



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



Report Number: 22-014819/D002.R000
Report Date: 12/12/2022
ORELAP#: OR100028
Purchase Order:
Received: 12/05/22 11:08

Customer: NW Natural Goods
Product identity: HEMP - PR 0031
Client/Metric ID: .
Laboratory ID: 22-014819-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.161		mg/4g		CBD-Total per Serving Size 19.7 mg/4g
CBD per 4g	19.7		mg/4g		
CBG per 4g	10.6		mg/4g		THC-Total per Serving Size <LOQ
CBT per 4g	0.200		mg/4g		(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 - PR 0031

Client/Metric ID: .

Sample Date:

Laboratory ID: 22-014819-0001

Evidence of Cooling: No

Temp: 19.3 °C

Relinquished by: Hinton

Serving Size #1: 4 g

Sample Results

Potency per 4g		Method: J AOAC 2015 V98-6 (mod) ^b		Units mg/se Batch: 2210372		Analyze: 12/7/22 7:17:00 AM
Analyte	Result	Limits	Units	LOQ	Notes	
CBC per 4g	0.161		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	19.7		mg/4g	0.126		
CBD-A per 4g	< LOQ		mg/4g	0.126		
CBD-Total per 4g	19.7		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	0.235		
CBE per 4g	< LOQ		mg/4g	0.126		
CBG per 4g	10.6		mg/4g	0.126		
CBG-A per 4g	< LOQ		mg/4g	0.126		
CBG-Total per 4g	10.6		mg/4g	0.235		
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	0.200		mg/4g	0.126		
Δ8-THCV per 4g	< LOQ		mg/4g	0.126		
Δ10-THC per 4g	< LOQ		mg/4g	0.126		
Δ8-THC per 4g	< LOQ		mg/4g	0.126		
Δ9-THC 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	31.0		mg/4g			



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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2210345	12/08/22 AOAC 991.14 (Petrifilm) [®]		
Total Coliforms	< LOQ		cfu/g	10	2210345	12/08/22 AOAC 991.14 (Petrifilm) [®]		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2210347	12/09/22 AOAC 2014.05 (RAPID) [®]		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2210347	12/09/22 AOAC 2014.05 (RAPID) [®]		

Solvents Method: Residual Solvents by GC/MS[®] Units µg/g Batch 2210461 Analyze 12/09/22 10:40 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)[®] Units mg/kg Batch 2210438 Analyze 12/09/22 09:55 AM

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

Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Arsenic	< LOQ	0.200	mg/kg	0.0156	2210479	12/09/22 AOAC 2013.06 (mod.) [®]	pass	
Cadmium	< LOQ	0.200	mg/kg	0.0156	2210479	12/09/22 AOAC 2013.06 (mod.) [®]	pass	
Lead	< LOQ	0.500	mg/kg	0.0156	2210479	12/09/22 AOAC 2013.06 (mod.) [®]	pass	
Mercury	< LOQ	0.100	mg/kg	0.00780	2210479	12/09/22 AOAC 2013.06 (mod.) [®]	pass	



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Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	17.9		g/100g	0.10	2210411	12/07/22 AOAC 925.10 (mod.) ^p		
Water Activity	0.678		Aw	0.030	2210343	12/06/22 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.

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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Hemp & Cannabis: Usable / Extract / Finished Product
Chain of Custody Record

