



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



Report Number: 23-007939/D002.R000
Report Date: 07/13/2023
ORELAP#: OR100028
Purchase Order:
Received: 07/06/23 11:59

Customer: NW Natural Goods
Product identity: HEMP - RB 0112
Client/Metric ID: .
Laboratory ID: 23-007939-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.188		mg/4g		CBD-Total per Serving Size 24.6 mg/4g
CBD per 4g	24.6		mg/4g		
CBG per 4g	0.644		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 - RB 0112

Client/Metric ID: .

Sample Date:

Laboratory ID: 23-007939-0001

Evidence of Cooling: No

Temp: 20.0

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: 2308895		Analyze: 7/7/23 6:09:00 PM
Analyte	Result	Limits	Units	LOQ	Notes	
CBC per 4g	0.188		mg/4g	0.129		
CBC-A per 4g	< LOQ		mg/4g	0.129		
CBC-Total per 4g	< LOQ		mg/4g	0.242		
CBD per 4g	24.6		mg/4g	0.129		
CBD-A per 4g	< LOQ		mg/4g	0.129		
CBD-Total per 4g	24.6		mg/4g	0.242		
CBDV per 4g	< LOQ		mg/4g	0.129		
CBDV-A per 4g	< LOQ		mg/4g	0.129		
CBDV-Total per 4g	< LOQ		mg/4g	0.240		
CBE per 4g	< LOQ		mg/4g	0.129		
CBG per 4g	0.644		mg/4g	0.129		
CBG-A per 4g	< LOQ		mg/4g	0.129		
CBG-Total per 4g	0.644		mg/4g	0.240		
CBL per 4g	< LOQ		mg/4g	0.129		
CBL-A per 4g	< LOQ		mg/4g	0.129		
CBL-Total per 4g	< LOQ		mg/4g	0.242		
CBN per 4g	< LOQ		mg/4g	0.129		
CBT per 4g	< LOQ		mg/4g	0.129		
Δ8-THCV per 4g	< LOQ		mg/4g	0.129		
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.129		
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.129		
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.258		
Δ8-THC per 4g	< LOQ		mg/4g	0.129		
Δ9-THC per 4g	< LOQ		mg/4g	0.129		
delta-9-THCP per 4g	< LOQ		mg/4g	0.129		
exo-THC per 4g	< LOQ		mg/4g	0.129		
THC-A per 4g	< LOQ		mg/4g	0.129		
THC-Total per 4g	< LOQ		mg/4g	0.242		
THCV per 4g	< LOQ		mg/4g	0.129		
THCV-A per 4g	< LOQ		mg/4g	0.129		
THCV-Total per 4g	< LOQ		mg/4g	0.242		
Total Cannabinoids per 4g	25.4		mg/4g			

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	1	2308844	07/09/23 AOAC 991.14 (Petrifilm) ^P		
Total Coliforms	< LOQ		cfu/g	1	2308844	07/09/23 AOAC 991.14 (Petrifilm) ^P		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2308845	07/09/23 AOAC 2014.05 (RAPID) ^P		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2308845	07/09/23 AOAC 2014.05 (RAPID) ^P		

Solvents Method: Residual Solvents by GC/MS^B Units µg/g Batch 2308992 Analyze 07/12/23 11:24 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)^B Units mg/kg Batch 2308942 Analyze 07/11/23 11:48 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	0.0177	2309029	07/12/23 AOAC 2013.06 (mod.) ^p	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0177	2309029	07/12/23 AOAC 2013.06 (mod.) ^p	pass	
Lead*	< LOQ	0.500	mg/kg	0.0177	2309029	07/12/23 AOAC 2013.06 (mod.) ^p	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00885	2309029	07/12/23 AOAC 2013.06 (mod.) ^p	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	18.3		g/100g	0.10	2308923	07/10/23 AOAC 925.10 (mod.) ^p		
Water Activity	0.702		Aw	0.030	2308906	07/10/23 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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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	lusalazole	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	luvalina e, au-	0.100
C PC	1.000	ndosul an sul a e	0.100	luxapyroxad	0.020



