Columbia LABORATORIES
A Tentamus Company

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

Report Number: 23-001842/D002.R000
Report Date: 02/20/2023
ORELAP#: OR100028
Purchase Order:
Received: 02/13/23 11:13

Customer: NW Natural Goods
Product identity: HEMP-LM 0075
Client/Metrc ID: .
Laboratory ID: 23-001842-0002

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status
CBC per 4g	0.224		mg/4g	
CBD per 4g	25.7		mg/4g	
CBG per 4g	0.756		mg/4g	

CBD-Total per Serving Size 25.7 mg/4g

THC-Total per Serving Size <LOQ

(Reported in milligrams per serving)

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

All analytes passing and less than LOQ.

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.

Testing in accordance with: OAR 333-007-0430

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Received: 02/13/23 11:13

Customer: NW Natural Goods

Product identity: HEMP-LM 0075
Client/Metrc ID: .
Sample Date:
Laboratory ID: 23-001842-0002
Evidence of Cooling: No
Temp: 12.3
Relinquished by: hinton
Serving Size #1: 4 g

Sample Results

Potency per 4g **Method:** J AOAC 2015 V98-6 (mod)[þ] **Units** mg/se **Batch:** 2301448 **Analyze:** 2/14/23 9:32:00 PM

Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.224		mg/4g	0.123	
CBC-A per 4g	< LOQ		mg/4g	0.123	
CBC-Total per 4g	< LOQ		mg/4g	0.232	
CBD per 4g	25.7		mg/4g	0.123	
CBD-A per 4g	< LOQ		mg/4g	0.123	
CBD-Total per 4g	25.7		mg/4g	0.232	
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	0.756		mg/4g	0.123	
CBG-A per 4g	< LOQ		mg/4g	0.123	
CBG-Total per 4g	0.756		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	0.232	
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	0.247	
Δ8-THC per 4g	< LOQ		mg/4g	0.123	
Δ9-THC 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	0.232	
THCV per 4g	< LOQ		mg/4g	0.123	
THCV-A per 4g	< LOQ		mg/4g	0.123	
THCV-Total per 4g	< LOQ		mg/4g	0.232	
Total Cannabinoids per 4g	26.8		mg/4g		

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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2301388	02/16/23	AOAC 991.14 (Petrifilm)þ		
Total Coliforms	< LOQ		cfu/g	10	2301388	02/16/23	AOAC 991.14 (Petrifilm)þ		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2301389	02/17/23	AOAC 2014.05 (RAPID)þ		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2301389	02/17/23	AOAC 2014.05 (RAPID)þ		

Solvents

Method: Residual Solvents by GC/MSþ **Units** µg/g **Batch** 2301501 **Analyze** 02/16/23 01:34 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-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	

Metals

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
Arsenic	< LOQ	0.200	mg/kg	0.0195	2301505	02/16/23	AOAC 2013.06 (mod.)þ	pass	
Cadmium	< LOQ	0.200	mg/kg	0.0195	2301505	02/16/23	AOAC 2013.06 (mod.)þ	pass	
Lead	< LOQ	0.500	mg/kg	0.0195	2301505	02/16/23	AOAC 2013.06 (mod.)þ	pass	
Mercury	< LOQ	0.100	mg/kg	0.00973	2301505	02/16/23	AOAC 2013.06 (mod.)þ	pass	

Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
Moisture (Loss on Drying)	17.4		g/100g	0.10	2301465	02/15/23	AOAC 925.10 (mod.)þ		
Water Activity	0.641		Aw	0.030	2301462	02/14/23	AOAC 978.18þ		

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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.

þ = 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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Columbia LABORATORIES
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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
Etoxazole	0.1
Etrimfos	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)

Updated: 09.12.2022

Testing in accordance with: OAR 333-007-0390 OAR 333-007-0400 OAR 333-007-0410 OAR 333-007-0430

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Columbia LABORATORIES
A Tentamus Company

P2320 Multi-Residue Pesticide Profile
Cannabis

Analyte	LOQ (mg/kg)
Flonicamid	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
Haloxyfop	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
Isofenphos	0.1
Isofenphos-methyl	0.1
Isofenphos-oxon	0.1
Isoprocarb	0.1
Isoprothiolane	0.1
Isoproturon	0.1
Isoxaben	0.1
Kresoxim-methyl	0.1
Lindane	0.1
Linuron	0.1
Malaoxon	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
Metalaxyl	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
Oxychlordane	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
Quinoxyfen	0.1
Quintozene(PCNB)	0.2
Quizalofop	0.1
Resmethrin	0.1
Rotenone	0.1
Saflufenacil	0.1

