



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



Report Number: 23-010503/D002.R000
Report Date: 09/12/2023
ORELAP#: OR100028
Purchase Order:
Received: 09/05/23 11:51

Customer: NW Natural Goods
Product identity: HEMP - HB 0099
Client/Metric ID: .
Laboratory ID: 23-010503-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.208		mg/4g		CBD-Total per Serving Size 25.8 mg/4g
CBD per 4g	25.8		mg/4g		
CBG per 4g	0.732		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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Customer: NW Natural Goods

Product identity: HEMP - HB 0099

Client/Metric ID: .

Sample Date:

Laboratory ID: 23-010503-0001

Evidence of Cooling: No

Temp: 19.2

Relinquished by: client

Serving Size #1: 4 g

Sample Results

Potency per 4g					
Method: J AOAC 2015 V98-6 (mod) ^b					
Units mg/se Batch: 2310729 Analyze: 9/8/23 4:58:00 AM					
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.208		mg/4g	0.126	
CBC-A per 4g	< LOQ		mg/4g	0.126	
CBC-Total per 4g	< LOQ		mg/4g	0.237	
CBD per 4g	25.8		mg/4g	0.126	
CBD-A per 4g	< LOQ		mg/4g	0.126	
CBD-Total per 4g	25.8		mg/4g	0.237	
CBDV per 4g	< LOQ		mg/4g	0.126	
CBDV-A per 4g	< LOQ		mg/4g	0.126	
CBDV-Total per 4g	< LOQ		mg/4g	0.236	
CBE per 4g	< LOQ		mg/4g	0.126	
CBG per 4g	0.732		mg/4g	0.126	
CBG-A per 4g	< LOQ		mg/4g	0.126	
CBG-Total per 4g	0.732		mg/4g	0.236	
CBL per 4g	< LOQ		mg/4g	0.126	
CBL-A per 4g	< LOQ		mg/4g	0.126	
CBL-Total per 4g	< LOQ		mg/4g	0.237	
CBN per 4g	< LOQ		mg/4g	0.126	
CBT per 4g	< LOQ		mg/4g	0.126	
Δ8-THCV per 4g	< LOQ		mg/4g	0.126	
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.126	
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.126	
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.252	
Δ8-THC per 4g	< LOQ		mg/4g	0.126	
Δ9-THC per 4g	< LOQ		mg/4g	0.126	
delta-9-THCP per 4g	< LOQ		mg/4g	0.126	
exo-THC per 4g	< LOQ		mg/4g	0.126	
THC-A per 4g	< LOQ		mg/4g	0.126	
THC-Total per 4g	< LOQ		mg/4g	0.237	
THCV per 4g	< LOQ		mg/4g	0.126	
THCV-A per 4g	< LOQ		mg/4g	0.126	
THCV-Total per 4g	< LOQ		mg/4g	0.237	
Total Cannabinoids per 4g	26.7		mg/4g		



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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2310632	09/08/23 AOAC 991.14 (Petrifilm) ^P		
Total Coliforms	< LOQ		cfu/g	10	2310632	09/08/23 AOAC 991.14 (Petrifilm) ^P		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2310633	09/08/23 AOAC 2014.05 (RAPID) ^P		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2310633	09/08/23 AOAC 2014.05 (RAPID) ^P		

Solvents Method: Residual Solvents by GC/MS^B Units µg/g Batch 2310772 Analyze 09/11/23 01:39 PM

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)^B Units mg/kg Batch 2310809 Analyze 09/12/23 10:22 AM

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	0.0174	2310725	09/08/23 AOAC 2013.06 (mod.) ^p	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0174	2310725	09/08/23 AOAC 2013.06 (mod.) ^p	pass	
Lead*	< LOQ	0.500	mg/kg	0.0174	2310725	09/08/23 AOAC 2013.06 (mod.) ^p	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00868	2310725	09/08/23 AOAC 2013.06 (mod.) ^p	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	19.0		g/100g	0.10	2310704	09/07/23 AOAC 925.10 (mod.) ^p		
Water Activity	0.691		Aw	0.030	2310688	09/07/23 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

Approved Signatory

Derrick Tanner
General Manager



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Cannab s Mu t -Res due Prof e, L m ts of Quant tat on

