	0.050	Piperonyl butoxide	0.050	Terbufos sulfoxide	0.050
Methidathion	0.050	Pirimicarb	0.020	Terbutylazine	0.020
Methiocarb	0.050	Pirimiphos-methyl	0.050	Terbutryn	0.020
Methiocarb sulfone	0.100	Pirimiphos-ethyl	0.020	Tetrachlorvinphos	0.050
Methiocarb sulfoxide	0.100	Prallethrin	0.100	Tetraconazole	0.050
Methomyl	0.100	Prochloraz	0.020	Tetradfon	0.200
Methoxychlor	0.100	Procyimdone	0.100	Tetramethrin	0.050
Methoxyfenozide	0.020	Prfenofos	0.100	Tetrasul	0.100
Metobromuron	0.050	Prfluralin	0.100	Thiabendazole	0.100
Metolachlor	0.100	Prmecarb	0.050	Thiabendazole, 5-hydroxy	0.100
Metolcarb	0.050	Prometon	0.100	Thiadoprid	0.050
Metraferone	0.050	Prometryn	0.020	Thiamethoxam	0.100
Metribuzin	0.100	Propadchlor	0.020	Thiobencarb	0.050
Mevinphos	0.100			Thiodicarb	0.050
				Thiophanate-methyl	0.050



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Cannabis Multi-Residue Profile, Limits of Quantitation

Compound	LOQ(mg/kg)	Compound	LOQ(mg/kg)	Compound	LOQ(mg/kg)
Tolclofos-methyl	0.100	Triazophos	0.020	Trifloxystrobin	0.020
Triforin	0.100	Tolyfluarid	0.050	Triconazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vindozolin	0.100
Triadimefon	0.050	Triflumizole	0.020	Zoxamide	0.020
Triallate	0.100	Trifluralin	0.100		

LOQ=Limit of Quantitation, mg/kg

Factors affecting the LOQ include instrumentation sensitivity for a particular analyte, sample size, moisture content (percent solids) of the sample, effectiveness of the cleanup on the sample extract, and especially the type of sample matrix.



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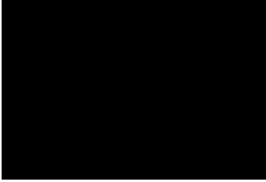
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**Hemp & Cannabis
Chain of Custody**

**Northwest-Natural
Goods-1700176221**

ORELAP ID: **OR1000028** ANAB ISO 17025 ID: **ATI508**

Contact Information Company: <u>Northwest Natural Goods</u> 		Project Details Turnaround Time: <u>5 Business Days (Req. For Micro Testing) Standard</u> Sample Relinquishment Options: <u>Pick-Up Request</u> Desired Pick Up/Sampling Time & Date: <u>11/20/23</u> Compliance: <u>Compliance</u> Project Name / ID: <u>HEMP-LM0089</u> Cannabis Type (select if applicable): <u>Industrial</u>			Testing H0010 - Potency Cannabinoid Basic + Extended Profile F0020 - HeatStable - Multi-Residue Profile H0008 - Residual Solvents - CF H0013 - Heavy Metals Profile (As, Cd, Pb & Hg) M075 - Total Coliforms - EColi P003 - Yeast and Mold N150 - Moisture Loss on Drying N300 - Water Activity							
#	Sample Name/ Test	Material	Amount Provided	Reporting Unit	Serving Size							
1	HEMP-LM0089	Edible	20 units for sale	mg/g & mg/ serving	4 g	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
<i>Amber Johnson</i>	<i>11/16/2023</i>	<i>15:10</i>		<i>BR</i>	<i>11/20/2023</i>	<i>11:02</i>		<i>No</i>
<i>BR</i>	<i>11/20/2023</i>	<i>11:38</i>	<i>16.6</i>	<i>rls</i>	<i>11/20/2023</i>	<i>12:39</i>		<i>No</i>

Samples submitted to Columbia Laboratories with testing requirements constitute an agreement for service in accordance with the [current terms of service](#) associated with this COC. By signing Relinquished by you are agreeing to these terms.

