



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



**Report Number:** 23-012921/D002.R000  
**Report Date:** 11/09/2023  
**ORELAP#:** OR100028  
**Purchase Order:**  
**Received:** 11/01/23 12:27

**Customer:** NW Natural Goods  
**Product identity:** HEMP - RB 121  
**Client/Metric ID:** .  
**Laboratory ID:** 23-012921-0001

### Summary

**Potency:**

Analyte per 4g	Result	Limits	Units	Status	
CBC per 4g	0.220		mg/4g		CBD-Total per Serving Size 26.8 mg/4g
CBD per 4g	26.8		mg/4g		
CBDV per 4g	0.131		mg/4g		THC-Total per Serving Size <LOQ
CBG per 4g	0.740		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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**Received:** 11/01/23 12:27

**Customer:** NW Natural Goods

**Product identity:** HEMP - RB 121  
**Client/Metric ID:** .  
**Sample Date:**  
**Laboratory ID:** 23-012921-0001  
**Evidence of Cooling:** No  
**Temp:** 16.3  
**Relinquished by:** rat  
**Serving Size #1:** 4 g

### Sample Results

Potency per 4g					
Method: J AOAC 2015 V98-6 (mod) <sup>b</sup>		Units mg/se		Batch: 2312517	
				Analyze: 11/3/23 6:21:00 PM	
Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.220		mg/4g	0.124	
CBC-A per 4g	< LOQ		mg/4g	0.124	
CBC-Total per 4g	< LOQ		mg/4g	0.233	
CBD per 4g	26.8		mg/4g	0.124	
CBD-A per 4g	< LOQ		mg/4g	0.124	
CBD-Total per 4g	26.8		mg/4g	0.233	
CBDV per 4g	0.131		mg/4g	0.124	
CBDV-A per 4g	< LOQ		mg/4g	0.124	
CBDV-Total per 4g	< LOQ		mg/4g	0.232	
CBE per 4g	< LOQ		mg/4g	0.124	
CBG per 4g	0.740		mg/4g	0.124	
CBG-A per 4g	< LOQ		mg/4g	0.124	
CBG-Total per 4g	0.740		mg/4g	0.232	
CBL per 4g	< LOQ		mg/4g	0.124	
CBL-A per 4g	< LOQ		mg/4g	0.124	
CBL-Total per 4g	< LOQ		mg/4g	0.233	
CBN per 4g	< LOQ		mg/4g	0.124	
CBT per 4g	< LOQ		mg/4g	0.124	
Δ8-THCV per 4g	< LOQ		mg/4g	0.124	
Δ10-THC-9R per 4g	< LOQ		mg/4g	0.124	
Δ10-THC-9S per 4g	< LOQ		mg/4g	0.124	
Δ10-THC-Total per 4g	< LOQ		mg/4g	0.249	
Δ8-THC per 4g	< LOQ		mg/4g	0.124	
Δ9-THC per 4g	< LOQ		mg/4g	0.124	
delta-9-THCP per 4g	< LOQ		mg/4g	0.124	
exo-THC per 4g	< LOQ		mg/4g	0.124	
THC-A per 4g	< LOQ		mg/4g	0.124	
THC-Total per 4g	< LOQ		mg/4g	0.233	
THCV per 4g	< LOQ		mg/4g	0.124	
THCV-A per 4g	< LOQ		mg/4g	0.124	
THCV-Total per 4g	< LOQ		mg/4g	0.233	
Total Cannabinoids per 4g	27.9		mg/4g		



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**Microbiology**

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2312416	11/04/23 AOAC 991.14 (Petrifilm) <sup>P</sup>		
Total Coliforms	< LOQ		cfu/g	10	2312416	11/04/23 AOAC 991.14 (Petrifilm) <sup>P</sup>		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2312417	11/05/23 AOAC 2014.05 (RAPID) <sup>P</sup>		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2312417	11/05/23 AOAC 2014.05 (RAPID) <sup>P</sup>		

**Solvents** Method: Residual Solvents by GC/MS<sup>B</sup> Units µg/g Batch 2312529 Analyze 11/06/23 03:23 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>B</sup> Units mg/kg Batch 2312611 Analyze 11/08/23 12:29 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	0.0192	2312545	11/06/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Cadmium*	< LOQ	0.200	mg/kg	0.0192	2312545	11/06/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Lead*	< LOQ	0.500	mg/kg	0.0192	2312545	11/06/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	
Mercury*	< LOQ	0.100	mg/kg	0.00960	2312545	11/06/23 AOAC 2013.06 (mod.) <sup>p</sup>	pass	