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Abamec in	0.100	Cle hodim	0.050	ndrin	0.100
Acepha e	0.100	Cle hodim Sul one	0.050	PN	0.050
Acequinocyl	0.100	Cle hodim Sul oxide	0.050	PTC	0.100
Ace amiprid	0.020	Clo en ezine	0.020	s envalera e/ envalera e	0.200
Ace ochlor	0.100	Clomazone	0.020	aconazole	0.100
Acrina hrin	0.100	Clo hianidin	0.200	hal luralin	0.100
Alachlor	0.100	Coumaphos	0.050	hio encarb	0.050
Aldicarb	0.100	Cro oxyphos	0.020	hion	0.200
Aldicarb sul oxide	0.100	Cyanazine	0.020	hirimol	0.100
Aldoxycarb (Aldicarb-sul one)	0.100	Cyano enphos	0.020	ho umesa e	0.050
Aldrin	0.100	Cyan raniliprole	0.050	hoprophos	0.020
Ame ocr radin	0.020	Cyazo amid	0.020	o enprox	0.020
Ame ryn	0.500	Cycloa e	0.100	oxazole	0.020
Aspon	0.100	Cy lu hrin	0.200	ridiazole	0.100
Asulam	0.100	Cyhalo hrin, lambda	0.200	rim os	0.020
A razine	0.100	Cymoxanil	0.050	amoxadone	0.200
A razine-dese hyl	0.100	Cyperme hrin	0.200	amphur	0.100
Azinphos-e hyl	0.020	Cyprodinil	0.100	enamidone	0.020
Azinphos-me hyl	0.020	Dac hal	0.100	enamiphos	0.020
Azoxys robin	0.020	Daminozide	0.100	enamiphos sul one	0.020
Benalaxyl	0.020	DCPMU	0.050	enamiphos sul oxide	0.020
Bendiocarb	0.020	DDD, o,p'-	0.100	enazaquin	0.100
Ben luralin	0.100	DDD, p,p'-	0.100	enbuconazole	0.100
Benoxacor	0.050	DD , o,p'-	0.100	enchlorphos	0.100
Bensulide	0.050	DD , p,p'-	0.100	enchlorphos-oxon	0.100
B C alpha isomer	0.100	DDT, o,p'-	0.100	enhexamid	0.100
B C be a isomer	0.100	DDT, p,p'-	0.100	eni ro hion	0.100
B C del a isomer	0.500	D (Tribu os)	0.100	enobucarb	0.050
Bi enaza e	0.020	Del ame hrin	0.100	enoxycarb	0.020
Bi en hrin	0.020	Desmedipham	0.100	enpropa hrin	0.050
Boscalid	0.020	Dialla e	0.100	enpyroxima e	0.020
Bromophos-e hyl	0.100	Diazinon	0.020	enson	0.100
Bromophos-me hyl	0.200	Diazoxon	0.100	ensul o hion	0.020
Bromopropyla e	0.100	Dichlobenil	0.100	ensul o hion oxon	0.020
Bromuconazole	0.100	Dichlo luanid	0.100	ensul o hion sul one	0.100
Bupirima e	0.020	Dichlorvos	0.100	Fensulfothion-oxon-sulfone	0.020
Bupro ezin	0.050	Diclobu razol	0.050	en hion	0.050
Bu achlor	0.500	Dico ol	0.100	en hion oxon	0.020
Bu ralin	0.200	Dicro ophos	0.050	en hion oxon sul one	0.100
Bu yla e	0.100	Dieldrin	0.100	en hion sul one	0.050
Cadusa os	0.020	Die ho encarb	0.020	enuron	0.020
Cap an	1.000	Die hyl oluamide (D T)	0.050	ipronil	0.100
Carbaryl	0.050	Di enoconazole	0.100	lonicamid	0.100
Carbendazim	0.100	Dime henamid	0.050	luchloralin	0.100
Carbo uran	0.020	Dime hoa e	0.050	lucy hrina e	0.100
Carbopheno hion	0.200	Dime homorph	0.050	ludioxonil	0.200
Carboxin	0.020	Diniconazole	0.200	lu enace	0.020
Car en razone-e hyl	0.100	Dino e uran	0.200	lumioxazin	0.100
Chloran raniliprole	0.020	Dioxa hion	0.100	luome uron	0.020
Chlordane, cis-	0.200	Diphenamid	0.020	luopicolide	0.050
Chlordane, rans-	0.200	Diphenylamine	0.100	luopyram	0.020
Chlor enapyr	0.500	Disul o on	0.100	luoxas robin	0.050
Chlor enson	0.200	Disul o on sul one	0.100	lupyradi urone	0.020
Chlor envinphos	0.050	Disul o on sul oxide	0.100	luridone	0.100
Chlorobenzila e	0.100	Diuron	0.050	lusilazole	0.020
Chloroneb	0.200	di enphos	0.050	lu olanil	0.020
Chlorpyri os	0.050	ndosul an alpha	0.200	lu ria ol	0.020
Chlorpyri os-me hyl	0.200	ndosul an be a	0.200	lualina e, au-	0.100
C PC	1.000	ndosul an sul a e	0.100	luxapyroxad	0.020