ORELAP ID: OR100028 ANAB ISO 17025 ID: AT-1508

Document Control ID: 2832 Revision: 5
Effective: 01/04/2022

22-014819

Company: Northwest Natural Goods Contact: Annie Nair Address: 11791 SE HWY 212 City: Clackamas State: OR Zip Code: 97015 <input checked="" type="checkbox"/> Email Results: annienair@nwnaturalgoods.com <input type="checkbox"/> Ph: (____) - _____ <i>Billing Contact (if different)</i> Name: _____ Email: _____ Address: _____ City: _____ State: _____ Zip: _____ Ph: (____) - _____			Analysis Requested Pesticides - OR 59 Compounds Pesticide Multi-Residue - 379 compounds Potency Residual Solvents Water Activity Moisture Micro: Yeast and Mold Micro: E.Coli and Total Coliform Heavy Metals Mycotoxins										PO Number: _____ Project ID: _____ Batch ID: _____ Sampled by: _____ Custom Reporting: _____		
			Source Material: <input type="checkbox"/> - Ind. Hemp product <input type="checkbox"/> - Rec. Cannabis Reporting Type: <input type="checkbox"/> - Compliance <input type="checkbox"/> - R&D Report to: <input type="checkbox"/> - METRC <input type="checkbox"/> - ODA <input type="checkbox"/> - USDA <input type="checkbox"/> - Other: _____										Turnaround time (TAT - Business Days): <input checked="" type="checkbox"/> - 5BD <input type="checkbox"/> - 3BD* <input type="checkbox"/> - 2BD* <i>*Check for availability</i>		
Lab ID	Client Sample Identification	Sample date	Pesticides - OR 59 Compounds	Pesticide Multi-Residue - 379 compounds	Potency	Residual Solvents	Water Activity	Moisture	Micro: Yeast and Mold	Micro: E.Coli and Total Coliform	Heavy Metals	Mycotoxins	Material Type †	Weight (Units)	Comments/Metric ID
	HEMP - PR 0031	12/05/22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		80g	
Signature - Relinquished By: Annie Nair <i>ANNA</i>			Date: 12/05/22 Time: 10:11	Signature - Received By: <i>MNA</i>			Date: 12/5 Time: 10:11	Signature - Received By: <i>DS</i>			Date: 12/5/22 Time: 11:07	Lab Use Only: <input type="checkbox"/> Shipped Via: _____ or <input type="checkbox"/> Client drop off Evidence of cooling: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No - Temp (°C): 19.3 Sample in good condition: <input type="checkbox"/> Yes <input type="checkbox"/> No Payment: <input type="checkbox"/> Cash <input type="checkbox"/> Check <input type="checkbox"/> CC <input type="checkbox"/> Net: _____ Prelog storage: _____			

† - Material Type Codes: Plant Material (P) ; Isolate (I) ; Concentrate/Extract (C) ; Tincture/Topical (T) ; Edible (E) ; Beverage (B) ; Vapor Product (V)

Samples submitted to Columbia Laboratories with testing requirements constitute an agreement for services in accordance with the [COLUMBIA LABORATORIES CHAIN OF CUSTODY \(COC\) FORM](#), associated with this COC. By signing "Relinquished by" you are agreeing to these terms

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P2320 Multi-Residue Pesticide Profile
 Cannabis

Analyte	LOQ (mg/kg)
2,4-D	0.1
Abamectin	0.1
Acephate	0.2
Acequinocyl	0.2
Acetamiprid	0.1
Acetochlor	0.2
Acrinathrin	0.1
Alachlor	0.1
Aldicarb	0.1
Aldoxycarb	0.1
Aldrin	0.1
Ametoctradin	0.1
Ametryn	0.1
Anilazine	0.1
Aspon	0.1
Asulam	0.1
Atrazine	0.1
Atrazine-desethyl	0.1
Azinphos-ethyl	0.1
Azinphos-methyl	0.1
Azoxystrobin	0.1
Benalaxyl	0.1
Bendiocarb	0.1
Benoxacor	0.1
Bensulide	0.1
Bentazon	0.1
Bifenazate	0.1
Bifenox	0.1
Bifenthrin	0.1
Binapacryl	0.1
Boscalid	0.1
Bromacil	0.1
Bromophos-ethyl	0.1
Bromopropylate	0.1
Bromoxynil	0.1
Bupirimate	0.1
Buprofezin	0.1
Butachlor	0.1
Butylate	0.1
Cadusafos	0.1
Captan	0.2
Carbaryl	0.1
Carbendazim	0.1
Carbofuran	0.1
Carbofuran 3-hydroxy	0.1
Carbophenothion	0.1
Carbophenothion-methyl	0.1
Carboxin	0.1

