



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



**Report Number:** 23-009164/D002.R000  
**Report Date:** 08/10/2023  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 08/03/23 11:22

**Customer:** NW Natural Goods  
**Product identity:** HEMP - EB 0087  
**Client/Metric ID:** .  
**Laboratory ID:** 23-009164-0001

### Summary

**Potency:**

Analyte per 4g	Result	Limits	Units	Status	
CBD per 4g	25.8		mg/4g		CBD-Total per Serving Size 25.8 mg/4g
CBE per 4g	0.169		mg/4g		
CBG per 4g	0.488		mg/4g		THC-Total per Serving Size <LOQ
CBN per 4g	5.12		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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**Customer:** NW Natural Goods

**Product identity:** HEMP - EB 0087

**Client/Metric ID:** .

**Sample Date:**

**Laboratory ID:** 23-009164-0001

**Evidence of Cooling:** No

**Temp:** 21.4 °C

**Relinquished by:** Ramos

**Serving Size #1:** 4 g

### Sample Results

Potency per 4g					
Method: J AOAC 2015 V98-6 (mod) <sup>b</sup>					
Units mg/se Batch: 2309794 Analyze: 8/7/23 8:57:00 PM					
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	< LOQ		mg/4g	0.130	
CBC-A per 4g	< LOQ		mg/4g	0.130	
CBC-Total per 4g	< LOQ		mg/4g	0.243	
CBD per 4g	25.8		mg/4g	0.130	
CBD-A per 4g	< LOQ		mg/4g	0.130	
CBD-Total per 4g	25.8		mg/4g	0.243	
CBDV per 4g	< LOQ		mg/4g	0.130	
CBDV-A per 4g	< LOQ		mg/4g	0.130	
CBDV-Total per 4g	< LOQ		mg/4g	0.242	
CBE per 4g	0.169		mg/4g	0.130	
CBG per 4g	0.488		mg/4g	0.130	
CBG-A per 4g	< LOQ		mg/4g	0.130	
CBG-Total per 4g	0.488		mg/4g	0.242	
CBL per 4g	< LOQ		mg/4g	0.130	
CBL-A per 4g	< LOQ		mg/4g	0.130	
CBL-Total per 4g	< LOQ		mg/4g	0.243	
CBN per 4g	5.12		mg/4g	0.130	
CBT per 4g	< LOQ		mg/4g	0.130	
Δ8-THCV per 4g	< LOQ		mg/4g	0.130	
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.130	
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.130	
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.259	
Δ8-THC per 4g	< LOQ		mg/4g	0.130	
Δ9-THC per 4g	< LOQ		mg/4g	0.130	
delta-9-THCP per 4g	< LOQ		mg/4g	0.130	
exo-THC per 4g	< LOQ		mg/4g	0.130	
THC-A per 4g	< LOQ		mg/4g	0.130	
THC-Total per 4g	< LOQ		mg/4g	0.243	
THCV per 4g	< LOQ		mg/4g	0.130	
THCV-A per 4g	< LOQ		mg/4g	0.130	
THCV-Total per 4g	< LOQ		mg/4g	0.243	
Total Cannabinoids per 4g	31.6		mg/4g		



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**Microbiology**

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2309696	08/06/23 AOAC 991.14 (Petrifilm) <sup>P</sup>		
Total Coliforms	< LOQ		cfu/g	10	2309696	08/06/23 AOAC 991.14 (Petrifilm) <sup>P</sup>		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2309697	08/06/23 AOAC 2014.05 (RAPID) <sup>P</sup>		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2309697	08/06/23 AOAC 2014.05 (RAPID) <sup>P</sup>		