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Cannab s Mu t -Res due Prof e, L m ts of Quant tat on

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
omesa en	0.100	Mexacarba e	0.020	Propamocarb	0.050
ono os	0.100	MGK 264	0.020	Propanil	0.050
orchlor enuron	0.050	Mirex	0.100	Propargi e	0.050
orme ana e	0.050	Molina e	0.050	Propazine	0.020
ura hiocarb	0.020	Monocro ophos	0.100	Prope amphos	0.050
ep achlor	0.100	Monolinuron	0.020	Propham	0.050
ep achlor epoxide	0.100	Myclobu anil	0.050	Propiconazole	0.050
ep enophos	0.100	Naled	0.100	Propoxur	0.050
exachlorobenzene	0.100	Napropamide	0.050	Propoxycarbazone Na	0.050
exaconazole	0.100	Neburon	0.020	Propyzamide	0.050
exazinone	0.100	Ni rapyrin	0.100	Pro hio os	0.100
exy hiazox	0.020	Nor lurazon	0.050	Pyraclos robin	0.020
mazalil	0.100	Ome hoa e	0.100	Pyrazophos	0.050
midacloprid	0.100	O-Phenylphenol	0.100	Pyre hrins	0.050
ndazi lam	0.020	Oxadixyl	0.100	Pyridaben	0.020
ndoxacarb	0.020	Oxamyl	0.100	Pyrida ol	0.100
proben os	0.100	Oxamyl-oxime	0.100	Pyrida e	0.020
prodione	0.100	Oxychlorthane	0.100	Pyrima hanil	0.050
sobenzan	0.100	Oxydeme on-Me hyl	0.100	Pyriproxi en	0.020
socarbophos	0.500	Oxy hioquinox	0.200	Pyroxasul one	0.020
sodrin	0.100	Paclobu razol	0.050	Pyroxulam	0.020
so enphos	0.050	Paraaxon-e hyl	0.020	Quinalphos	0.050
so enphos-me hyl	0.020	Paraaxon me hyl	0.100	Quinoxy en	0.050
so enphos oxon	0.050	Para hion e hyl	0.100	Quin ozene (PCNB)	0.200
soproc carb	0.020	Para hion me hyl	0.200	Resme hrin	0.050
sopropalin	0.200	Penconazole	0.050	Ro enone	0.050
sopro hiolane	0.050	Pendime halin	0.050	S421	0.100
sopro uron	0.050	Pen lu en	0.020	Simazine	0.100
soxaben	0.050	Pen achloroaniline	0.100	Sime ryn	0.200
soxa lu ole	0.050	Pen achloroanisole	0.100	Spine oram	0.020
Kresoxim-me hyl	0.050	Pen achlorobenzene (PCB)	0.100	Spinosad	0.050
ac o en	0.500	Pentachlorothioanisole (PCTA)	0.100	Spirodiclo en	0.100
enacil	0.100	Pen hiopyrad	0.020	Spiromesi en	0.050
indane (gamma B C)	0.100	Perme hrin	0.050	Spiro e rama	0.050
inuron	0.020	Per hane	0.100	Spiroxamine	0.020
Malaaxon	0.050	Phenmedipham	0.050	Sul o ep	0.050
Mala hion	0.050	Phen hoa e	0.050	Sul oxa lor	0.050
Mandipropamid	0.020	Phora e	0.050	Sulpro os	0.020
Mecarbam	0.020	Phora e Sul one	0.050	Tebuconazole	0.100
Mepanipyrim	0.050	Phora e Sul oxide	0.050	Tebu enozide	0.020
Merphos	0.500	Phosalone	0.050	Tebu hiuron	0.020
Me alaxyl	0.050	Phosme	0.100	Tecnazene	0.100
Me aldehyde	0.050	Phosphamidon	0.050	Te lu hrin	0.100
Me conazole	0.100	Phoxim	0.050	Terbu os	0.020
Me hacri os	0.100	Pinoxaden	0.020	Terbu os sul one	0.050
Me hamidophos	0.050	Piperonyl bu oxide	0.050	Terbu os sul oxide	0.050
Me hida hion	0.050	Pirimicarb	0.020	Terbu hylazine	0.020
Me hiocarb	0.050	Pirimiphos-me hyl	0.050	Terbu ryn	0.020
Me hiocarb sul one	0.100	Pirimiphos-e hyl	0.020	Te rachlorvinphos	0.050
Me hiocarb sul oxide	0.100	Pralle hrin	0.100	Te raconazole	0.050
Me homyl	0.100	Prochloraz	0.020	Te radi on	0.200
Me hoxychlor	0.100	Procymidone	0.100	Te rame hrin	0.050
Me hoxy enozide	0.020	Pro eno os	0.100	Te rasul	0.100
Me obromuron	0.050	Pro luralin	0.100	Thiabendazole	0.100
Me olachlor	0.100	Promecarb	0.050	Thiabendazole, 5-hydroxy	0.100
Me olcarb	0.050	Prome on	0.100	Thiacloprid	0.050
Me ra enone	0.050	Prome ryn	0.020	Thiame hoxam	0.100
Me ribuzin	0.100	Propachlor	0.020	Thiobencarb	0.050
Mevinphos	0.100			Thiodicarb	0.050
				Thiophana e-me hyl	0.050