Analyte	LOQ (mg/kg)
Chlorantraniliprol	0.1
Chlordane, cis-	0.1
Chlordane, trans-	0.1
Chlorfenapyr	0.1
Chlorfenvinphos	0.1
Chlorobenzilate	0.1
Chlorpyrifos-ethyl	0.1
Chlorpyrifos-methyl	0.1
Chlorthal-dimethyl (Dacthal)	0.1
Clethodim	0.1
Clethodim sulfone	0.1
Clethodim sulfoxide	0.1
Clofentezine	0.1
Clomazone	0.1
Clopyralid	0.1
Clothianidin	0.1
Coumaphos	0.1
Crotoxyphos	0.1
Cyanofenphos	0.1
Cyanophos	0.1
Cyantraniliprole	0.1
Cyazofamid	0.1
Cyfluthrin	0.1
Cyhalothrin, lambda	0.1
Cymoxanil	0.1
Cypermethrin	0.1
Cyprodinil	0.1
DDD, o,p'-	0.1
DDD, p,p'-	0.1
DDE, o,p'-	0.1
DDE, p,p'-	0.1
DDT, o,p'-	0.1
DDT, p,p'-	0.1
DEET	0.1
Deltamethrin	0.1
Demeton-S	0.1
Demeton-s-methyl	0.1
Demeton-S-methyl-sulfone	0.1
Desmedipham	0.1
Diazinon	0.1
Dicamba	0.1
Dichlofenthion	0.1
Dichlofluanid	0.1
Dichlorbenzamid	0.1
Dichlorvos	0.1
Diclofop	0.1
Diclofop-methyl	0.1
Dicrotophos	0.1

Analyte	LOQ (mg/kg)
Dieldrin	0.1
Diethofencarb	0.1
Difenoconazol	0.1
Diflubenzuron	0.1
Diflufenzopyr	0.1
Dimethenamid	0.1
Dimethoat	0.1
Dimethomorph	0.1
Dinoseb	0.1
Dinotefuran	0.1
Dioxathion	0.1
Diphenamid	0.1
Diphenylamine (DPA)	0.1
Disulfoton	0.1
Disulfoton-sulfone	0.1
Disulfoton-Sulfoxide	0.1
Diuron	0.1
DNOC	0.1
Edifenphos	0.1
Endosulfan (alpha isomer)	0.1
Endosulfan (beta isomer)	0.1
Endosulfan-sulfate	0.1
Endrin	0.1
EPN	0.1
EPTC	0.1
Esfenvalerate/Fenvalerate	0.1
Ethiofencarb	0.1
Ethion	0.1
Ethofumesate	0.1
Ethoprophos	0.1
Etofenprox	0.1
Etozazole	0.1
Etrinfos	0.1
Famoxadone	0.1
Famphur	0.1
Fenamiphos	0.1
Fenamiphos-Sulfone	0.1
Fenamiphos-Sulfoxide	0.1
Fenazaquin	0.1
Fenbuconazole	0.1
Fenhexamid	0.1
Fenobucarb	0.1
Fenoxycarb	0.1
Fenpropathrin	0.1
Fensulfothion	0.1
Fenthion	0.1
Fenuron	0.1
Fipronil	0.1

LOQ= Limit of Quantitation
 mg/kg= milligram per kilogram (ppm)



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P2320 Multi-Residue Pesticide Profile
Cannabis

