



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



Report Number: 23-014754/D002.R000
Report Date: 12/28/2023
ORELAP#: OR100028
Purchase Order:
Received: 12/18/23 12:16

Customer: NW Natural Goods
Product identity: HEMP - HB 0104
Client/Metric ID:
Laboratory ID: 23-014754-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.213		mg/4g		CBD-Total per Serving Size 25.8 mg/4g
CBD per 4g	25.8		mg/4g		
CBG per 4g	0.724		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 0104

Client/Metric ID:

Sample Date:

Laboratory ID: 23-014754-0001

Evidence of Cooling: No

Temp: 16.7

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: 2313757		Analyze: 12/19/23 7:21:00 PM
Analyte	Result	Limits	Units	LOQ	Notes	
CBC per 4g	0.213		mg/4g	0.123		
CBC-A per 4g	< LOQ		mg/4g	0.123		
CBC-Total per 4g	< LOQ		mg/4g	0.231		
CBD per 4g	25.8		mg/4g	0.123		
CBD-A per 4g	< LOQ		mg/4g	0.123		
CBD-Total per 4g	25.8		mg/4g	0.231		
CBDV per 4g	< LOQ		mg/4g	0.123		
CBDV-A per 4g	< LOQ		mg/4g	0.123		
CBDV-Total per 4g	< LOQ		mg/4g	0.230		
CBE per 4g	< LOQ		mg/4g	0.123		
CBG per 4g	0.724		mg/4g	0.123		
CBG-A per 4g	< LOQ		mg/4g	0.123		
CBG-Total per 4g	0.724		mg/4g	0.230		
CBL per 4g	< LOQ		mg/4g	0.123		
CBL-A per 4g	< LOQ		mg/4g	0.123		
CBL-Total per 4g	< LOQ		mg/4g	0.231		
CBN per 4g	< LOQ		mg/4g	0.123		
CBT per 4g	< LOQ		mg/4g	0.123		
Δ8-THCV per 4g	< LOQ		mg/4g	0.123		
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.123		
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.123		
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.246		
Δ8-THC per 4g	< LOQ		mg/4g	0.123		
Δ9-THC per 4g	< LOQ		mg/4g	0.123		
delta-9-THCP per 4g	< LOQ		mg/4g	0.123		
exo-THC per 4g	< LOQ		mg/4g	0.123		
THC-A per 4g	< LOQ		mg/4g	0.123		
THC-Total per 4g	< LOQ		mg/4g	0.231		
THCV per 4g	< LOQ		mg/4g	0.123		
THCV-A per 4g	< LOQ		mg/4g	0.123		
THCV-Total per 4g	< LOQ		mg/4g	0.231		
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	2313675	12/21/23 AOAC 991.14 (Petrifilm) ^P		
Total Coliforms	< LOQ		cfu/g	10	2313675	12/21/23 AOAC 991.14 (Petrifilm) ^P		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2313676	12/21/23 AOAC 2014.05 (RAPID) ^P		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2313676	12/21/23 AOAC 2014.05 (RAPID) ^P		

Solvents Method: Residual Solvents by GC/MS^b Units µg/g Batch 2313769 Analyze 12/21/23 07:32 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-Dimethylbutane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200		
2,3-Dimethylbutane	< 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	
Isopropylbenzene (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 2313828 Analyze 12/27/23 08:59 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	0.0171	2313730	12/19/23 AOAC 2013.06 (mod.) ^b	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0171	2313730	12/19/23 AOAC 2013.06 (mod.) ^b	pass	
Lead*	< LOQ	0.500	mg/kg	0.0171	2313730	12/19/23 AOAC 2013.06 (mod.) ^b	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00855	2313730	12/19/23 AOAC 2013.06 (mod.) ^b	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	18.7		%	0.60	2313733	12/19/23 AOAC 966.02 (mod.)		
Water Activity	0.679		Aw	0.030	2313726	12/19/23 AOAC 978.18 ^b		



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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.

Ⓐ = ISO/IEC 17025:2017 accredited method.

Ⓜ = TNI accredited analyte.