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Cannabis Mutt-Residue Profile, Limits of Quantitation

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Tolclofos-methyl	0.100	Triazophos	0.020	Trioxystrobin	0.020
Triorin	0.100	Tolyluanid	0.050	Triiconazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vinclozolin	0.100
Triadimefon	0.050	Triumizole	0.020	Zoxamide	0.020
Triallec	0.100	Triuralin	0.100		

LOQ = Limit of Quantitation, mg/kg

Factors affecting the LOQ include instrument sensitivity or a particular analysis, 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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Hemp & Cannabis
Chain of Custody

Northwest-Natural-
Goods-1693503717

ORELAP ID: OR100028 ANAB ED P/025ID: A1608

Project Information							Testing						
Project Name: <u>HEMP-HB0008</u> PO Number: <u>144</u> Turnaround Time: <u>5 Business Days (Req. For Micro Testing) (Standard)</u> Samples Delivered to Laboratory: <u>Schedule Pick-Up</u> Cannabis Type: <u>Industrial</u>							H1001 - Potency Cannabis (Bark + Extended Profile) P2201 - Pesticide - Multi-Pesticide Profile H1008 - Residual Solvents - OF H1012 - Heavy Metals Profile (Pb, As, Cd, Fe & Hg) P1076 - Total Coliforms + E.Coli P2385 - Yeast and Mold N1180 - Moisture as Loss on Drying N380 - Water Activity						
Sample Name Test	Material	Amount Provided	Reporting Unit	Serving Size	Additional Test Requests and Sample Comments								
HEMP-HB0008	Edible	20 g	mg/g & mg/serving	1 g	this is for 3/5 pickup	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Released By	Date	Time	Temp, °C	Received By	Date	Time	Received Temp, °C	Evidence of Cooling?
Kristen Johnson	8/31/2023	12:21	Temp, °C	BR	9/5/2023	10:18		No
BR	9/5/2023	10:45	19.2	rb	9/5/2023	11:57		No

Samples submitted to Columbia Laboratories with testing requirements consist of an agreement for services in accordance with the current terms of services associated with this COC. By signing "Requested by" you are agreeing to these terms.

Columbia Laboratories
12423 NE Whitaker Way
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P: (503) 254-1794 | Fax: (503) 254-1182
info@columbialaboratories.com