Analyte	LOQ (mg/kg)
Fonicamid	0.1
Fluazifop	0.1
Fluazinam	0.1
Flucythrinate	0.1
Fludioxonil	0.1
Flufenacet	0.1
Flumioxazin	0.1
Fluopicolide	0.1
Fluopyram	0.1
Fluoxastrobin	0.1
Flupyradifurone	0.1
Fluridone	0.1
Fluroxypyr	0.1
Fluthiacet-methyl	0.1
Flutolanil	0.1
Flutriafol	0.1
Fluvalinate	0.1
Fluxapyroxad	0.1
Fomesafen	0.1
Formetanate	0.1
Furathiocarb	0.1
Haloxypol	0.1
Heptachlor	0.1
Heptachlor epoxide	0.1
Hexaconazole	0.1
Hexazinone	0.1
Hexythiazox	0.1
Hydropene	0.1
Imazalil	0.1
Imazethapyr	0.1
Imidacloprid	0.1
Indaziflam	0.1
Indoxacarb	0.1
Iprobenfos	0.1
Iprodion	0.1
Isobenzan	0.1
Isufenphos	0.1
Isufenphos-methyl	0.1
Isufenphos-oxon	0.1
Isoprocab	0.1
Isoprothiolane	0.1
Isoproturon	0.1
Isoxaben	0.1
Kresoxim-methyl	0.1
Lindane	0.1
Linuron	0.1
Malaaxon	0.1
Malathion	0.1

Analyte	LOQ (mg/kg)
Mandipropamid	0.1
MCPA	0.1
MCPB	0.1
MCPP	0.1
Mecabarm	0.1
Mepanipyrim	0.1
Mesotrione	0.1
Metaxyl	0.1
Methamidophos	0.1
Methiocarb	0.1
Methiocarb sulfone	0.1
Methiocarb sulfoxide	0.1
Methomyl	0.1
Methoxyfenozide	0.1
Metolachlor	0.1
Metolcarb	0.1
Metrafenone	0.1
Mevinphos	0.1
MGK 264	0.1
Molinat	0.1
Monocrotophos	0.1
Monolinuron	0.1
Myclobutanil	0.1
Naled	0.1
Napropamide	0.1
Neburon	0.1
Norflurazon	0.1
Novaluron	0.1
Omethoat	0.1
Oryzalin	0.1
Oxadiazon	0.1
Oxadixyl	0.1
Oxamyl	0.1
Oxamyl-oxime	0.1
Oxychlorane	0.1
Oxydemeton-Methyl	0.1
Oxyfluorfen	0.1
Paclobutrazol	0.1
Paraoxon-ethyl	0.1
Paraoxon-methyl	0.1
Parathion-methyl	0.1
Penconazole	0.1
Pendimethalin	0.1
Penflufen	0.1
Penthiopyrad	0.1
Permethrin	0.1
Perthane	0.1
Phenmedipham	0.1

Analyte	LOQ (mg/kg)
Phenothrin	0.1
Phenthoate	0.1
Phorate	0.1
Phorate-Sulfone	0.1
Phorate-Sulfoxide	0.1
Phosalone	0.1
Phosmet	0.1
Phosphamidon	0.1
Phoxim	0.1
Pinoxaden	0.1
Piperonyl Butoxide	0.1
Pirimicarb	0.1
Pirimiphos-ethyl	0.1
Pirimiphos-methyl	0.1
Prallethrin	0.1
Prochloraz	0.1
Procymidone	0.1
Profenofos	0.1
Promecarb	0.1
Prometon	0.1
Prometryn	0.1
Propachlor	0.1
Propamocarb	0.1
Propanil	0.1
Propazine	0.1
Propetamophos	0.1
Propham	0.1
Propiconazole	0.1
Propoxur	0.1
Propyzamide	0.1
Prothiofos	0.1
Pyraclostrobin	0.1
Pyraflufen Ethyl	0.1
Pyrazophos	0.1
Pyrethrin	0.1
Pyridaben	0.1
Pyrimethanil	0.1
Pyriproxifen	0.1
Pyroxasulfone	0.1
Pyroxsulam	0.1
Quinalphos	0.1
Quinclorac	0.1
Quinoxifen	0.1
Quintozene(PCNB)	0.2
Quizalofop	0.1
Resmethrin	0.1
Rotenone	0.1
Safufenacil	0.1