Columbia Laboratories
12423 NE Whitaker Way
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12423 NE Whitaker Way
Portland, OR 97230
503-254-1794



Report Number: 23-013698/D002.R000
Report Date: 11/29/2023
ORELAP#: OR100028
Purchase Order:
Received: 11/20/23 12:39

Revision: 4 Document ID: 7148
Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results
Batch ID: 2313030

JAOAC2015 V986									
Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes	
CBVA	2	0.0337	0.0329	%	103	80.0 - 120	Acceptable		
CBV	2	0.0336	0.0324	%	104	80.0 - 120	Acceptable		
CBE	2	0.0358	0.0349	%	102	80.0 - 120	Acceptable		
CBDA	1	0.0323	0.0311	%	104	90.0 - 110	Acceptable		
CBGA	1	0.0331	0.0313	%	106	80.0 - 120	Acceptable		
CBG	1	0.0340	0.0332	%	103	80.0 - 120	Acceptable		
CB	1	0.0327	0.0319	%	103	90.0 - 110	Acceptable		
THCV	2	0.0332	0.0337	%	98.4	80.0 - 120	Acceptable		
δ8THCV	2	0.0292	0.0271	%	108	80.0 - 120	Acceptable		
THCVA	2	0.0324	0.0317	%	102	80.0 - 120	Acceptable		
CBN	1	0.0354	0.0332	%	106	80.0 - 120	Acceptable		
exo-THC	2	0.0315	0.0308	%	102	80.0 - 120	Acceptable		
δ9THC	1	0.0326	0.0320	%	102	90.0 - 110	Acceptable		
δ8THC	1	0.0287	0.0277	%	104	90.0 - 110	Acceptable		
9Sδ10THC	1	0.0335	0.0328	%	102	80.0 - 120	Acceptable		
CB	2	0.0356	0.0351	%	101	80.0 - 120	Acceptable		
9Rδ10THC	1	0.0332	0.0314	%	106	80.0 - 120	Acceptable		
CB	2	0.0344	0.0341	%	101	80.0 - 120	Acceptable		
THCA	1	0.0319	0.0303	%	105	90.0 - 110	Acceptable		
CBGA	2	0.0331	0.0336	%	98.6	80.0 - 120	Acceptable		
CBLA	2	0.0345	0.0336	%	103	80.0 - 120	Acceptable		
δ9THCP	2	0.0328	0.0331	%	99.2	80.0 - 120	Acceptable		
CB	2	0.0330	0.0337	%	97.9	80.0 - 120	Acceptable		
Method Blank									
Analyte	Result	LOQ	Units	Limits	Evaluation	Notes			
CBVA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBV	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBE	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBDA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBGA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBG	<LOQ	0.00328	%	< 0.00328	Acceptable				
CB	0.00877	0.00328	%	< 0.00328	Outlier	B, Q1			
THCV	<LOQ	0.00328	%	< 0.00328	Acceptable				
δ8THCV	<LOQ	0.00328	%	< 0.00328	Acceptable				
THCVA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBN	<LOQ	0.00328	%	< 0.00328	Acceptable				
exo-THC	<LOQ	0.00328	%	< 0.00328	Acceptable				
δ9THC	<LOQ	0.00328	%	< 0.00328	Acceptable				
δ8THC	<LOQ	0.00328	%	< 0.00328	Acceptable				
9Sδ10THC	<LOQ	0.00328	%	< 0.00328	Acceptable				
CB	<LOQ	0.00328	%	< 0.00328	Acceptable				
9Rδ10THC	<LOQ	0.00328	%	< 0.00328	Acceptable				
CB	<LOQ	0.00328	%	< 0.00328	Acceptable				
THCA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBGA	<LOQ	0.00328	%	< 0.00328	Acceptable				
CBLA	<LOQ	0.00328	%	< 0.00328	Acceptable				
δ9THCP	<LOQ	0.00328	%	< 0.00328	Acceptable				
CB	<LOQ	0.00328	%	< 0.00328	Acceptable				

Abbreviations

ND - None Detected at or above MRL
RPD - Relative Percent Difference
LOQ - Limit of Quantitation

B - Analyte detected in method blank, but not in associated samples.
Q1 - Quality control result biased high. Only non-detect samples reported.

Units of Measure:

% - Percent



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Laboratory Quality Control Results

JAOAC2015 V986		Batch ID: 2313030						
Sample Duplicate		Sample ID: 23-0135970002						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBDV	0.00906	0.00885	0.00314	%	2.34	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBDVA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBSA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBS	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBD	2.26	2.19	0.00314	%	2.92	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
9Sa10THC	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
9Rd10THC	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00314	%	NA	< 20	Acceptable	

Abbreviations

ND - None Detected at or above MRL
 RPD - Relative Percent Difference
 LOQ - Limit of Quantitation

Units of Measure:

% - Percent



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Laboratory Quality Control Results