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

Laboratory Quality Control Results

JAOAC2015 V98-6 Batch ID: 2310729

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBDVA	2	0.0313	0.0309	%	101	80.0	- 120	Acceptable	
CBDV	2	0.0317	0.0313	%	101	80.0	- 120	Acceptable	
CBE	2	0.0331	0.0329	%	100	80.0	- 120	Acceptable	
CEDA	1	0.0339	0.0338	%	100	90.0	- 110	Acceptable	
CBG ^A	1	0.0344	0.0343	%	100	80.0	- 120	Acceptable	
CBG	1	0.0364	0.0363	%	100	80.0	- 120	Acceptable	
CBD	1	0.0351	0.0351	%	99.9	90.0	- 110	Acceptable	
THCV	2	0.0202	0.0200	%	101	80.0	- 120	Acceptable	
Δ8THCV	2	0.0276	0.0276	%	99.9	80.0	- 120	Acceptable	
THCV/A	2	0.0308	0.0307	%	100	80.0	- 120	Acceptable	
CBN	1	0.0343	0.0343	%	99.8	80.0	- 120	Acceptable	
exo-THC	2	0.0301	0.0302	%	99.6	80.0	- 120	Acceptable	
Δ9THC	1	0.0356	0.0355	%	100	90.0	- 110	Acceptable	
Δ8THC	1	0.0357	0.0364	%	98.0	90.0	- 110	Acceptable	
9SΔ10THC	1	0.0349	0.0354	%	98.3	80.0	- 120	Acceptable	
CBL	2	0.0324	0.0311	%	104	80.0	- 120	Acceptable	
9RΔ10THC	1	0.0110	0.0115	%	95.4	80.0	- 120	Acceptable	
CBG	2	0.0325	0.0335	%	97.2	80.0	- 120	Acceptable	
THCA	1	0.0350	0.0344	%	102	90.0	- 110	Acceptable	
CBGA	2	0.0319	0.0319	%	99.8	80.0	- 120	Acceptable	
CBLA	2	0.0644	0.0647	%	99.6	80.0	- 120	Acceptable	
Δ9THCP	2	0.0309	0.0316	%	97.6	80.0	- 120	Acceptable	
CBT	2	0.0295	0.0308	%	95.7	80.0	- 120	Acceptable	

Method Blank						
Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDVA	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBDV	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBE	<LOQ	0.00321	%	< 0.00321	Acceptable	
CEDA	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBG ^A	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBG	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBD	<LOQ	0.00321	%	< 0.00321	Acceptable	
THCV	<LOQ	0.00321	%	< 0.00321	Acceptable	
Δ8THCV	<LOQ	0.00321	%	< 0.00321	Acceptable	
THCV/A	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBN	<LOQ	0.00321	%	< 0.00321	Acceptable	
exo-THC	<LOQ	0.00321	%	< 0.00321	Acceptable	
Δ9THC	<LOQ	0.00321	%	< 0.00321	Acceptable	
Δ8THC	<LOQ	0.00321	%	< 0.00321	Acceptable	
9SΔ10THC	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBL	<LOQ	0.00321	%	< 0.00321	Acceptable	
9RΔ10THC	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBG	<LOQ	0.00321	%	< 0.00321	Acceptable	
THCA	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBGA	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBLA	<LOQ	0.00321	%	< 0.00321	Acceptable	
Δ9THCP	<LOQ	0.00321	%	< 0.00321	Acceptable	
CBT	<LOQ	0.00321	%	< 0.00321	Acceptable	

Abbreviations
 ND - None Detected at or above MRI
 RP.D - Relative Percent Difference
 LOQ - Limit of Quantitation

Units of Measure:
 %- Percent



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Report Number: 23-010503/D002.R000
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Revision: 4 Document D: 7148
 Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V98-6		Batch ID: 2310729						
Sample Duplicate		Sample ID: 23-010475-0001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBD ^A	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBC	0.0271	0.0269	0.00315	%	0.836	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
Δ ⁸ THCV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBN	0.00386	0.00380	0.00315	%	1.59	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
Δ ⁹ THC	0.385	0.383	0.00315	%	0.532	< 20	Acceptable	
Δ ⁸ THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
9S-Δ ¹⁰ THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
9R-Δ ¹⁰ THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBC	0.00632	0.00631	0.00315	%	0.184	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
Δ ⁹ THCP	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	

Abbreviations

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

Units of Measure:

%- Percent



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evision 2 Document D 7087
 Legacy D CFL-E33Effective