LOQ= Limit of Quantitation
mg/kg= milligram per kilogram (ppm)



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P2320 Multi-Residue Pesticide Profile
 Cannabis

Analyte	LOQ (mg/kg)
Sebuthylazin	0.1
Sethoxydim	0.1
Simazine	0.1
Simetryn	0.1
Spinetoram J/L	0.1
Spinosyn A/D	0.1
Spirodiclofen	0.1
Spiromesifen	0.1
Spirotetramat	0.1
Spiroxamine	0.1
Sulfentrazone	0.1
Sulfotep	0.1
Sulfoxaflor	0.1
Sulprofos	0.1
Tebuconazole	0.1
Tebufenozide	0.1
Terbufos	0.1
Terbutylazine	0.1
Terbutryn	0.1
Tetrachlorvinphos	0.1
Tetraconazole	0.1
Tetramethrin	0.1
Thiabendazol	0.1
Thiabendazol-5-hydroxy	0.1
Thiacloprid	0.1
Thiamethoxam	0.1
Thiodicarb	0.1
Thiodicarb	0.1
Thiometon	0.1
Thiophanate-methyl	0.2
Tolfenpyrad	0.1
Tolyfluanid	0.1
Triadimefon	0.1
Triadimenol	0.1
Triazophos	0.1
Trifloxystrobin	0.1
Triflumizole	0.1
Triticonazole	0.1
Zoxamid	0.1

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 mg/kg= milligram per kilogram (ppm)



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Revision: 1 Document ID: 7148
 Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6 Batch ID: 2210372

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBDVA	2	0.0343	0.034	%	100	80.0	- 120	Acceptable	
CBDV	2	0.0354	0.035	%	100	80.0	- 120	Acceptable	
CBE	2	0.0345	0.035	%	97.5	80.0	- 120	Acceptable	
CBDA	1	0.0334	0.032	%	105	90.0	- 110	Acceptable	
CBGA	1	0.0334	0.032	%	104	80.0	- 120	Acceptable	
CBG	1	0.0336	0.032	%	106	80.0	- 120	Acceptable	
CBD	1	0.0334	0.032	%	105	90.0	- 110	Acceptable	
THCV	2	0.0344	0.034	%	101	80.0	- 120	Acceptable	
d8THCV	2	0.0365	0.036	%	101	80.0	- 120	Acceptable	
THCVA	2	0.0336	0.033	%	101	80.0	- 120	Acceptable	
CBN	1	0.0345	0.033	%	105	80.0	- 120	Acceptable	
exo-THC	2	0.0331	0.033	%	101	80.0	- 120	Acceptable	
d9THC	1	0.0347	0.034	%	102	90.0	- 110	Acceptable	
d8THC	1	0.0326	0.033	%	97.5	90.0	- 110	Acceptable	
CBL	2	0.0335	0.033	%	101	80.0	- 120	Acceptable	
d10THC	1	0.0321	0.031	%	105	80.0	- 120	Acceptable	
CBG	2	0.0351	0.035	%	100	80.0	- 120	Acceptable	
THCA	1	0.0337	0.032	%	106	90.0	- 110	Acceptable	
CBCA	2	0.0338	0.034	%	98.4	80.0	- 120	Acceptable	
CBLA	2	0.0356	0.035	%	101	80.0	- 120	Acceptable	
CBT	2	0.0361	0.037	%	98.6	80.0	- 120	Acceptable	