**Solvents** Method: Residual Solvents by GC/MS<sup>P</sup> Units µg/g Batch 2309785 Analyze 08/07/23 02:08 PM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass	
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane (Isopentane)	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethyl butane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200		
2,3-Dimethyl butane	< LOQ		30.0			3-Methylpentane	< LOQ		30.0		
Acetone	< LOQ	5000	200	pass		Acetonitrile	< LOQ	410	100	pass	
Benzene	< LOQ	2.00	1.00	pass		Butanes (sum)	< LOQ	5000	400	pass	
Cyclohexane	< LOQ	3880	200	pass		Ethyl acetate	< LOQ	5000	200	pass	
Ethyl benzene	< LOQ		200			Ethyl ether	< LOQ	5000	200	pass	
Ethylene glycol	< LOQ	620	200	pass		Ethylene oxide	< LOQ	50.0	20.0	pass	
Hexanes (sum)	< LOQ	290	150	pass		Isopropyl acetate	< LOQ	5000	200	pass	
Isopropyl benzene (Cumene)	< LOQ	70.0	30.0	pass		m,p-Xylene	< LOQ		200		
Methanol	< LOQ	3000	200	pass		Methylene chloride	< LOQ	600	60.0	pass	
Methylpropane (Isobutane)	< LOQ		200			n-Butane	< LOQ		200		
n-Heptane	< LOQ	5000	200	pass		n-Hexane	< LOQ		30.0		
n-Pentane	< LOQ		200			o-Xylene	< LOQ		200		
Pentanes (sum)	< LOQ	5000	600	pass		Propane	< LOQ	5000	200	pass	
Tetrahydrofuran	< LOQ	720	100	pass		Toluene	< LOQ	890	100	pass	
Total Xylenes	< LOQ		400			Total Xylenes and Ethyl benzene	< LOQ	2170	600	pass	

**Pesticides** Method: AOAC 2007.01 & EN 15662 (mod)<sup>P</sup> Units mg/kg Batch 2309863 Analyze 08/09/23 04:16 PM

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	0.0176	2309845	08/08/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0176	2309845	08/08/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Lead*	< LOQ	0.500	mg/kg	0.0176	2309845	08/08/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00882	2309845	08/08/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	

**Nutrition**

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	16.8		g/100g	0.10	2309793	08/07/23 AOAC 925.10 (mod.) <sup>p</sup>		
Water Activity	0.684		Aw	0.030	2309772	08/07/23 AOAC 978.18 <sup>p</sup>		



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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.

<sup>p</sup> = ISO/IEC 17025:2017 accredited method.