Units of Measure

cfu/g = Colony forming units per gram

g = g

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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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
Acequinocyl	0.100	Clethodim Sulfoxide	0.050	EPTC	0.100
Acetamiprid	0.020	Clofentezine	0.020	Esfenvalerate/Fenvalerate	0.200
Acetochlor	0.100	Clomazone	0.020	Etaconazole	0.100
Acrinathrin	0.100	Clothianidin	0.200	Ethalfuralin	0.100
Alachlor	0.100	Coumaphos	0.050	Ethiofencarb	0.050
Aldicarb	0.100	Crotoxyphos	0.020	Ethion	0.200
Aldicarb sulfoxide	0.100	Cyanazine	0.020	Ethirimol	0.100
Aldoxycarb (Aldicarb-sulfone)	0.100	Cyanofenphos	0.020	Ethofumesate	0.050
Aldrin	0.100	Cyantranilprole	0.050	Ethoprophos	0.020
Ametocrtadin	0.020	Cyazofamid	0.020	Etofenprox	0.020
Ametryn	0.500	Cycloate	0.100	Etozazole	0.020
Aspon	0.100	Cyfluthrin	0.200	Etridiazole	0.100
Asulam	0.100	Cyhalothrin, lambda	0.200	Etrimfos	0.020
Atrazine	0.100	Cymoxanil	0.050	Famoxadone	0.200
Atrazine-desethyl	0.100	Cypermethrin	0.200	Famphur	0.100
Azinphos-ethyl	0.020	Cyprodinil	0.100	Fenamidone	0.020
Azinphos-methyl	0.020	Dacthal	0.100	Fenamiphos	0.020
Azoxystrobin	0.020	Daminozide	0.100	Fenamiphos sulfone	0.020
Benalaxyl	0.020	DCPMU	0.050	Fenamiphos sulfoxide	0.020
Bendiocarb	0.020	DDD, o,p'-	0.100	Fenazaquin	0.100
Benfluralin	0.100	DDD, p,p'-	0.100	Fenbuconazole	0.100
Benoxacor	0.050	DDE, o,p'-	0.100	Fenchlorphos	0.100
Bensulide	0.050	DDE, p,p'-	0.100	Fenchlorphos-oxon	0.100
BHC alpha isomer	0.100	DDT, o,p'-	0.100	Fenhexamid	0.100
BHC beta isomer	0.100	DDT, p,p'-	0.100	Fenitrothion	0.100
BHC delta isomer	0.500	DEF (Tribufos)	0.100	Fenobucarb	0.050
Bifenazate	0.020	Deltamethrin	0.100	Fenoxycarb	0.020
Bifenthrin	0.020	Desmedipham	0.100	Fenpropathrin	0.050
Boscalid	0.020	Diallate	0.100	Fenpyroximate	0.020
Bromophos-ethyl	0.100	Diazinon	0.020	Fenson	0.100
Bromophos-methyl	0.200	Diazoxon	0.100	Fensulfothion	0.020
Bromopropylate	0.100	Dichlobenil	0.100	Fensulfothion oxon	0.020
Bromuconazole	0.100	Dichlofluanid	0.100	Fensulfothion sulfone	0.100
Bupirimate	0.020	Dichlorvos	0.100	Fensulfothion-oxon-sulfone	0.020
Buprofezin	0.050	Diclobutrazol	0.050	Fenthion	0.050
Butachlor	0.500	Dicofol	0.100	Fenthion oxon	0.020
Butralin	0.200	Dicrotophos	0.050	Fenthion oxon sulfone	0.100
Butylate	0.100	Dieldrin	0.100	Fenthion sulfone	0.050
Cadusafos	0.020	Diethofencarb	0.020	Fenuron	0.020
Captan	1.000	Diethyltoluamide (DEET)	0.050	Fipronil	0.100
Carbaryl	0.050	Difenoconazole	0.100	Flonicamid	0.100
Carbendazim	0.100	Dimethenamid	0.050	Fluchloralin	0.100
Carbofuran	0.020	Dimethoate	0.050	Flucythrinate	0.100
Carbophenothion	0.200	Dimethomorph	0.050	Fludioxonil	0.200
Carboxin	0.020	Diniconazole	0.200	Flufenacet	0.020
Carfentrazone-ethyl	0.100	Dinotefuran	0.200	Flumioxazin	0.100
Chlorantranilprole	0.020	Dioxathion	0.100	Fluometuron	0.020
Chlordane, cis-	0.200	Diphenamid	0.020	Fluopicolide	0.050
Chlordane, trans-	0.200	Diphenylamine	0.100	Fluopyram	0.020
Chlorfenapyr	0.500	Disulfoton	0.100	Fluoxastrobin	0.050
Chlorfenson	0.200	Disulfoton sulfone	0.100	Flupyradifurone	0.020
Chlorfenvinphos	0.050	Disulfoton sulfoxide	0.100	Fluridone	0.100
Chlorobenzilate	0.100	Diuron	0.050	Flusilazole	0.020
Chloroneb	0.200	Edifenphos	0.050	Flutolanil	0.020
Chlorpyrifos	0.050	Endosulfan alpha	0.200	Flutriafol	0.020
Chlorpyrifos-methyl	0.200	Endosulfan beta	0.200	Fluxalinate, tau-	0.100
CIPC	1.000	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	Propanil	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	Prothiofos	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	Paclobutrazol	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 (PCNB)	0.200
Isoprocarb	0.020	Parathion methyl	0.200	Resmethrin	0.050
Isopropalin	0.200	Penconazole	0.050	Rotenone	0.050
Isoprothiolane	0.050	Pendimethalin	0.050	S421	0.100
Isoproturon	0.050	Penflufen	0.020	Simazine	0.100
Isoxaben	0.050	Pentachloroaniline	0.100	Simetryn	0.200
Isoxaflutole	0.050	Pentachloroanisole	0.100	Spinetoram	0.020
Kresoxim-methyl	0.050	Pentachlorobenzene (PCB)	0.100	Spinosad	0.050
Lactofen	0.500	Pentachlorothioanisole (PCTA)	0.100	Spirodiclofen	0.100
Lenacil	0.100	Penthiopyrad	0.020	Spiromesifen	0.050
Lindane (gamma BHC)	0.100	Permethrin	0.050	Spirotetramat	0.050
Linuron	0.020	Perthane	0.100	Spiroxamine	0.020
Malaoxon	0.050	Phenmedipham	0.050	Sulfotep	0.050
Malathion	0.050	Phenthoate	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
Methacrifos	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	Tetradifon	0.200
Methoxychlor	0.100	Procymidone	0.100	Tetramethrin	0.050
Methoxyfenozide	0.020	Profenofos	0.100	Tetrasul	0.100
Metobromuron	0.050	Profluralin	0.100	Thiabendazole	0.100
Metolachlor	0.100	Promecarb	0.050	Thiabendazole, 5-hydroxy	0.100
Metolcarb	0.050	Prometon	0.100	Thiacloprid	0.050
Metrafenone	0.050	Prometryn	0.020	Thiamethoxam	0.100
Metribuzin	0.100	Propachlor	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	Tolyfluanid	0.050	Triticonazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vinclozolin	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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**Hemp & Cannabis
Chain of Custody**