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

Updated: 09.12.2022

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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
Terbuthylazine	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
Thiobencarb	0.1
Thiodicarb	0.1
Thiometon	0.1
Thiophanate-methyl	0.2
Tolfenpyrad	0.1
Tolylfluanid	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)

Updated: 09.12.2022

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Columbia LABORATORIES A Tentamus Company

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

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

NWNATURALGOODS 23-001842

NW Natural Goods

ion: 5
2022

Company: Northwest Natural Goods
Contact: Annie Nair
Address: 11791 SE HWY 212
City: Clackamas **State:** OR **Zip Code:** 97015
☑ **Email Results:** annienair@nwnaturalgoods.com
☐ **Ph:** {____} - _____

Billing Contact (if different)

Name: _____ **Email:** _____
Address: _____
City: _____ **State:** _____ **Zip:** _____
Ph: (____) - _____

Sampled by: _____
Custom Reporting:

Source Material: ☐ - Ind. Hemp product | ☐ - Rec. Cannabis
Reporting Type: ☐ - Compliance | ☐ - R&D
Report to: ☐ - METRC | ☐ - ODA | ☐ - USDA | ☐ - Other:

Turnaround time (TAT - Business Days):
■ - 5BD | ☐ - 3BD* | ☐ - 2BD*
**Check for availability*

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/Metrc ID
	HEMP - EB 0067	02/10/23		✔	✔	✔	✔	✔	✔	✔	✔			80g	

Analysis Requested

Signature - Relinquished By:	Date	Time	Signature - Received By:	Date	Time
Annie Nair	02/10/23		MRH	2/13	10:11
MRA	2/13	10:46	R535	02/13/23	1113

Lab Use Only:
☐ Shipped Via: _____ or ☐ Client drop off
Evidence of cooling: ☐ Yes | ☐ No - Temp (°C): 12.3
Sample in good condition: ☐ Yes | ☐ No _____
Payment: ☐ Cash | ☐ Check | ☐ CC | ☐ 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 current terms of service associated with this COC. By signing "Relinquished by" you are agreeing to these terms

12423 NE Whitaker Way
Portland, OR 97230
P: (503) 254-1794 | Fax: (503) 254-1452
info@columbialaboratories.com

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Columbia LABORATORIES A Tentamus Company

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

Company: Northwest Natural Goods
Contact: Annie Nair
Address: 11791 SE HWY 212
City: Clackamas **State:** OR **Zip Code:** 97015
☑ **Email Results:** annienair@nwnaturalgoods.com
☐ **Ph:** (____) - _____

Billing Contact (if different)

Name: _____ **Email:** _____
Address: _____
City: _____ **State:** _____ **Zip:** _____
Ph: (____) - _____

PO Number: _____
Project ID: _____
Batch ID: _____
Sampled by: _____
Custom Reporting: _____

Source Material: ☐ - Ind. Hemp product | ☐ - Rec. Cannabis
Reporting Type: ☐ - Compliance | ☐ - R&D
Report to: ☐ - METRC | ☐ - ODA | ☐ - USDA | ☐ - Other:

Turnaround time (TAT - Business Days):
■ - 5BD | ☐ - 3BD* | ☐ - 2BD*
**Check for availability*

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/Metrc ID
	HEMP - LM 0075	02/13/23		✔	✔	✔	✔	✔	✔	✔	✔			80g	

Signature - Relinquished By:	Date	Time	Signature - Received By:	Date	Time
Annie Nair	02/13/23		MRA	2/13	10:11
MRA	2/13	10:46	RBS	02/13/23	1113

Lab Use Only:
☐ Shipped Via: _____ or ☐ Client drop off
Evidence of cooling: ☐ Yes | ☐ No - Temp (°C): 12.3
Sample in good condition: ☐ Yes | ☐ No _____
Payment: ☐ Cash | ☐ Check | ☐ CC | ☐ 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 current terms of service associated with this COC. By signing "Relinquished by" you are agreeing to these terms

12423 NE Whitaker Way
Portland, OR 97230
P: (503) 254-1794 | Fax: (503) 254-1452
info@columbialaboratories.com
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www.columbialaboratories.com

Columbia LABORATORIES
A Tentamus Company

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

Report Number: 23-001842/D002.R000
Report Date: 02/20/2023
ORELAP#: OR100028
Purchase Order:
Received: 02/13/23 11:13