<sup>¥</sup> = 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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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
Acetaminocyl	0.100	Clethodim Sulfoxide	0.050	EPIC	0.100
Acetamiprid	0.020	Cb fenfentazine	0.020	Esfenvalerate/ Fenvalerate	0.200
Acetochlor	0.100	Cb mazone	0.020	Etaconazole	0.100
Acrinathrin	0.100	Cb thianidin	0.200	Ethalfuralin	0.100
Alachlor	0.100	Cumaphos	0.050	Ethiofencarb	0.050
Aldicarb	0.100	Crtoxypfos	0.020	Ethion	0.200
Aldicarb sulfoxide	0.100	Cyarazine	0.020	Ethirimol	0.100
Aldoxycarb (Aldicarb-sulfone)	0.100	Cyazofenphos	0.020	Ethofumesate	0.050
Aldrin	0.100	Cyazotranylprole	0.050	Ethoprophos	0.020
Ametoctradin	0.020	Cyazflamid	0.020	Etofenprox	0.020
Ametryn	0.500	Cytoate	0.100	Etoazole	0.020
Aspon	0.100	Cyfluthrin	0.200	Eridiazole	0.100
Asulam	0.100	Cyhalothrin, lambda	0.200	Erimfos	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	Dadhal	0.100	Fenamiphos	0.020
Azoxystrobin	0.020	Damnozide	0.100	Fenamiphos sulfone	0.020
Beralaxyl	0.020	DCEMU	0.050	Fenamiphos sulfoxide	0.020
Berdiocarb	0.020	DDD, op'	0.100	Fenazaquin	0.100
Berfluralin	0.100	DDD, p,p'	0.100	Fenbuconazole	0.100
Berxacor	0.050	DCE, o,p'	0.100	Fenchlorphos	0.100
Bersulide	0.050	DCE, p,p'	0.100	Fenchlorphos-oxon	0.100
BHC alpha isomer	0.100	DDT, o,p'	0.100	Fenhexam d	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	Fensulfiothion	0.020
Bromopropylate	0.100	Dichlobenil	0.100	Fensulfiothion oxon	0.020
Bromuconazole	0.100	D chlorfluand	0.100	Fensulfiothion sulfone	0.100
Bupirimate	0.020	D chlorvos	0.100	Fensulfiothion-oxon-sulfone	0.020
Buprofezin	0.050	D clobutrazol	0.050	Fenthion	0.050
Butachlor	0.500	D cofol	0.100	Fenthion oxon	0.020
Butralin	0.200	Dicrotophos	0.050	Fenthion oxon sulfone	0.100
Butylate	0.100	Deldrin	0.100	Fenthion sulfone	0.050
Cadusafos	0.020	Dethofencarb	0.020	Fenuron	0.020
Captan	1.000	D ethyltoluam de (DEET)	0.050	Fipronil	0.100
Carbaryl	0.050	Difenoconazole	0.100	Fonicamid	0.100
Carbendazim	0.100	Dimethenamid	0.050	Fuchloralin	0.100
Carbofuran	0.020	Dimethoate	0.050	Flucythrinate	0.100
Carbophenothion	0.200	D methomorph	0.050	Fludioxonil	0.200
Carboxin	0.020	D niconazole	0.200	Flufenacet	0.020
Carfentrazone-ethyl	0.100	D notefuran	0.200	Flumioxazin	0.100
Chlorantrilprole	0.020	D oxathion	0.100	Flumeturon	0.020
Chordane, os-	0.200	D phenamid	0.020	Fluopicolide	0.050
Chordane, trans-	0.200	D phenylamine	0.100	Fluopyram	0.020
Chorfenapyr	0.500	Disulfoton	0.100	Fluoxastrobin	0.050
Chorfenoson	0.200	Disulfoton sulfone	0.100	Flupyradfurone	0.020
Chorfenvinphos	0.050	Disulfoton sulfoxide	0.100	Fluridone	0.100
Chorobenzilate	0.100	Duron	0.050	Flusilazole	0.020
Choroneb	0.200	Edifenphos	0.050	Flutolanil	0.020
Chorpyrifos	0.050	Endosulfan alpha	0.200	Flutriafol	0.020
Chorpyrifos-methyl	0.200	Endosulfan beta	0.200	Fluvalinate, 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	Proparil	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	Prthiofos	0.100
Hexythiazox	0.020	Norflurazon	0.050	Pyraclostrobin	0.020
Imazalil	0.100	Omethoate	0.100	Pyrazophos	0.050
Imidacoprid	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	Padobutrazol	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 (PQNB)	0.200
Isoprocarb	0.020	Parathion methyl	0.200	Resmethrin	0.050
Isopropalin	0.200	Perconazole	0.050	Rotenone	0.050
Isoprothiolane	0.050	Perdimethalin	0.050	S421	0.100
Isoproturon	0.050	Perflufen	0.020	Smaazine	0.100
Isoxaben	0.050	Pertachloroaniline	0.100	Smectryl	0.200
Isoxaflutole	0.050	Pertachloroanisole	0.100	Spinetoram	0.020
Kresoxim-methyl	0.050	Pentachlorobenzene (PCB)	0.100	Spinosad	0.050
Lactofen	0.500	Pentachlorothiobenzene (PCTA)	0.100	Spirodiclofen	0.100
Lenacl	0.100	Perthiopyrad	0.020	Spiromesifen	0.050
Lindane (gammaBHC)	0.100	Permethrin	0.050	Spirotetramat	0.050
Linuron	0.020	Peithane	0.100	Spiroxamine	0.020
Malaaxon	0.050	Phenmedipharm	0.050	Sulfotep	0.050
Malathion	0.050	Phanthoate	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
Methadifos	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	Tetradfon	0.200
Methoxychlor	0.100	Procyimdone	0.100	Tetramethrin	0.050
Methoxyfenozide	0.020	Prfenofos	0.100	Tetrasul	0.100
Metobromuron	0.050	Prfluralin	0.100	Thiabendazole	0.100
Metolachlor	0.100	Prmecarb	0.050	Thiabendazole, 5-hydroxy	0.100
Metolcarb	0.050	Prometon	0.100	Thiadoprid	0.050
Metraferone	0.050	Prometryn	0.020	Thiamethoxam	0.100
Metribuzin	0.100	Propadchlor	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	Tolyfluarid	0.050	Triticonazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vindozolin	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-1691014509