**Northwest-Natural-
goods-1702571188**

ORELAP ID: OR1000028 ANAB ISO 17025 ID: AT1508

Contact Information Company: Northwest Natural goods 		Project Details Turnaround Time: 5 Business Days (Reg. For Micro Testing) (Standard) Sample Relinquishment Options: <u>Schedule Pick-Up</u> Desired Pick Up/Sampling Time & Date: 12/18/23 Compliance: <u>Compliance</u> Project Name / ID: <u>HEMP-HB B104</u> Cannabis Type (select if applicable): <u>Industrial</u> Pick-Up Details Pick-Up Location Name: Northwest Natural goods  City, State, Zip: <u>Clackamas, OR 97015</u> Receipt Information Sample Condition: Satisfactory			Testing						
					H010 - Potency Cannabis (Basic Expanded)	M203 - HPLC (Yeast and Mold Count (MYM) (mfr)) (m)	H0012 - Cannabis Heavy Metals Profile (CF)	N300 - Water Activity	M026 - E. coli (Coliform Count) (mfr)) (m)	F2200 - Multi-Residue Pesticides Profile (Cannabis)	H100 - Moisture (Loss on Drying)
#	Sample Name Test	Material	Amount Provided	Reporting Unit	Serving Size						
1	HEMP-HB B104	Cannabinoid E.dible	20 each	mg/g & mg/-serving	4 g	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
CHARLES MLEARB	12/14/2023	08:26	Temp., °C	BR	12/18/2023	10:28	NA	No
BR	12/18/2023	10:57	16.70	rke	12/18/2023	12:16	NA	No

Sample 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
 12423 NE Whitaker Way
 Portland, OR 97230
 P: (503) 254-1794
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Revision: 4 Document ID: 7148
 Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