Laboratory Quality Control Results

Residual Solvents				Batch ID: 2310772					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		560	584	µg/g	95.9	60	120
Isobutane	ND	< 200		711	767	µg/g	92.7	60	120
Butane	ND	< 200		688	782	µg/g	88.0	60	120
2,2 Dimethylpropane	ND	< 200		854	939	µg/g	90.9	60	120
Methanol	ND	< 200		1630	1670	µg/g	97.6	60	120
Ethylene Oxide	ND	< 30		54.7	57.1	µg/g	95.8	60	120
2 Methylbutane	ND	< 200		1470	1680	µg/g	87.5	60	120
Pentane	ND	< 200		1480	1670	µg/g	88.6	60	120
Ethanol	ND	< 200		1610	1660	µg/g	97.0	70	130
Ethyl Ether	ND	< 200		1520	1670	µg/g	91.0	60	120
2,2 Dimethylbutane	ND	< 30		168	189	µg/g	88.9	60	120
Acetone	ND	< 200		1550	1670	µg/g	92.8	60	120
2 Propanol	ND	< 200		1530	1630	µg/g	93.9	60	120
Ethyl Formate	ND	< 500		1390	1600	µg/g	86.9	70	130
Acetonitrile	ND	< 100		447	492	µg/g	90.9	60	120
Methyl Acetate	ND	< 500		1560	1600	µg/g	97.5	70	130
2,3 Dimethylbutane	ND	< 30		159	180	µg/g	88.3	60	120
Dichloromethane	ND	< 60		451	488	µg/g	92.4	60	120
2 Methylpentane	ND	< 30		151	182	µg/g	83.0	60	120
M BE	ND	< 500		1560	1610	µg/g	96.9	70	130
3 Methylpentane	ND	< 30		155	177	µg/g	87.6	60	120
Hexane	ND	< 30		160	177	µg/g	90.4	60	120
1 Propanol	ND	< 500		1520	1600	µg/g	95.0	70	130
Methylethylketone	ND	< 500		1530	1610	µg/g	95.0	70	130
Ethyl acetate	ND	< 200		1500	1630	µg/g	92.0	60	120
2 Butanol	ND	< 200		1470	1630	µg/g	90.2	60	120
tetrahydrofuran	ND	< 100		456	488	µg/g	93.4	60	120
Cyclohexane	ND	< 200		1410	1610	µg/g	87.6	60	120
2 methyl 1 propanol	ND	< 500		1410	1610	µg/g	87.6	70	130
Benzene	ND	< 1		4.39	4.79	µg/g	91.6	60	120
Isopropyl Acetate	ND	< 200		1510	1650	µg/g	91.5	60	120
Heptane	ND	< 200		1420	1630	µg/g	87.1	60	120
1 Butanol	ND	< 500		1360	1600	µg/g	85.0	70	130
Propyl Acetate	ND	< 500		1440	1600	µg/g	90.0	70	130
1,4 Dioxane	ND	< 100		421	523	µg/g	80.5	60	120
2 Ethoxyethanol	ND	< 30		155	179	µg/g	86.6	60	120
Methylisobutylketone	ND	< 500		1370	1600	µg/g	85.6	70	130
3 Methyl 1 butanol	ND	< 500		1250	1600	µg/g	78.1	70	130
Ethylene Glycol	ND	< 200		311	506	µg/g	61.5	60	120
oluene	ND	< 100		414	496	µg/g	83.5	60	120
Isobutyl Acetate	ND	< 500		1420	1610	µg/g	88.2	70	130
1 Pentanol	ND	< 500		1440	1600	µg/g	90.0	70	130
Butyl Acetate	ND	< 500		1330	1610	µg/g	82.6	70	130
Ethylbenzene	ND	< 200		732	978	µg/g	74.8	60	120
m,p Xylene	ND	< 200		742	994	µg/g	74.6	60	120
o Xylene	ND	< 200		719	982	µg/g	73.2	60	120
Cumene	ND	< 30		111	171	µg/g	64.9	60	120
Anisole	ND	< 500		1200	1600	µg/g	75.0	70	130
DMSO	ND	< 500		1240	1620	µg/g	76.5	70	130
1,2 dimethoxyethane	ND	< 50		171	185	µg/g	91.9	70	130
riethylamine	ND	< 500		1310	1600	µg/g	81.9	70	130
N,N dimethylformamide	ND	< 150		393	480	µg/g	81.9	70	130
N,N dimethylacetamide	ND	< 150		323	483	µg/g	66.9	70	130 Q6
Pyridine	ND	< 50		140	168	µg/g	83.3	70	130
Sulfolane	ND	< 50		69.5	161	µg/g	43.2	70	130 Q6
1,2 Dichloroethane	ND	< 1		0.873	1	µg/g	87.3	70	130
Chloroform	ND	< 1		0.842	1	µg/g	84.2	70	130
richloroethylene	ND	< 1		0.846	1	µg/g	84.6	70	130
1,1 Dichloroethane	ND	< 1		0.898	1	µg/g	89.8	70	130



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QC - Sample Duplicate		Sample ID: 23-010300-0001						
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	ND	ND	200	µg/g	0.0	< 20	Acceptable	
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	
M BE	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	
Methyl ethyl ketone	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	
oluene	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	
richloroethylene	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

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.