ORELAP ID: CR1000028 ANAB ISO 17025 ID: AT1608

[Redacted] [Redacted] [Redacted] [Redacted] [Redacted] [Redacted] [Redacted]	Project Information Project Name <b>HEMP - EB 0088</b> PONumber <b>N/A</b> Turnaround Time <b>5 Business Days (Req. For Micro Testing) Standard</b> Samples Delivered to Laboratory <b>Schedule Pick-Up</b> Cannabis Type <b>Industrial</b> [Redacted] [Redacted]		Testing H0010 Potency Cannabinoid Basic + Extended Profile P2320 Pesticide - Multi-Residue Profile H0008 Residual Solvents - OR H0019 Heavy Metals Profile OR (As, Cd, Pb, Hg) M075 Total Coliforms + E Coli M020 Yeast and Mold N180 Moisture as Loss on Drying N050 Water Activity						
	#	Sample Name	Material	Amount Provided					
1	HEMP - EB 0088	Edible	20 units for sale						

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp. °C	Evidence of Cooling?
Charles Moore	8/2/2023	15:15		BR	8/3/2023	10:26		No
BR	8/3/2023	11:05	21.3	MRH	8/3/2023	11:22		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 OCC. By signing Relinquished by you are agreeing to these terms.

Columbia Laboratories  
 12423 NE Whitaker Way  
 Portland OR 97230

P (503) 254-1794 | Fax (503) 254-9152  
[www.columbialaboratories.com](http://www.columbialaboratories.com)

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Hemp & Cannabis  
 Chain of Custody

Northwest-Natural-  
 Goods-1691014306

ORELAP ID: CR1000028 ANAB ISO 17025 ID: AT1608

	Project Information Project Name <b>HEMP - EB0087</b> PONumber <b>N/A</b> Turnaround Time <b>5 Business Days - Req. For Micro Testing   Standard</b> Samples Delivered to Laboratory <b>Schedule Pick-Up</b> Cannabis Type <b>Industrial</b>		Testing						
			H0010 Potency Cannabinoid Basic + Extended Profile	P2320 Pesticide - Multi-Residue Profile	H0008 Residual Solvents - OR	H0019 Heavy Metals Profile OR (As, Cd, Pb, Hg)	M075 Total Coliforms + E Coli	M020 Yeast and Mold	N030 Water Activity
#	Sample Name	Material	Amount Provided						
1	HEMP - EB0087	Edible	20 units for sale	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp. °C	Evidence of Cooling?
<i>Charles Moore</i>	<i>8/2/2023</i>	<i>15:11</i>		<i>BR</i>	<i>8/3/2023</i>	<i>10:22</i>		<i>No</i>
<i>BR</i>	<i>8/3/2023</i>	<i>11:04</i>	<i>21.4</i>	<i>MRH</i>	<i>8/3/2023</i>	<i>11:22</i>		<i>No</i>

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

Columbia Laboratories  
 12423 NE Whitaker Way  
 Portland OR 97230

P (503) 254-1794 | Fax (503) 254-4152  
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12423 NE Whitaker Way  
 Portland, OR 97230  
 503-254-1794



Report Number: 23-009164/D002.R000  
 Report Date: 08/10/2023  
 ORELAP#: OR100028  
 Purchase Order:  
 Received: 08/03/23 11:22