**Nutrition**

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed Method	Status	Notes
Moisture (Loss on Drying)	18.1		g/100g	0.10	2312448	11/03/23 AOAC 925.10 (mod.) <sup>p</sup>		
Water Activity	0.694		Aw	0.030	2312434	11/02/23 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
Acetaminophen	0.100	Clethodim Sulfoxide	0.050	EPIC	0.100
Acetochlor	0.020	Cb fenfentazine	0.020	Esfenvalerate/ Fenvalerate	0.200
Acrinathrin	0.100	Cb mazone	0.020	Etaconazole	0.100
Alachlor	0.100	Cb thianidin	0.200	Ethalfuralin	0.100
Aldicarb	0.100	Cumaphos	0.050	Ethiofencarb	0.050
Aldicarb sulfoxide	0.100	Crtoxypfos	0.020	Ethion	0.200
Aldoxycarb (Aldicarb-sulfone)	0.100	Cyarazine	0.020	Ethirimol	0.100
Aldrin	0.100	Cyazofenphos	0.020	Ethofumesate	0.050
Ametoctradin	0.020	Cyaztraniiprole	0.050	Ethoprophos	0.020
Ametryn	0.500	Cyazflamid	0.020	Etofenprox	0.020
Aspon	0.100	Cytoate	0.100	Etoazole	0.020
Asulam	0.100	Cyfluthrin	0.200	Eridiazole	0.100
Atrazine	0.100	Cyhalothrin, lambda	0.200	Erimfos	0.020
Atrazine-desethyl	0.100	Cymoxanil	0.050	Fenoxadone	0.200
Azinphos-ethyl	0.020	Cypermethrin	0.200	Famphur	0.100
Azinphos-methyl	0.020	Cyprodinil	0.100	Fenamidon	0.020
Azoxystrobin	0.020	Dadhal	0.100	Fenamiphos	0.020
Berlaxyl	0.020	Damnozide	0.100	Fenamiphos sulfone	0.020
Berdicarb	0.020	DCEMU	0.050	Fenamiphos sulfoxide	0.020
Berfluralin	0.100	DDD, op'	0.100	Fenazaquin	0.100
Berxacor	0.050	DDD, p,p'	0.100	Fenbuconazole	0.100
Bersulide	0.050	DCE, op'	0.100	Fenchlorphos	0.100
BHC alpha isomer	0.100	DCE, p,p'	0.100	Fenchlorphos-oxon	0.100
BHC beta isomer	0.100	DDT, op'	0.100	Fenhexam d	0.100
BHC delta isomer	0.500	DDT, p,p'	0.100	Fenitrothion	0.100
Bifenazate	0.020	DEF (Tribufos)	0.100	Fenobucarb	0.050
Bifenthrin	0.020	Deltamethrin	0.100	Fenoxycarb	0.020
Boscalid	0.020	Desmedipham	0.100	Fenpropathrin	0.050
Bromophos-ethyl	0.100	Diallate	0.100	Fenpyroximate	0.020
Bromophos-methyl	0.200	Diazinon	0.020	Fenson	0.100
Bromopropylate	0.100	Diazoxon	0.100	Fensulfothion	0.020
Bromuconazole	0.100	Dichlobenil	0.100	Fensulfothion oxon	0.020
Bupirimate	0.020	D chlorfluaniid	0.100	Fensulfothion sulfone	0.100
Buprofezin	0.050	D chlorvos	0.100	Fensulfothion-oxon-sulfone	0.020
Butachlor	0.500	D clobutrazol	0.050	Fenthion	0.050
Butralin	0.200	D cofol	0.100	Fenthion oxon	0.020
Butylate	0.100	Dicrotophos	0.050	Fenthion oxon sulfone	0.100
Cadusafos	0.020	Deldrin	0.100	Fenthion sulfone	0.050
Captan	1.000	Dethofencarb	0.020	Fenuron	0.020
Carbaryl	0.050	D ethyltoluam de (DEET)	0.050	Fipronil	0.100
Carbendazim	0.100	Difenoconazole	0.100	Fonicamid	0.100
Carbofuran	0.020	Dimethenamid	0.050	Fuchloralin	0.100
Carbophenothion	0.200	Dimethoate	0.050	Flucythrinate	0.100
Carboxin	0.020	D methomorph	0.050	Fludioxonil	0.200
Carfentrazone-ethyl	0.100	D niconazole	0.200	Flufenacet	0.020
Chlorantraniliprole	0.020	D notefuran	0.200	Flumioxazin	0.100
Chordane, cis-	0.200	D oxathion	0.100	Flumeturon	0.020
Chordane, trans-	0.200	D phenamid	0.020	Fluopicolide	0.050
Chlorfenapyr	0.500	D phenylamine	0.100	Fluopyram	0.020
Chlorfenson	0.200	Disulfoton	0.100	Fluoxastrobin	0.050
Chlorfenvinphos	0.050	Disulfoton sulfone	0.100	Flupyradifurone	0.020
Chlorobenzilate	0.100	Disulfoton sulfoxide	0.100	Fluridone	0.100
Chloroneb	0.200	Duron	0.050	Flusilazole	0.020
Chlorpyrifos	0.050	Edifenphos	0.050	Flutolanil	0.020
Chlorpyrifos-methyl	0.200	Endosulfan alpha	0.200	Flutriafol	0.020
CIPC	1.000	Endosulfan beta	0.200	Fluvalinate, tau-	0.100
		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	Smectryn	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	Pethane	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	Triconazole	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-1698782933**