Residual Solvents				Batch D: 2313070					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		559	584	µg/g	95.7	60 - 120	
Isobutane	ND	< 200		715	767	µg/g	93.2	60 - 120	
Butane	ND	< 200		710	782	µg/g	90.8	60 - 120	
2,2-Dimethylpropane	ND	< 200		892	939	µg/g	95.0	60 - 120	
Methanol	ND	< 200		1680	1600	µg/g	105.0	60 - 120	
Ethylene Oxide	ND	< 30		53.1	57.1	µg/g	93.0	60 - 120	
2-Methylbutane	ND	< 200		1590	1600	µg/g	99.4	60 - 120	
Pentane	ND	< 200		1580	1600	µg/g	98.8	60 - 120	
Ethanol	ND	< 200		1540	1600	µg/g	96.3	70 - 130	
Ethyl Ether	ND	< 200		1510	1600	µg/g	94.4	60 - 120	
2,2-Dimethylbutane	ND	< 30		155	161	µg/g	96.3	60 - 120	
Acetone	ND	< 200		1600	1600	µg/g	100.0	60 - 120	
2-Propanol	ND	< 200		1580	1600	µg/g	98.8	60 - 120	
Ethyl Formate	ND	< 500		1020	1600	µg/g	63.8	70 - 130	Q6
Acetonitrile	ND	< 100		480	488	µg/g	98.4	60 - 120	
Methyl Acetate	ND	< 500		1420	1610	µg/g	88.2	70 - 130	
2,3-Dimethylbutane	ND	< 30		165	163	µg/g	101.2	60 - 120	
Dichloromethane	ND	< 60		420	488	µg/g	86.1	60 - 120	
2-Methylpentane	ND	< 30		142	161	µg/g	88.2	60 - 120	
MTBE	ND	< 500		1450	1650	µg/g	87.9	70 - 130	
3-Methylpentane	ND	< 30		147	162	µg/g	90.7	60 - 120	
Hexane	ND	< 30		147	161	µg/g	91.3	60 - 120	
1-Propanol	ND	< 500		1640	1620	µg/g	101.2	70 - 130	
Methyl ethyl ketone	ND	< 500		1470	1610	µg/g	91.3	70 - 130	
Ethyl acetate	ND	< 200		1590	1610	µg/g	98.8	60 - 120	
2-Butanol	ND	< 200		1550	1610	µg/g	96.3	60 - 120	
Tetrahydrofuran	ND	< 100		443	483	µg/g	92.1	60 - 120	
Cyclohexane	ND	< 200		1470	1600	µg/g	91.9	60 - 120	
2-methyl-1-propanol	ND	< 500		1280	1600	µg/g	80.0	70 - 130	
Benzene	ND	< 1		4.6	4.99	µg/g	92.2	60 - 120	
Isopropyl Acetate	ND	< 200		1620	1600	µg/g	101.3	60 - 120	
Heptane	ND	< 200		1620	1600	µg/g	101.3	60 - 120	
1-Butanol	ND	< 500		1380	1610	µg/g	85.7	70 - 130	
Propyl Acetate	ND	< 500		1520	1610	µg/g	94.4	70 - 130	
1,4-Dioxane	ND	< 100		426	480	µg/g	88.8	60 - 120	
2-Ethoxyethanol	ND	< 30		119	161	µg/g	73.9	60 - 120	
Methylisobutylketone	ND	< 500		1540	1610	µg/g	95.7	70 - 130	
3-Methyl-1-butanol	ND	< 500		1440	1610	µg/g	89.4	70 - 130	
Ethylene Glycol	ND	< 200		193	481	µg/g	40.1	60 - 120	Q6
Toluene	ND	< 100		443	483	µg/g	91.7	60 - 120	
Isobutyl Acetate	ND	< 500		1530	1610	µg/g	95.0	70 - 130	
1-Pentanol	ND	< 500		1490	1610	µg/g	92.5	70 - 130	
Butyl Acetate	ND	< 500		1470	1600	µg/g	91.9	70 - 130	
Ethylbenzene	ND	< 200		888	962	µg/g	92.3	60 - 120	
m,p-Xylene	ND	< 200		885	972	µg/g	91.0	60 - 120	
o-Xylene	ND	< 200		885	965	µg/g	91.7	60 - 120	
Cumene	ND	< 30		140	169	µg/g	82.8	60 - 120	
Anisole	ND	< 500		1210	1600	µg/g	75.6	70 - 130	
DMSO	ND	< 500		1070	1600	µg/g	66.9	70 - 130	Q6
1,2-dimethoxyethane	ND	< 50		143	163	µg/g	87.7	70 - 130	
Triethylamine	ND	< 500		1020	1600	µg/g	63.8	70 - 130	Q6
N,N-dimethylformamide	ND	< 150		370	482	µg/g	76.8	70 - 130	
N,N-dimethylacetamide	ND	< 150		435	483	µg/g	90.1	70 - 130	
Pyridine	ND	< 50		118	161	µg/g	73.3	70 - 130	
Silfolane	ND	< 50		110	163	µg/g	67.5	70 - 130	Q6
1,2-Dichloroethane	ND	< 1		1.06	1	µg/g	106.0	70 - 130	
Chloroform	ND	< 1		0.933	1	µg/g	93.3	70 - 130	
Trichloroethylene	ND	< 1		0.886	1	µg/g	88.6	70 - 130	
1,1-Dichloroethane	ND	< 1		0.981	1	µg/g	98.1	70 - 130	