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

Laboratory Quality Control Results

J AOAC 2015 V98-6 **Batch ID: 2301448**

Laboratory Control Sample

Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDVA	2	0.0417	0.040	%	105	80.0 - 120	Acceptable	
CBDV	2	0.0446	0.042	%	105	80.0 - 120	Acceptable	
CBE	2	0.0436	0.041	%	105	80.0 - 120	Acceptable	
CBDA	1	0.0320	0.032	%	99.7	90.0 - 110	Acceptable	
CBGA	1	0.0317	0.032	%	99.5	80.0 - 120	Acceptable	
CBG	1	0.0332	0.033	%	99.8	80.0 - 120	Acceptable	
CBD	1	0.0317	0.033	%	95.3	90.0 - 110	Acceptable	
THCV	2	0.0420	0.040	%	104	80.0 - 120	Acceptable	
d8THCV	2	0.0440	0.042	%	105	80.0 - 120	Acceptable	
THCVA	2	0.0397	0.038	%	104	80.0 - 120	Acceptable	
CBN	1	0.0334	0.033	%	100	80.0 - 120	Acceptable	
exo-THC	2	0.0418	0.040	%	104	80.0 - 120	Acceptable	
d9THC	1	0.0341	0.033	%	104	90.0 - 110	Acceptable	
d8THC	1	0.0330	0.034	%	97.5	90.0 - 110	Acceptable	
9S-d10THC	1	0.0342	0.034	%	100	80.0 - 120	Acceptable	
CBL	2	0.0407	0.040	%	103	80.0 - 120	Acceptable	
9S-HHC	3	0.0308	0.033	%	92.4	80.0 - 120	Acceptable	
9R-d10THC	1	0.0319	0.032	%	99.5	80.0 - 120	Acceptable	
CBC	2	0.0441	0.042	%	105	80.0 - 120	Acceptable	
9R-HHC	3	0.0293	0.033	%	87.9	80.0 - 120	Acceptable	
THCA	1	0.0329	0.032	%	102	90.0 - 110	Acceptable	
CBCA	2	0.0421	0.040	%	104	80.0 - 120	Acceptable	
CBLA	2	0.0426	0.041	%	104	80.0 - 120	Acceptable	
d8THCO	3	0.0330	0.033	%	99.0	80.0 - 120	Acceptable	
CBT	2	0.0424	0.041	%	102	80.0 - 120	Acceptable	
d9THCO	3	0.0322	0.033	%	96.7	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	
9S-d10THC	<LOQ	0.003	%	< 0.003	Acceptable	
CBL	<LOQ	0.003	%	< 0.003	Acceptable	
9S-HHC	<LOQ	0.003	%	< 0.003	Acceptable	
9R-d10THC	<LOQ	0.003	%	< 0.003	Acceptable	
CBC	<LOQ	0.003	%	< 0.003	Acceptable	
9R-HHC	<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	
d8THCO	<LOQ	0.003	%	< 0.003	Acceptable	
CBT	<LOQ	0.003	%	< 0.003	Acceptable	
d9THCO	<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

Columbia LABORATORIES
A Tentamus Company

12423 NE Whitaker Way
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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: 2301448**

Sample Duplicate Sample ID: **22-013845-0002**

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	0.0079	0.0081	0.003	%	2.16	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d9THC	0.276	0.283	0.003	%	2.38	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
9S-d10THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
9S-HHC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
9R-d10THC	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBC	0.0122	0.0124	0.003	%	1.88	< 20	Acceptable	
9R-HHC	<LOQ	<LOQ	0.003	%	NA	< 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	
d8THCO	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
d9THCO	<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:

% - Percent

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Received: 02/13/23 11:13

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

Laboratory Quality Control Results

Residual Solvents **Batch ID:** 2301501

Method Blank					Laboratory Control Sample							
Analyte	**Result**		**LOQ**	**Notes**	**Result**	**Spike**	**Units**	**% Rec**	**Limits**			**Notes**
Propane	ND	<	200		528	572	µg/g	92.3	60	-	120	
Isobutane	ND	<	200		696	731	µg/g	95.2	60	-	120	
Butane	ND	<	200		686	731	µg/g	93.8	60	-	120	
2,2-Dimethylpropane	ND	<	200		840	936	µg/g	89.7	60	-	120	
Methanol	ND	<	200		1680	1620	µg/g	103.7	60	-	120	
Ethylene Oxide	ND	<	30		53.3	56.2	µg/g	94.8	60	-	120	
2-Methylbutane	ND	<	200		1690	1610	µg/g	105.0	60	-	120	
Pentane	ND	<	200		1680	1600	µg/g	105.0	60	-	120	
Ethanol	ND	<	200		1680	1610	µg/g	104.3	70	-	130	
Ethyl Ether	ND	<	200		1750	1630	µg/g	107.4	60	-	120	
2,2-Dimethylbutane	ND	<	30		178	171	µg/g	104.1	60	-	120	
Acetone	ND	<	200		1680	1630	µg/g	103.1	60	-	120	
2-Propanol	ND	<	200		1680	1620	µg/g	103.7	60	-	120	
Ethyl Formate	ND	<	500		1810	1670	µg/g	108.4	70	-	130	
Acetonitrile	ND	<	100		508	498	µg/g	102.0	60	-	120	
Methyl Acetate	ND	<	500		1720	1730	µg/g	99.4	70	-	130	
2,3-Dimethylbutane	ND	<	30		177	171	µg/g	103.5	60	-	120	
Dichloromethane	ND	<	60		523	483	µg/g	108.3	60	-	120	
2-Methylpentane	ND	<	30		175	168	µg/g	104.2	60	-	120	
MTBE	ND	<	500		1730	1650	µg/g	104.8	70	-	130	
3-Methylpentane	ND	<	30		161	167	µg/g	96.4	60	-	120	
Hexane	ND	<	30		228	182	µg/g	125.3	60	-	120	Q1
1-Propanol	ND	<	500		1520	1620	µg/g	93.8	70	-	130	
Methylethylketone	ND	<	500		1620	1620	µg/g	100.0	70	-	130	
Ethyl acetate	ND	<	200		1650	1610	µg/g	102.5	60	-	120	
2-Butanol	ND	<	200		1670	1600	µg/g	104.4	60	-	120	
Tetrahydrofuran	ND	<	100		500	483	µg/g	103.5	60	-	120	
Cyclohexane	ND	<	200		1740	1610	µg/g	108.1	60	-	120	
2-methyl-1-propanol	ND	<	500		1610	1620	µg/g	99.4	70	-	130	
Benzene	ND	<	1		5.82	5.02	µg/g	115.9	60	-	120	
Isopropyl Acetate	ND	<	200		1680	1620	µg/g	103.7	60	-	120	
Heptane	ND	<	200		1630	1610	µg/g	101.2	60	-	120	
1-Butanol	ND	<	500		1620	1630	µg/g	99.4	70	-	130	
Propyl Acetate	ND	<	500		1580	1610	µg/g	98.1	70	-	130	
1,4-Dioxane	ND	<	100		510	491	µg/g	103.9	60	-	120	
2-Ethoxyethanol	ND	<	30		180	181	µg/g	99.4	60	-	120	
Methylisobutylketone	ND	<	500		1680	1620	µg/g	103.7	70	-	130	
3-Methyl-1-butanol	ND	<	500		1580	1630	µg/g	96.9	70	-	130	
Ethylene Glycol	ND	<	200		480	484	µg/g	99.2	60	-	120	
Toluene	ND	<	100		504	485	µg/g	103.9	60	-	120	
Isobutyl Acetate	ND	<	500		1580	1630	µg/g	96.9	70	-	130	
1-Pentanol	ND	<	500		1520	1620	µg/g	93.8	70	-	130	
Butyl Acetate	ND	<	500		1540	1620	µg/g	95.1	70	-	130	
Ethylbenzene	ND	<	200		992	969	µg/g	102.4	60	-	120	
m,p-Xylene	ND	<	200		1000	994	µg/g	100.6	60	-	120	
o-Xylene	ND	<	200		979	967	µg/g	101.2	60	-	120	
Cumene	ND	<	30		173	171	µg/g	101.2	60	-	120	
Anisole	ND	<	500		1600	1630	µg/g	98.2	70	-	130	
DMSO	ND	<	500		1550	1680	µg/g	92.3	70	-	130	
1,2-dimethoxyethane	ND	<	50		160	169	µg/g	94.7	70	-	130	
Triethylamine	ND	<	500		1650	1630	µg/g	101.2	70	-	130	
N,N-dimethylformamide	ND	<	150		527	482	µg/g	109.3	70	-	130	
N,N-dimethylacetamide	ND	<	150		480	510	µg/g	94.1	70	-	130	
Pyridine	ND	<	50		201	203	µg/g	99.0	70	-	130	
Sulfolane	ND	<	50		167	172	µg/g	97.1	70	-	130	
1,2-Dichloroethane	ND	<	1		0.929	1	µg/g	92.9	70	-	130	
Chloroform	ND	<	1		1.01	1	µg/g	101.0	70	-	130	
Trichloroethylene	ND	<	1		0.909	1	µg/g	90.9	70	-	130	
1,1-Dichloroethane	ND	<	1		0.927	1	µg/g	92.7	70	-	130	

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

QC - Sample Duplicate **Sample ID: 23-001842-0001**

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. Only non-detect samples reported.

Units of Measure:

µg/g- Microgram per gram or ppm

Columbia LABORATORIES
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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	Quantitaion 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.