ORELAP ID: OR1000028 ANAB ISO 17025 ID: AT1508

<b>Contact Information</b> Company: <u>Northwest Natural Goods</u> 		<b>Project Details</b> Turnaround Time: <u>5 Business Days / Rep. For Micro Testing / Standard</u> Sample Relinquishment Options: <u>Click-Up Request</u> Compliance: <u>Compliance</u> Project Name / ID: <u>HEMP-RB121</u> Cannabis Type (select if applicable): <u>Industrial</u>			<b>Testing</b> H0010 - Potency Cannabinoid Basic + Extended Profile F0020 - Pesticide - Multi-Pesticide Profile H0008 - Residual Solvents - CF H0010 - Heavy Metals Profile (As, Cd, Pb & Hg) M070 - Total Coliforms - EColi P000 - Yeast and Mold N150 - Moisture Loss on Drying N200 - Water Activity							
#	Sample Name Test	Material	Amount Provided	Reporting Unit	Serving Size							
1	HEMP-RB121	Edible	20 units for sale	mg/g & mg/-serving	4 g	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C	Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
KRISTEN JOHNSON	10/31/2023	13:08	Temp., °C	RAT	11/1/2023	10:37		No
RAT	11/1/2023	11:12	16,3	RAT	11/1/2023	12:27		No

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

Columbia Laboratories  
12423 NE Whitaker Way  
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P: (503) 254-1794 | F: (503) 254-1462  
[info@columbialaboratories.com](http://info.columbialaboratories.com)

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**Report Number:** 23-012921/D002.R000  
**Report Date:** 11/09/2023  
**ORELAP#:** OR100028  
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Laboratory Quality Control Results

JAOAC2015 V986 Batch ID: 2312517

Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBVA	2	0.0319	0.0323	%	98.7	80.0 - 120	Acceptable	
CBV	2	0.0305	0.0337	%	90.6	80.0 - 120	Acceptable	
CEE	2	0.0314	0.0358	%	87.6	80.0 - 120	Acceptable	
CBDA	1	0.0320	0.0322	%	99.3	90.0 - 110	Acceptable	
CBSA	1	0.0311	0.0329	%	94.3	80.0 - 120	Acceptable	
CBG	1	0.0358	0.0368	%	97.3	80.0 - 120	Acceptable	
CB	1	0.0312	0.0313	%	99.7	90.0 - 110	Acceptable	
THCV	2	0.0343	0.0345	%	99.5	80.0 - 120	Acceptable	
δ8THCV	2	0.0291	0.0283	%	103	80.0 - 120	Acceptable	
THCVA	2	0.0313	0.0312	%	100	80.0 - 120	Acceptable	
CBN	1	0.0324	0.0329	%	98.5	80.0 - 120	Acceptable	
exo-THC	2	0.0315	0.0315	%	100	80.0 - 120	Acceptable	
δ9THC	1	0.0363	0.0365	%	99.5	90.0 - 110	Acceptable	
δ8THC	1	0.0327	0.0340	%	96.1	90.0 - 110	Acceptable	
9SaTHC	1	0.0327	0.0337	%	96.9	80.0 - 120	Acceptable	
CB	2	0.0325	0.0332	%	98.1	80.0 - 120	Acceptable	
9RaTHC	1	0.0329	0.0336	%	97.8	80.0 - 120	Acceptable	
CB	2	0.0343	0.0342	%	100	80.0 - 120	Acceptable	
THCA	1	0.0321	0.0337	%	95.4	90.0 - 110	Acceptable	
CBGA	2	0.0335	0.0338	%	99.2	80.0 - 120	Acceptable	
CBLA	2	0.0341	0.0342	%	99.6	80.0 - 120	Acceptable	
δ9THCP	2	0.0329	0.0334	%	98.5	80.0 - 120	Acceptable	
CB	2	0.0337	0.0343	%	98.4	80.0 - 120	Acceptable	