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QC- Sample Duplicate		Sample ID: 23-013647-0001						
Analyte	Result	Org. Result	LOQ Units	RPD	Limits	Accept/ Fail	Notes	
Propane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Isobutane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Butane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2,2-Dimethylpropane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Methanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethylene Oxide	ND	ND	30 µg/g	0.0	< 20	Acceptable		
2-Methylbutane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Pentane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethanol	369	ND	200 µg/g	59.4	< 20	FAIL	Q4	
Ethyl Ether	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2,2-Dimethylbutane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Acetone	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-Propanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Ethyl Formate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Acetonitrile	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Methyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
2,3-Dimethylbutane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Dichloromethane	ND	ND	60 µg/g	0.0	< 20	Acceptable		
2-Methylpentane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
MTBE	ND	ND	500 µg/g	0.0	< 20	Acceptable		
3-Methylpentane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Hexane	ND	ND	30 µg/g	0.0	< 20	Acceptable		
1-Propanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Methylethylketone	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethyl acetate	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-Butanol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Tetrahydrofuran	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Cyclohexane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
2-methyl-1-propanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Benzene	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Isopropyl Acetate	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Heptane	ND	ND	200 µg/g	0.0	< 20	Acceptable		
1-Butanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Propyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1,4-Dioxane	ND	ND	100 µg/g	0.0	< 20	Acceptable		
2-Ethoxyethanol	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Methylisobutylketone	ND	ND	500 µg/g	0.0	< 20	Acceptable		
3-Methyl-1-butanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethylene Glycol	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Toluene	ND	ND	100 µg/g	0.0	< 20	Acceptable		
Isobutyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1-Pentanol	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Butyl Acetate	ND	ND	500 µg/g	0.0	< 20	Acceptable		
Ethylbenzene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
m,p-Xylene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
o-Xylene	ND	ND	200 µg/g	0.0	< 20	Acceptable		
Cumene	ND	ND	30 µg/g	0.0	< 20	Acceptable		
Anisole	ND	ND	500 µg/g	0.0	< 20	Acceptable		
DMSO	ND	ND	500 µg/g	0.0	< 20	Acceptable		
1,2-dimethoxyethane	ND	ND	50 µg/g	0.0	< 20	Acceptable		
Triethylamine	ND	ND	500 µg/g	0.0	< 20	Acceptable		
N,N-dimethylformamide	ND	ND	150 µg/g	0.0	< 20	Acceptable		
N,N-dimethylacetamide	ND	ND	150 µg/g	0.0	< 20	Acceptable		
Pyridine	ND	ND	50 µg/g	0.0	< 20	Acceptable		
Sulfolane	ND	ND	50 µg/g	0.0	< 20	Acceptable		
1,2-Dichloroethane	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Chloroform	ND	ND	1 µg/g	0.0	< 20	Acceptable		
Trichloroethylene	ND	ND	1 µg/g	0.0	< 20	Acceptable		
1,1-Dichloroethane	ND	ND	1 µg/g	0.0	< 20	Acceptable		

Abbreviations

ND - None Detected at or above MRL
RPD - Relative Percent Difference
LOQ - Limit of Quantitation
Q4 - Non-homogeneous sample matrix, affecting RPD result and/or % recoveries.
Q6 - Quality control outside QC limits. Data acceptable based on remaining QC.

Units of Measure:

µg/g - Microgram per gram or ppm



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Explanation of QC Flag Comments:

Code	Explanation
Q	Matrix interferences affecting spike or surrogate recoveries.
Q1	Quality control result biased high. Only non-detect samples reported.
Q2	Quality control outside QC limits. Data considered estimate.
Q3	Sample concentration greater than four times the amount spiked.
Q4	Non-homogenous sample matrix, affecting RPD result and/or % recoveries.
Q5	Spike results above calibration curve.
Q6	Quality control outside QC limits. Data acceptable based on remaining QC.
R	Relative percent difference (RPD) outside control limit.
R1	RPD non-calculable, as sample or duplicate results are less than five times the LOQ.
R2	Sample replicates RPD non-calculable, as only one replicate is within the analytical range.
LOQ1	Quantitation level raised due to low sample volume and/or dilution.
LOQ2	Quantitation level raised due to matrix interference.
B	Analyte detected in method blank, but not in associated samples.
B1	The sample concentration is greater than 5 times the blank concentration.
B2	The sample concentration is less than 5 times the blank concentration.