Revision 2 Document D 7087  
 Legacy D CFL-E33Effective

Laboratory Quality Control Results

Residual Solvents				Batch ID: 2309785					
Method Blank				Laboratory Control Sample					
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes
Propane	ND	< 200		489	584	µg/g	83.7	60	120
Isobutane	ND	< 200		645	767	µg/g	84.1	60	120
Butane	ND	< 200		632	782	µg/g	80.8	60	120
2,2 Dimethylpropane	ND	< 200		787	939	µg/g	83.8	60	120
Methanol	ND	< 200		1670	1640	µg/g	101.8	60	120
Ethylene Oxide	ND	< 30		56.2	57.1	µg/g	98.4	60	120
2 Methylbutane	ND	< 200		1390	1600	µg/g	86.9	60	120
Pentane	ND	< 200		1420	1620	µg/g	87.7	60	120
Ethanol	ND	< 200		1660	1610	µg/g	103.1	70	130
Ethyl Ether	ND	< 200		1470	1610	µg/g	91.3	60	120
2,2 Dimethylbutane	ND	< 30		154	168	µg/g	91.7	60	120
Acetone	ND	< 200		1540	1620	µg/g	95.1	60	120
2 Propanol	ND	< 200		1780	1600	µg/g	111.3	60	120
Ethyl Formate	ND	< 500		1390	1600	µg/g	86.9	70	130
Acetonitrile	ND	< 100		436	484	µg/g	90.1	60	120
Methyl Acetate	ND	< 500		1540	1610	µg/g	95.7	70	130
2,3 Dimethylbutane	ND	< 30		150	162	µg/g	92.6	60	120
Dichloromethane	ND	< 60		465	483	µg/g	96.3	60	120
2 Methylpentane	ND	< 30		171	174	µg/g	98.3	60	120
M BE	ND	< 500		1570	1610	µg/g	97.5	70	130
3 Methylpentane	ND	< 30		167	168	µg/g	99.4	60	120
Hexane	ND	< 30		156	168	µg/g	92.9	60	120
1 Propanol	ND	< 500		1730	1600	µg/g	108.1	70	130
Methylethylketone	ND	< 500		1590	1620	µg/g	98.1	70	130
Ethyl acetate	ND	< 200		1600	1600	µg/g	100.0	60	120
2 Butanol	ND	< 200		1820	1600	µg/g	113.8	60	120
tetrahydrofuran	ND	< 100		492	514	µg/g	95.7	60	120
Cyclohexane	ND	< 200		1560	1600	µg/g	97.5	60	120
2 methyl 1 propanol	ND	< 500		1890	1610	µg/g	117.4	70	130
Benzene	ND	< 1		4.17	5.12	µg/g	81.4	60	120
Isopropyl Acetate	ND	< 200		1630	1620	µg/g	100.6	60	120
Heptane	ND	< 200		1500	1610	µg/g	93.2	60	120
1 Butanol	ND	< 500		1840	1600	µg/g	115.0	70	130
Propyl Acetate	ND	< 500		1610	1600	µg/g	100.6	70	130
1,4 Dioxane	ND	< 100		487	493	µg/g	98.8	60	120
2 Ethoxyethanol	ND	< 30		194	163	µg/g	119.0	60	120
Methylisobutylketone	ND	< 500		1660	1600	µg/g	103.8	70	130
3 Methyl 1 butanol	ND	< 500		1810	1610	µg/g	112.4	70	130
Ethylene Glycol	ND	< 200		292	483	µg/g	60.5	60	120
oluene	ND	< 100		489	493	µg/g	99.2	60	120
Isobutyl Acetate	ND	< 500		1610	1600	µg/g	100.6	70	130
1 Pentanol	ND	< 500		1860	1600	µg/g	116.3	70	130
Butyl Acetate	ND	< 500		1630	1600	µg/g	101.9	70	130
Ethylbenzene	ND	< 200		988	969	µg/g	102.0	60	120
m,p Xylene	ND	< 200		983	968	µg/g	101.5	60	120
o Xylene	ND	< 200		1020	976	µg/g	104.5	60	120
Cumene	ND	< 30		171	162	µg/g	105.6	60	120
Anisole	ND	< 500		1610	1610	µg/g	100.0	70	130
DMSO	ND	< 500		1430	1610	µg/g	88.8	70	130
1,2 dimethoxyethane	ND	< 50		158	164	µg/g	96.3	70	130
riethylamine	ND	< 500		1360	1600	µg/g	85.0	70	130
N,N dimethylformamide	ND	< 150		519	484	µg/g	107.2	70	130
N,N dimethylacetamide	ND	< 150		460	489	µg/g	94.1	70	130
Pyridine	ND	< 50		180	172	µg/g	104.7	70	130
Sulfolane	ND	< 50		160	163	µg/g	98.2	70	130
1,2 Dichloroethane	ND	< 1		1.2	1	µg/g	120.0	70	130
Chloroform	ND	< 1		1.36	1	µg/g	136.0	70	130 Q1
richloroethylene	ND	< 1		1.36	1	µg/g	136.0	70	130 Q1
1,1 Dichloroethane	ND	< 1		1.07	1	µg/g	107.0	70	130