Analyte	Result	LOG	Units	Limits	Evaluation	Notes
CBVA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBV	<LOQ	0.00322	%	< 0.00322	Acceptable	
CEE	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBDA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBSA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBG	<LOQ	0.00322	%	< 0.00322	Acceptable	
CB	<LOQ	0.00322	%	< 0.00322	Acceptable	
THCV	<LOQ	0.00322	%	< 0.00322	Acceptable	
δ8THCV	<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	
δ9THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
δ8THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
9SaTHC	<LOQ	0.00322	%	< 0.00322	Acceptable	
CB	<LOQ	0.00322	%	< 0.00322	Acceptable	
9RaTHC	<LOQ	0.00322	%	< 0.00322	Acceptable	
CB	<LOQ	0.00322	%	< 0.00322	Acceptable	
THCA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBGA	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBLA	<LOQ	0.00322	%	< 0.00322	Acceptable	
δ9THCP	<LOQ	0.00322	%	< 0.00322	Acceptable	
CB	<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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Laboratory Quality Control Results

JAOAC2015 V986		Batch ID: 2312517						
Sample Duplicate		Sample ID: 21-0128500007						
Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBDV	0.0109	0.0112	0.00328	%	2.91	< 20	Acceptable	
CBF	0.0646	0.0658	0.00328	%	1.76	< 20	Acceptable	
CBD	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBSA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBS	0.0185	0.0186	0.00328	%	0.587	< 20	Acceptable	
CBD	3.86	3.87	0.00328	%	0.202	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBN	0.0280	0.0287	0.00328	%	2.24	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
d9THC	0.0253	0.0259	0.00328	%	2.32	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
9Sa10THC	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBL	0.00652	0.00662	0.00328	%	1.47	< 20	Acceptable	
9Rd10THC	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CB	0.114	0.116	0.00328	%	1.08	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBSA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00328	%	NA	< 20	Acceptable	
CB	0.112	0.105	0.00328	%	6.34	< 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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Laboratory Quality Control Results