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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	Propoxycarbazono 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	Pyrimo 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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Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Tolclo os-me hyl	0.100	Triazophos	0.020	Tri loxys robin	0.020
Tri orin	0.100	Tolyl luanid	0.050	Tri iconazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vinclozolin	0.100
Triadime on	0.050	Tri lumizole	0.020	Zoxamide	0.020
Trialla e	0.100	Tri luralin	0.100		

LOQ= Limit of Quantitation, mg/kg

Factors affecting the LOQ include instrument sensitivity or 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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Hemp & Cannabis
 Chain of Custody

Northwest-Natural-
 Goods-1688595469

ORELAP ID: OR100028 ANAB ED P (ESID: A1608

	Project Information Project Name: HEMP-RB-012 PO Number: N/A Turnaround Time: 5 Business Days (Rate, For Micro Testing IS Standard) Samples Delivered to Laboratory: Schedule Pick-Up Cannable Types: Industrial			(Test m)						
				H1001 Potency-Cannabinoid (Basic) - Extended Profile	P2320 Pesticide - Multi-Residue Profile	H1008 Residual Solvents-CR	H1003 Heavy Metals Profile (Pb, As, Cd, Fe & Hg)	M025 Total Coliforms - E-Coli	M028 Yeast and Mold	N1801 Moisture and Loss on Drying
#	Sample Name	Material	Amount Provided	Testing Comments						
1	HEMP-RB-012	Edible	20 units for sale	n580-water activity	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
Kristen Johnson	7/6/2023	15:17	Temp., °C	BR	7/6/2023	10:14		No
BR	7/6/2023	11:03	20.0	ARH	7/6/2023	11:59		No

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

Columbia Laboratories
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P: (503) 254-1794 Fax: (503) 254-1492
info@columbialaboratories.com

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Revision 4 Documen D 7148
Legacy D Workshee Valida ed 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V986 Batch ID: 2308895

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBDVA	2	0.0318	0.0316	%	101	80.0	- 120	Acceptable	
CBDV	2	0.0323	0.0315	%	103	80.0	- 120	Acceptable	
CBE	2	0.0354	0.0348	%	102	80.0	- 120	Acceptable	
CBDA	1	0.0320	0.0325	%	98.5	90.0	- 110	Acceptable	
CBGA	1	0.0321	0.0326	%	98.3	80.0	- 120	Acceptable	
CBG	1	0.0324	0.0332	%	97.6	80.0	- 120	Acceptable	
CBD	1	0.0332	0.0337	%	98.3	90.0	- 110	Acceptable	
THCV	2	0.0239	0.0236	%	101	80.0	- 120	Acceptable	
d8THCV	2	0.0280	0.0279	%	100	80.0	- 120	Acceptable	
THCVA	2	0.0311	0.0308	%	101	80.0	- 120	Acceptable	
CBN	1	0.0331	0.0340	%	97.5	80.0	- 120	Acceptable	
exo-THC	2	0.0285	0.0283	%	101	80.0	- 120	Acceptable	
d9THC	1	0.0324	0.0329	%	98.4	90.0	- 110	Acceptable	
d8THC	1	0.0314	0.0320	%	98.1	90.0	- 110	Acceptable	
9S-d10THC	1	0.0336	0.0343	%	98.2	80.0	- 120	Acceptable	
CBL	2	0.0319	0.0311	%	103	80.0	- 120	Acceptable	
9R-d10THC	1	0.0304	0.0313	%	97.2	80.0	- 120	Acceptable	
CBC	2	0.0298	0.0293	%	102	80.0	- 120	Acceptable	
THCA	1	0.0317	0.0322	%	98.3	90.0	- 110	Acceptable	
CBCA	2	0.0325	0.0320	%	102	80.0	- 120	Acceptable	
CBLA	2	0.0306	0.0302	%	101	80.0	- 120	Acceptable	
d9THCP	2	0.0326	0.0326	%	100	80.0	- 120	Acceptable	
CBT	2	0.0329	0.0326	%	101	80.0	- 120	Acceptable	