JAOAC2015 V986 Batch ID: 2313757

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBVA	2	0.0321	0.0322	%	99.6	80.0	- 120	Acceptable	
CBV	2	0.0336	0.0349	%	96.1	80.0	- 120	Acceptable	
CEE	2	0.0361	0.0356	%	101	80.0	- 120	Acceptable	
CBDA	1	0.0307	0.0317	%	97.1	90.0	- 110	Acceptable	
CBGA	1	0.0309	0.0315	%	98.1	80.0	- 120	Acceptable	
CBG	1	0.0290	0.0309	%	94.1	80.0	- 120	Acceptable	
CB	1	0.0334	0.0330	%	101	90.0	- 110	Acceptable	
THCV	2	0.0341	0.0342	%	99.9	80.0	- 120	Acceptable	
δ8THCV	2	0.0281	0.0280	%	100	80.0	- 120	Acceptable	
THCVA	2	0.0318	0.0323	%	98.4	80.0	- 120	Acceptable	
CBN	1	0.0331	0.0330	%	100	80.0	- 120	Acceptable	
exo-THC	2	0.0318	0.0315	%	101	80.0	- 120	Acceptable	
δ9THC	1	0.0335	0.0337	%	99.5	90.0	- 110	Acceptable	
δ8THC	1	0.0337	0.0336	%	100	90.0	- 110	Acceptable	
9SaTHC	1	0.0330	0.0326	%	101	80.0	- 120	Acceptable	
CB	2	0.0328	0.0325	%	101	80.0	- 120	Acceptable	
9RaTHC	1	0.0319	0.0318	%	100	80.0	- 120	Acceptable	
CB	2	0.0355	0.0354	%	100	80.0	- 120	Acceptable	
THCA	1	0.0328	0.0322	%	102	90.0	- 110	Acceptable	
CBGA	2	0.0345	0.0344	%	100	80.0	- 120	Acceptable	
CBLA	2	0.0344	0.0341	%	101	80.0	- 120	Acceptable	
δ9THCP	2	0.0338	0.0332	%	102	80.0	- 120	Acceptable	
CB	2	0.0348	0.0350	%	99.5	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	
CEE	<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	<LOQ	0.00328	%	< 0.00328	Acceptable	
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	
9SaTHC	<LOQ	0.00328	%	< 0.00328	Acceptable	
CB	<LOQ	0.00328	%	< 0.00328	Acceptable	
9RaTHC	<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

Units of Measure:

% - Percent



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



Report Number: 23-014754/D002.R000
Report Date: 12/28/2023
ORELAP#: OR100028
Purchase Order:
Received: 12/18/23 12:16

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

Laboratory Quality Control Results

JAOAC2015 V986		Batch ID: 2313757						
Sample Duplicate		Sample ID: 23-0147130001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBF	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBG	0.00338	0.00380	0.00321	%	11.7	< 20	Acceptable	
CB	0.256	0.256	0.00321	%	0.0900	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
δ8THCV	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBN	0.259	0.259	0.00321	%	0.00184	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
δ9THC	0.258	0.258	0.00321	%	0.00580	< 20	Acceptable	
δ8THC	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
9Sδ10THC	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
9Rδ10THC	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
δ9THCP	<LOQ	<LOQ	0.00321	%	NA	< 20	Acceptable	
CB	<LOQ	<LOQ	0.00321	%	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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 ORELAP#: OR100028
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 Received: 12/18/23 12:16