Residual Solvents				Batch D: 2312529						
Method Blank				Laboratory Control Sample						
Analyte	Result	LOQ	Notes	Result	Spike	Units	% Rec	Limits	Notes	
Propane	ND	< 200		556	584	µg/g	95.2	60 - 120		
Isobutane	ND	< 200		749	767	µg/g	97.7	60 - 120		
Butane	ND	< 200		747	782	µg/g	95.5	60 - 120		
2,2-Dimethylpropane	ND	< 200		959	939	µg/g	102.1	60 - 120		
Methanol	ND	< 200		1820	1670	µg/g	109.0	60 - 120		
Ethylene Oxide	ND	< 30		59.4	57.1	µg/g	104.0	60 - 120		
2-Methylbutane	ND	< 200		1660	1680	µg/g	98.8	60 - 120		
Pentane	ND	< 200		1650	1670	µg/g	98.8	60 - 120		
Ethanol	ND	< 200		1760	1660	µg/g	106.0	70 - 130		
Ethyl Ether	ND	< 200		1700	1670	µg/g	101.8	60 - 120		
2,2-Dimethylbutane	ND	< 30		192	189	µg/g	101.6	60 - 120		
Acetone	ND	< 200		1740	1670	µg/g	104.2	60 - 120		
2-Propanol	ND	< 200		1720	1630	µg/g	105.5	60 - 120		
Ethyl Formate	ND	< 500		1180	1600	µg/g	73.8	70 - 130		
Acetonitrile	ND	< 100		498	492	µg/g	101.2	60 - 120		
Methyl Acetate	ND	< 500		1510	1600	µg/g	94.4	70 - 130		
2,3-Dimethylbutane	ND	< 30		194	180	µg/g	107.8	60 - 120		
Dichloromethane	ND	< 60		506	488	µg/g	103.7	60 - 120		
2-Methylpentane	ND	< 30		168	182	µg/g	92.3	60 - 120		
MTBE	ND	< 500		1530	1610	µg/g	95.0	70 - 130		
3-Methylpentane	ND	< 30		188	177	µg/g	106.2	60 - 120		
Hexane	ND	< 30		180	177	µg/g	101.7	60 - 120		
1-Propanol	ND	< 500		1530	1600	µg/g	95.6	70 - 130		
Methylethylketone	ND	< 500		1480	1610	µg/g	91.9	70 - 130		
Ethyl acetate	ND	< 200		1690	1630	µg/g	103.7	60 - 120		
2-Butanol	ND	< 200		1670	1630	µg/g	102.5	60 - 120		
Tetrahydrofuran	ND	< 100		507	488	µg/g	103.9	60 - 120		
Cyclohexane	ND	< 200		1590	1610	µg/g	98.8	60 - 120		
2-methyl-1-propanol	ND	< 500		1500	1610	µg/g	93.2	70 - 130		
Benzene	ND	< 1		5.13	4.79	µg/g	107.1	60 - 120		
Isopropyl Acetate	ND	< 200		1720	1650	µg/g	104.2	60 - 120		
Heptane	ND	< 200		1580	1630	µg/g	96.9	60 - 120		
1-Butanol	ND	< 500		1550	1600	µg/g	96.9	70 - 130		
Propyl Acetate	ND	< 500		1440	1600	µg/g	90.0	70 - 130		
1,4-Dioxane	ND	< 100		563	523	µg/g	107.6	60 - 120		
2-Ethoxyethanol	ND	< 30		173	179	µg/g	96.6	60 - 120		
Methylisobutylketone	ND	< 500		1450	1600	µg/g	90.6	70 - 130		
3-Methyl-1-butanol	ND	< 500		1310	1600	µg/g	81.9	70 - 130		
Ethylene Glycol	ND	< 200		380	508	µg/g	75.1	60 - 120		
Toluene	ND	< 100		507	496	µg/g	102.2	60 - 120		
Isobutyl Acetate	ND	< 500		1430	1610	µg/g	88.8	70 - 130		
1-Pentanol	ND	< 500		1360	1600	µg/g	85.0	70 - 130		
Butyl Acetate	ND	< 500		1410	1610	µg/g	87.6	70 - 130		
Ethylbenzene	ND	< 200		924	978	µg/g	94.5	60 - 120		
m,p-Xylene	ND	< 200		925	994	µg/g	93.1	60 - 120		
o-Xylene	ND	< 200		930	982	µg/g	94.7	60 - 120		
Cumene	ND	< 30		164	171	µg/g	95.9	60 - 120		
Anisole	ND	< 500		1450	1600	µg/g	90.6	70 - 130		
DMSO	ND	< 500		1380	1620	µg/g	85.2	70 - 130		
1,2-dimethoxyethane	ND	< 50		163	186	µg/g	87.6	70 - 130		
Triethylamine	ND	< 500		1430	1600	µg/g	89.4	70 - 130		
N,N-dimethylformamide	ND	< 150		420	480	µg/g	87.5	70 - 130		
N,N-dimethylacetamide	ND	< 150		479	483	µg/g	99.2	70 - 130		
Pyridine	ND	< 50		133	168	µg/g	79.2	70 - 130		
Silolane	ND	< 50		101	161	µg/g	62.7	70 - 130	Q6	
1,2-Dichloroethane	ND	< 1		0.94	1	µg/g	94.0	70 - 130		
Chloroform	ND	< 1		0.976	1	µg/g	97.6	70 - 130		
Trichloroethylene	ND	< 1		0.968	1	µg/g	96.8	70 - 130		
1,1-Dichloroethane	ND	< 1		0.997	1	µg/g	99.7	70 - 130		



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QC- Sample Duplicate Sample ID: 23-012700-0004

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

Units of Measure:

µg/g - Microgram per gram or ppm



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Explanation of QC Flag Comments:

Code	Explanation
Q	Matrix interferences affecting spike or surrogate recoveries.
Q1	Quality control result biased high. Only non-detect samples reported.
Q2	Quality control outside QC limits. Data considered estimate.
Q3	Sample concentration greater than four times the amount spiked.
Q4	Non-homogenous sample matrix, affecting RPD result and/or % recoveries.
Q5	Spike results above calibration curve.
Q6	Quality control outside QC limits. Data acceptable based on remaining QC.
R	Relative percent difference (RPD) outside control limit.
R1	RPD non-calculable, as sample or duplicate results are less than five times the LOQ.
R2	Sample replicates RPD non-calculable, as only one replicate is within the analytical range.
LOQ1	Quantitation level raised due to low sample volume and/or dilution.
LOQ2	Quantitation level raised due to matrix interference.
B	Analyte detected in method blank, but not in associated samples.
B1	The sample concentration is greater than 5 times the blank concentration.
B2	The sample concentration is less than 5 times the blank concentration.