Method Blank						
Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDVA	<LOQ	0.003	%	< 0.003	Acceptable	
CBDV	<LOQ	0.003	%	< 0.003	Acceptable	
CBE	<LOQ	0.003	%	< 0.003	Acceptable	
CBDA	<LOQ	0.003	%	< 0.003	Acceptable	
CBGA	<LOQ	0.003	%	< 0.003	Acceptable	
CBG	<LOQ	0.003	%	< 0.003	Acceptable	
CBD	<LOQ	0.003	%	< 0.003	Acceptable	
THCV	<LOQ	0.003	%	< 0.003	Acceptable	
d8THCV	<LOQ	0.003	%	< 0.003	Acceptable	
THCVA	<LOQ	0.003	%	< 0.003	Acceptable	
CBN	<LOQ	0.003	%	< 0.003	Acceptable	
exo-THC	<LOQ	0.003	%	< 0.003	Acceptable	
d9THC	<LOQ	0.003	%	< 0.003	Acceptable	
d8THC	<LOQ	0.003	%	< 0.003	Acceptable	
CBL	<LOQ	0.003	%	< 0.003	Acceptable	
d10THC	<LOQ	0.003	%	< 0.003	Acceptable	
CBG	<LOQ	0.003	%	< 0.003	Acceptable	
THCA	<LOQ	0.003	%	< 0.003	Acceptable	
CBCA	<LOQ	0.003	%	< 0.003	Acceptable	
CBLA	<LOQ	0.003	%	< 0.003	Acceptable	
CBT	<LOQ	0.003	%	< 0.003	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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Report Number: 22-014819/D002.R000
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Received: 12/05/22 11:08

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 Legacy ID: Worksheet Validated 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6 Batch ID: 2210372

Sample Duplicate Sample ID: 22-014671-0001

Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBG	0.0143	0.0143	0.003	%	0.280	< 20	Acceptable	
CBD	0.0040	0.0039	0.003	%	2.40	< 20	Acceptable	
THCV	0.0063	0.0064	0.003	%	2.18	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBN	0.0232	0.0234	0.003	%	0.761	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d9THC	1.05	1.02	0.003	%	2.81	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d10THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBC	0.0137	0.0137	0.003	%	0.411	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	

Abbreviations

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

Units of Measure:



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Laboratory Quality Control Results