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

Laboratory Quality Control Results

Residual Solvents				Batch ID: 2313769					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		568	584	µg/g	97.3	60 - 120	
Isobutane	ND	< 200		678	767	µg/g	88.4	60 - 120	
Butane	ND	< 200		679	782	µg/g	86.8	60 - 120	
2,2-Dimethylpropane	ND	< 200		942	939	µg/g	100.3	60 - 120	
Methanol	ND	< 200		1910	1600	µg/g	119.4	60 - 120	
Ethylene Oxide	ND	< 30		52.8	57.1	µg/g	92.5	60 - 120	
2-Methylbutane	ND	< 200		1820	1600	µg/g	113.8	60 - 120	
Pentane	ND	< 200		1780	1600	µg/g	111.3	60 - 120	
Ethanol	ND	< 200		1600	1600	µg/g	100.0	70 - 130	
Ethyl Ether	ND	< 200		1610	1600	µg/g	100.6	60 - 120	
2,2-Dimethylbutane	ND	< 30		159	161	µg/g	98.8	60 - 120	
Acetone	ND	< 200		1740	1600	µg/g	108.8	60 - 120	
2-Propanol	ND	< 200		1710	1600	µg/g	106.9	60 - 120	
Ethyl Formate	ND	< 500		1160	1600	µg/g	72.5	70 - 130	
Acetonitrile	ND	< 100		558	488	µg/g	114.3	60 - 120	
Methyl Acetate	ND	< 500		1580	1610	µg/g	98.1	70 - 130	
2,3-Dimethylbutane	ND	< 30		166	163	µg/g	101.8	60 - 120	
Dichloromethane	ND	< 60		469	488	µg/g	96.1	60 - 120	
2-Methylpentane	ND	< 30		152	161	µg/g	94.4	60 - 120	
MTBE	ND	< 500		1610	1650	µg/g	97.6	70 - 130	
3-Methylpentane	ND	< 30		164	162	µg/g	101.2	60 - 120	
Hexane	ND	< 30		144	161	µg/g	89.4	60 - 120	
1-Propanol	ND	< 500		1720	1620	µg/g	106.2	70 - 130	
Methyl ethyl ketone	ND	< 500		1580	1610	µg/g	98.1	70 - 130	
Ethyl acetate	ND	< 200		1760	1610	µg/g	109.3	60 - 120	
2-Butanol	ND	< 200		1660	1610	µg/g	103.1	60 - 120	
Tetrahydrofuran	ND	< 100		463	483	µg/g	95.9	60 - 120	
Cyclohexane	ND	< 200		1520	1600	µg/g	95.0	60 - 120	
2-methyl-1-propanol	ND	< 500		1410	1600	µg/g	88.1	70 - 130	
Benzene	ND	< 1		3	4.99	µg/g	60.1	60 - 120	
Isopropyl Acetate	ND	< 200		1760	1600	µg/g	110.0	60 - 120	
Heptane	ND	< 200		1770	1600	µg/g	110.6	60 - 120	
1-Butanol	ND	< 500		1530	1610	µg/g	95.0	70 - 130	
Propyl Acetate	ND	< 500		1620	1610	µg/g	100.6	70 - 130	
1,4-Dioxane	ND	< 100		430	480	µg/g	89.6	60 - 120	
2-Ethoxyethanol	ND	< 30		156	161	µg/g	96.9	60 - 120	
Methylisobutylketone	ND	< 500		1630	1610	µg/g	101.2	70 - 130	
3-Methyl-1-butanol	ND	< 500		1530	1610	µg/g	95.0	70 - 130	
Ethylene Glycol	ND	< 200		393	481	µg/g	81.7	60 - 120	
Toluene	ND	< 100		447	483	µg/g	92.5	60 - 120	
Isobutyl Acetate	ND	< 500		1640	1610	µg/g	101.9	70 - 130	
1-Pentanol	ND	< 500		1620	1610	µg/g	100.6	70 - 130	
Butyl Acetate	ND	< 500		1620	1600	µg/g	101.3	70 - 130	
Ethylbenzene	ND	< 200		898	962	µg/g	93.1	60 - 120	
m,p-Xylene	ND	< 200		893	972	µg/g	91.9	60 - 120	
o-Xylene	ND	< 200		893	965	µg/g	92.5	60 - 120	
Cumene	ND	< 30		157	169	µg/g	92.9	60 - 120	
Anisole	ND	< 500		1360	1600	µg/g	85.0	70 - 130	
DMSO	ND	< 500		1310	1600	µg/g	81.9	70 - 130	
1,2-dimethoxyethane	ND	< 50		157	163	µg/g	96.3	70 - 130	
Triethylamine	ND	< 500		1220	1600	µg/g	76.3	70 - 130	
N,N-dimethylformamide	ND	< 150		432	482	µg/g	89.6	70 - 130	
N,N-dimethylacetamide	ND	< 150		464	483	µg/g	96.1	70 - 130	
Pyridine	ND	< 50		136	161	µg/g	84.5	70 - 130	
Silfolane	ND	< 50		132	163	µg/g	81.0	70 - 130	
1,2-Dichloroethane	ND	< 1		0.949	1	µg/g	94.9	70 - 130	
Chloroform	ND	< 1		0.872	1	µg/g	87.2	70 - 130	
Trichloroethylene	ND	< 1		0.758	1	µg/g	75.8	70 - 130	
1,1-Dichloroethane	ND	< 1		0.935	1	µg/g	93.5	70 - 130	



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Received: 12/18/23 12:16

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

QC- Sample Duplicate Sample ID: 23-014491-0001

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

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



12423 NE Whitaker Way
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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.