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**Report Number:** 23-009164/D002.R000  
**Report Date:** 08/10/2023  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 08/03/23 11:22

Revision 2 Document D 7087  
 Legacy D CFL-E33Effective

QC - Sample Duplicate Sample ID: 23-009084-0001

Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Accept/Fail	Notes
Propane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Isobutane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Butane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2,2 Dimethylpropane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Methanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethylene Oxide	ND	ND	30	µg/g	0.0	< 20	Acceptable	
2 Methylbutane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Pentane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethyl Ether	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2,2 Dimethylbutane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Acetone	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2 Propanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Ethyl Formate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Acetonitrile	ND	ND	100	µg/g	0.0	< 20	Acceptable	
Methyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
2,3 Dimethylbutane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Dichloromethane	ND	ND	60	µg/g	0.0	< 20	Acceptable	
2 Methylpentane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
M BE	ND	ND	500	µg/g	0.0	< 20	Acceptable	
3 Methylpentane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Hexane	ND	ND	30	µg/g	0.0	< 20	Acceptable	
1 Propanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Methyl ethyl ketone	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Ethyl acetate	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2 Butanol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
tetrahydrofuran	ND	ND	100	µg/g	0.0	< 20	Acceptable	
Cyclohexane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
2 methyl 1 propanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Benzene	ND	ND	1	µg/g	0.0	< 20	Acceptable	
Isopropyl Acetate	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Heptane	ND	ND	200	µg/g	0.0	< 20	Acceptable	
1 Butanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Propyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
1,4 Dioxane	ND	ND	100	µg/g	0.0	< 20	Acceptable	
2 Ethoxyethanol	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Methylisobutylketone	ND	ND	500	µg/g	0.0	< 20	Acceptable	
3 Methyl 1 butanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Ethylene Glycol	ND	ND	200	µg/g	0.0	< 20	Acceptable	
oluene	ND	ND	100	µg/g	0.0	< 20	Acceptable	
Isobutyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
1 Pentanol	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Butyl Acetate	ND	ND	500	µg/g	0.0	< 20	Acceptable	
Ethylbenzene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
m,p Xylene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
o Xylene	ND	ND	200	µg/g	0.0	< 20	Acceptable	
Cumene	ND	ND	30	µg/g	0.0	< 20	Acceptable	
Anisole	ND	ND	500	µg/g	0.0	< 20	Acceptable	
DMSO	ND	ND	500	µg/g	0.0	< 20	Acceptable	
1,2 dimethoxyethane	ND	ND	50	µg/g	0.0	< 20	Acceptable	
triethylamine	ND	ND	500	µg/g	0.0	< 20	Acceptable	
N,N dimethylformamide	ND	ND	150	µg/g	0.0	< 20	Acceptable	
N,N dimethylacetamide	ND	ND	150	µg/g	0.0	< 20	Acceptable	
Pyridine	ND	ND	50	µg/g	0.0	< 20	Acceptable	
Sulfolane	ND	ND	50	µg/g	0.0	< 20	Acceptable	
1,2 Dichloroethane	ND	ND	1	µg/g	0.0	< 20	Acceptable	
Chloroform	ND	ND	1	µg/g	0.0	< 20	Acceptable	
richloroethylene	ND	ND	1	µg/g	0.0	< 20	Acceptable	
1,1 Dichloroethane	ND	ND	1	µg/g	0.0	< 20	Acceptable	