Method Blank							
Analyte	Result	LOQ	Units	Limits		Evaluation	Notes
CBDVA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBDV	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBE	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBDA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBGA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBG	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBD	<LOQ	0.00323	%	< 0.00323		Acceptable	
THCV	<LOQ	0.00323	%	< 0.00323		Acceptable	
d8THCV	<LOQ	0.00323	%	< 0.00323		Acceptable	
THCVA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBN	<LOQ	0.00323	%	< 0.00323		Acceptable	
exo-THC	<LOQ	0.00323	%	< 0.00323		Acceptable	
d9THC	<LOQ	0.00323	%	< 0.00323		Acceptable	
d8THC	<LOQ	0.00323	%	< 0.00323		Acceptable	
9S-d10THC	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBL	<LOQ	0.00323	%	< 0.00323		Acceptable	
9R-d10THC	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBC	<LOQ	0.00323	%	< 0.00323		Acceptable	
THCA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBCA	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBLA	<LOQ	0.00323	%	< 0.00323		Acceptable	
d9THCP	<LOQ	0.00323	%	< 0.00323		Acceptable	
CBT	<LOQ	0.00323	%	< 0.00323		Acceptable	

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

Units of Measure:
% - Percent



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



Report Number: 23-007939/D002.R000
Report Date: 07/13/2023
ORELAP#: OR100028
Purchase Order:
Received: 07/06/23 11:59

Revision 4 Documen D 7148
 Legacy D Workshee Valida ed 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V986		Batch ID: 2308895						
Sample Duplicate		Sample ID: 23-0079390001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBG	0.0154	0.0161	0.00323	%	4.31	< 20	Acceptable	
CBD	0.600	0.614	0.00323	%	2.29	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
9S-d10THC	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
9R-d10THC	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBC	0.00458	0.00469	0.00323	%	2.55	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00323	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.00323	%	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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Revision: 2 Document ID: 7087
 Legacy ID: CFL-E33Effective:

Laboratory Quality Control Results

Residual Solvents				Batch D: 2308992					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		632	584	µg/g	108.2	60 - 120	
Isobutane	ND	< 200		833	767	µg/g	108.6	60 - 120	
Butane	ND	< 200		831	782	µg/g	106.3	60 - 120	
2,2-Dimethylpropane	ND	< 200		1020	939	µg/g	108.6	60 - 120	
Methanol	ND	< 200		1850	1640	µg/g	112.8	60 - 120	
Ethylene Oxide	ND	< 30		73.5	57.1	µg/g	128.7	60 - 120	Q1
2-Methylbutane	ND	< 200		1670	1600	µg/g	104.4	60 - 120	
Pentane	ND	< 200		1700	1620	µg/g	104.9	60 - 120	
Ethanol	ND	< 200		1920	1610	µg/g	119.3	70 - 130	
Ethyl Ether	ND	< 200		1730	1610	µg/g	107.5	60 - 120	
2,2-Dimethylbutane	ND	< 30		177	168	µg/g	105.4	60 - 120	
Acetone	ND	< 200		1750	1620	µg/g	108.0	60 - 120	
2-Propanol	ND	< 200		1970	1600	µg/g	123.1	60 - 120	Q1
Ethyl Formate	ND	< 500		1610	1600	µg/g	100.6	70 - 130	
Acetonitrile	ND	< 100		516	484	µg/g	106.6	60 - 120	
Methyl Acetate	ND	< 500		1630	1610	µg/g	101.2	70 - 130	
2,3-Dimethylbutane	ND	< 30		177	162	µg/g	109.3	60 - 120	
Dichloromethane	ND	< 60		523	483	µg/g	108.3	60 - 120	
2-Methylpentane	ND	< 30		181	174	µg/g	104.0	60 - 120	
MTBE	ND	< 500		1610	1610	µg/g	100.0	70 - 130	
3-Methylpentane	ND	< 30		188	168	µg/g	111.9	60 - 120	
Hexane	ND	< 30		171	168	µg/g	101.8	60 - 120	
1-Propanol	ND	< 500		1790	1600	µg/g	111.9	70 - 130	
Methyl ethyl ketone	ND	< 500		1640	1620	µg/g	101.2	70 - 130	
Ethyl acetate	ND	< 200		1770	1600	µg/g	110.6	60 - 120	
2-Butanol	ND	< 200		2010	1600	µg/g	125.6	60 - 120	Q1
Tetrahydrofuran	ND	< 100		540	514	µg/g	105.1	60 - 120	
Cyclohexane	ND	< 200		1670	1600	µg/g	104.4	60 - 120	
2-methyl-1-propanol	ND	< 500		1880	1610	µg/g	116.8	70 - 130	
Benzene	ND	< 1		4.41	5.12	µg/g	86.1	60 - 120	
Isopropyl Acetate	ND	< 200		1790	1620	µg/g	110.5	60 - 120	
Heptane	ND	< 200		1700	1610	µg/g	105.6	60 - 120	
1-Butanol	ND	< 500		1870	1600	µg/g	116.9	70 - 130	
Propyl Acetate	ND	< 500		1640	1600	µg/g	102.5	70 - 130	
1,4-Dioxane	ND	< 100		509	493	µg/g	103.2	60 - 120	
2-Ethoxyethanol	ND	< 30		216	163	µg/g	132.5	60 - 120	Q1
Methylisobutylketone	ND	< 500		1680	1600	µg/g	105.0	70 - 130	
3-Methyl-1-butanol	ND	< 500		1830	1610	µg/g	113.7	70 - 130	
Ethylene Glycol	ND	< 200		473	483	µg/g	97.9	60 - 120	
Toluene	ND	< 100		508	493	µg/g	103.0	60 - 120	
Isobutyl Acetate	ND	< 500		1640	1600	µg/g	102.5	70 - 130	
1-Pentanol	ND	< 500		1970	1600	µg/g	123.1	70 - 130	
Butyl Acetate	ND	< 500		1640	1600	µg/g	102.5	70 - 130	
Ethylbenzene	ND	< 200		994	969	µg/g	102.6	60 - 120	
m,p-Xylene	ND	< 200		931	968	µg/g	96.2	60 - 120	
o-Xylene	ND	< 200		989	976	µg/g	101.3	60 - 120	
Cumene	ND	< 30		163	162	µg/g	104.3	60 - 120	
Anisole	ND	< 500		1550	1610	µg/g	96.3	70 - 130	
DMSO	ND	< 500		1450	1610	µg/g	90.1	70 - 130	
1,2-dimethoxyethane	ND	< 50		160	164	µg/g	97.6	70 - 130	
Triethylamine	ND	< 500		1470	1600	µg/g	91.9	70 - 130	
N,N-dimethylformamide	ND	< 150		513	484	µg/g	106.0	70 - 130	
N,N-dimethylacetamide	ND	< 150		478	489	µg/g	97.8	70 - 130	
Pyridine	ND	< 50		149	172	µg/g	86.6	70 - 130	
Silolane	ND	< 50		127	163	µg/g	77.9	70 - 130	
1,2-Dichloroethane	ND	< 1		1.07	1	µg/g	107.0	70 - 130	
Chloroform	ND	< 1		1.12	1	µg/g	112.0	70 - 130	
Trichloroethylene	ND	< 1		1.07	1	µg/g	107.0	70 - 130	
1,1-Dichloroethane	ND	< 1		1.03	1	µg/g	103.0	70 - 130	



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Received: 07/06/23 11:59

Revision: 2 Document ID: 7087
 Legacy ID: CFL-E33Effective:

QC- Sample Duplicate Sample ID: 23-007460-0001

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	
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
 Q1- Quality control result biased/high. On y non-detect samples reported.

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.