Residual Solvents				Batch ID: 2210461					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		416	572	µg/g	72.7	60 - 120	
Isobutane	ND	< 200		498	731	µg/g	68.1	60 - 120	
Butane	ND	< 200		474	731	µg/g	64.8	60 - 120	
2,2-Dimethylpropane	ND	< 200		654	936	µg/g	69.9	60 - 120	
Methanol	ND	< 200		1130	1620	µg/g	69.8	60 - 120	
Ethylene Oxide	ND	< 30		39	56.2	µg/g	69.4	60 - 120	
2-Methylbutane	ND	< 200		1160	1610	µg/g	72.0	60 - 120	
Pentane	ND	< 200		1150	1600	µg/g	71.9	60 - 120	
Ethanol	ND	< 200		1060	1610	µg/g	65.8	70 - 130	Q6
Ethyl Ether	ND	< 200		1170	1630	µg/g	71.8	60 - 120	
2,2-Dimethylbutane	ND	< 30		120	171	µg/g	70.2	60 - 120	
Acetone	ND	< 200		1220	1630	µg/g	74.8	60 - 120	
2-Propanol	ND	< 200		1090	1620	µg/g	67.3	60 - 120	
Ethyl Formate	ND	< 500		1430	1670	µg/g	85.6	70 - 130	
Acetonitrile	ND	< 100		346	498	µg/g	69.5	60 - 120	
Methyl Acetate	ND	< 500		1450	1730	µg/g	83.8	70 - 130	
2,3-Dimethylbutane	ND	< 30		128	171	µg/g	74.9	60 - 120	
Dichloromethane	ND	< 60		349	483	µg/g	72.3	60 - 120	
2-Methylpentane	ND	< 30		116	168	µg/g	69.0	60 - 120	
MTBE	ND	< 500		1460	1650	µg/g	88.5	70 - 130	
3-Methylpentane	ND	< 30		103	167	µg/g	61.7	60 - 120	
Hexane	ND	< 30		153	182	µg/g	84.1	60 - 120	
1-Propanol	ND	< 500		1360	1620	µg/g	84.0	70 - 130	
Methylethylketone	ND	< 500		1370	1620	µg/g	84.6	70 - 130	
Ethyl acetate	ND	< 200		1110	1610	µg/g	68.9	60 - 120	
2-Butanol	ND	< 200		1010	1600	µg/g	63.1	60 - 120	
Tetrahydrofuran	ND	< 100		330	483	µg/g	68.3	60 - 120	
Cyclohexane	ND	< 200		1140	1610	µg/g	70.8	60 - 120	
2-methyl-1-propanol	ND	< 500		1340	1620	µg/g	82.7	70 - 130	
Benzene	ND	< 1		3.97	5.02	µg/g	79.1	60 - 120	
Isopropyl Acetate	ND	< 200		1140	1620	µg/g	70.4	60 - 120	
Heptane	ND	< 200		1030	1610	µg/g	64.0	60 - 120	
1-Butanol	ND	< 500		1390	1630	µg/g	85.3	70 - 130	
Propyl Acetate	ND	< 500		1350	1610	µg/g	83.9	70 - 130	
1,4-Dioxane	ND	< 100		325	491	µg/g	66.2	60 - 120	
2-Ethoxyethanol	ND	< 30		136	181	µg/g	75.1	60 - 120	
Methylisobutylketone	ND	< 500		1340	1620	µg/g	82.7	70 - 130	
3-Methyl-1-butanol	ND	< 500		1330	1630	µg/g	81.6	70 - 130	
Ethylene Glycol	ND	< 200		305	484	µg/g	63.0	60 - 120	
Toluene	ND	< 100		329	485	µg/g	67.8	60 - 120	
Isobutyl Acetate	ND	< 500		1350	1630	µg/g	82.8	70 - 130	
1-Pentanol	ND	< 500		1300	1620	µg/g	80.2	70 - 130	
Butyl Acetate	ND	< 500		1330	1620	µg/g	82.1	70 - 130	
Ethylbenzene	ND	< 200		648	969	µg/g	66.9	60 - 120	
m,p-Xylene	ND	< 200		662	994	µg/g	66.6	60 - 120	
o-Xylene	ND	< 200		646	967	µg/g	66.8	60 - 120	
Cumene	ND	< 30		111	171	µg/g	64.9	60 - 120	
Anisole	ND	< 500		1310	1630	µg/g	80.4	70 - 130	
DMSO	ND	< 500		1430	1680	µg/g	85.1	70 - 130	
1,2-dimethoxyethane	ND	< 50		146	169	µg/g	86.4	70 - 130	
Triethylamine	ND	< 500		1420	1630	µg/g	87.1	70 - 130	
N,N-dimethylformamide	ND	< 150		417	482	µg/g	86.5	70 - 130	
N,N-dimethylacetamide	ND	< 150		411	510	µg/g	80.6	70 - 130	
Pyridine	ND	< 50		165	203	µg/g	81.3	70 - 130	
Silfolane	ND	< 50		127	172	µg/g	73.8	70 - 130	
1,2-Dichloroethane	ND	< 1		0.872	1	µg/g	87.2	70 - 130	
Chloroform	ND	< 1		0.818	1	µg/g	81.8	70 - 130	
Trichloroethylene	ND	< 1		0.802	1	µg/g	80.2	70 - 130	
1,1-Dichloroethane	ND	< 1		0.736	1	µg/g	73.6	70 - 130	



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QC- Sample Duplicate Sample ID: 22-014435-0001

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
 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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Portland, OR 97230
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Report Number: 22-014819/D002.R000
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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.