**Abbreviations**

- ND None Detected at or above MRL
- RPD Relative Percent Difference
- LOQ Limit of Quantitation
- 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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**Report Number:** 23-009164/D002.R000  
**Report Date:** 08/10/2023  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 08/03/23 11:22

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

Laboratory Quality Control Results

J AOAC 2015 V98-6 Batch ID: 2309794

Laboratory Control Sample									
Analyte	LCS	Result	Spike	Units	% Rec	Limits		Evaluation	Notes
CBDVA	2	0.0314	0.0311	%	101	80.0	- 120	Acceptable	
CBDV	2	0.0310	0.0307	%	101	80.0	- 120	Acceptable	
CBE	2	0.0350	0.0349	%	100	80.0	- 120	Acceptable	
CBDA	1	0.0330	0.0336	%	98.1	90.0	- 110	Acceptable	
CBGA	1	0.0351	0.0336	%	105	80.0	- 120	Acceptable	
CBG	1	0.0343	0.0344	%	99.5	80.0	- 120	Acceptable	
CBD	1	0.0351	0.0352	%	99.7	90.0	- 110	Acceptable	
THCV	2	0.0225	0.0222	%	101	80.0	- 120	Acceptable	
d8THCV	2	0.0272	0.0272	%	100	80.0	- 120	Acceptable	
THCVA	2	0.0312	0.0310	%	101	80.0	- 120	Acceptable	
CBN	1	0.0356	0.0351	%	102	80.0	- 120	Acceptable	
exo-THC	2	0.0312	0.0311	%	100	80.0	- 120	Acceptable	
d9THC	1	0.0355	0.0345	%	103	90.0	- 110	Acceptable	
d8THC	1	0.0325	0.0325	%	99.9	90.0	- 110	Acceptable	
9S-d10THC	1	0.0356	0.0354	%	101	80.0	- 120	Acceptable	
CBL	2	0.0315	0.0311	%	101	80.0	- 120	Acceptable	
9R-d10THC	1	0.0325	0.0323	%	101	80.0	- 120	Acceptable	
CBC	2	0.0315	0.0319	%	98.7	80.0	- 120	Acceptable	
THCA	1	0.0333	0.0331	%	101	90.0	- 110	Acceptable	
CBCA	2	0.0321	0.0325	%	98.7	80.0	- 120	Acceptable	
CBLA	2	0.0498	0.0500	%	99.6	80.0	- 120	Acceptable	
d9THCP	2	0.0316	0.0323	%	97.8	80.0	- 120	Acceptable	
CBT	2	0.0306	0.0314	%	97.5	80.0	- 120	Acceptable	

Method Blank						
Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDVA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBDV	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBE	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBDA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBGA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBG	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBD	<LOQ	0.00322	%	< 0.00322	Acceptable	
THCV	<LOQ	0.00322	%	< 0.00322	Acceptable	
d8THCV	<LOQ	0.00322	%	< 0.00322	Acceptable	
THCVA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBN	<LOQ	0.00322	%	< 0.00322	Acceptable	
exo-THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
d9THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
d8THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
9S-d10THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBL	<LOQ	0.00322	%	< 0.00322	Acceptable	
9R-d10THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBC	<LOQ	0.00322	%	< 0.00322	Acceptable	
THCA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBCA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBLA	<LOQ	0.00322	%	< 0.00322	Acceptable	
d9THCP	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBT	<LOQ	0.00322	%	< 0.00322	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 4 Documen D 7148  
 Legacy D Workshee Valida ed 04/20/2021

Laboratory Quality Control Results

J AOAC 2015 V98-6		Batch ID: 2309794						
Sample Duplicate		Sample ID: 23-009164-0001						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBE	0.00406	0.00423	0.00315	%	4.18	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBG	0.0121	0.0122	0.00315	%	1.23	< 20	Acceptable	
CBD	0.635	0.645	0.00315	%	1.61	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBN	0.126	0.128	0.00315	%	1.58	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
9S-d10THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
9R-d10THC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBC	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00315	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.00315	%	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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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.