Columbia LABORATORIES
A Tentamus Company

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

Report Number: 22-013576/D002.R000
Report Date: 11/11/2022
ORELAP#: OR100028
Purchase Order:
Received: 11/04/22 10:55

Customer: NW Natural Goods
Product identity: HEMP- BB 0087
Client/Metrc ID: .
Laboratory ID: 22-013576-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status
CBC per 4g	0.196		mg/4g	
CBD per 4g	24.9		mg/4g	
CBDV per 4g	0.136		mg/4g	
CBT per 4g	0.268		mg/4g	

CBD-Total per Serving Size 24.9 mg/4g

THC-Total per Serving Size <LOQ

(Reported in milligrams per serving)

Residual Solvents:

All analytes passing and less than LOQ.

Pesticides:

Analyte	Result (mg/kg)	Limits (mg/kg)	Status
Multi-Residue Pesticide Profile	< LOQ for all analytes		

Metals:

Less than LOQ for all analytes.

Microbiology:

Less than LOQ for all analytes.

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Received: 11/04/22 10:55

Customer: NW Natural Goods

Product identity: HEMP- BB 0087
Client/Metrc ID: .
Sample Date:
Laboratory ID: 22-013576-0001
Evidence of Cooling: No
Temp: 18.1
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:** 2209590 **Analyze:** 11/7/22 9:04:00 PM

Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.196		mg/4g	0.129	
CBC-A per 4g	< LOQ		mg/4g	0.129	
CBC-Total per 4g	< LOQ		mg/4g	0.243	
CBD per 4g	24.9		mg/4g	0.129	
CBD-A per 4g	< LOQ		mg/4g	0.129	
CBD-Total per 4g	24.9		mg/4g	0.243	
CBDV per 4g	0.136		mg/4g	0.129	
CBDV-A per 4g	< LOQ		mg/4g	0.129	
CBDV-Total per 4g	< LOQ		mg/4g	0.241	
CBE per 4g	< LOQ		mg/4g	0.129	
CBG per 4g	< LOQ		mg/4g	0.129	
CBG-A per 4g	< LOQ		mg/4g	0.129	
CBG-Total per 4g	< LOQ		mg/4g	0.241	
CBL per 4g	< LOQ		mg/4g	0.129	
CBL-A per 4g	< LOQ		mg/4g	0.129	
CBL-Total per 4g	< LOQ		mg/4g	0.243	
CBN per 4g	< LOQ		mg/4g	0.129	
CBT per 4g	0.268		mg/4g	0.129	
Δ8-THCV per 4g	< LOQ		mg/4g	0.129	
Δ10-THC per 4g	< LOQ		mg/4g	0.129	
Δ8-THC per 4g	< LOQ		mg/4g	0.129	
Δ9-THC per 4g	< LOQ		mg/4g	0.129	
exo-THC per 4g	< LOQ		mg/4g	0.129	
THC-A per 4g	< LOQ		mg/4g	0.129	
THC-Total per 4g	< LOQ		mg/4g	0.243	
THCV per 4g	< LOQ		mg/4g	0.129	
THCV-A per 4g	< LOQ		mg/4g	0.129	
THCV-Total per 4g	< LOQ		mg/4g	0.243	
Total Cannabinoids per 4g	25.5		mg/4g		

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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2209514	11/07/22	AOAC 991.14 (Petrifilm)þ		
Total Coliforms	< LOQ		cfu/g	10	2209514	11/07/22	AOAC 991.14 (Petrifilm)þ		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2209515	11/08/22	AOAC 2014.05 (RAPID)þ		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2209515	11/08/22	AOAC 2014.05 (RAPID)þ		

Solvents

Method: Residual Solvents by GC/MSþ **Units** µg/g **Batch** 2209634 **Analyze** 11/09/22 12:52 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	

Pesticides

Method: AOAC 2007.01 & EN 15662 (mod)þ **Units** mg/kg **Batch** 2209670 **Analyze** 11/10/22 10:22 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	0.0164	2209737	11/11/22	AOAC 2013.06 (mod.)þ	pass	
Cadmium	< LOQ	0.200	mg/kg	0.0164	2209737	11/11/22	AOAC 2013.06 (mod.)þ	pass	
Lead	< LOQ	0.500	mg/kg	0.0164	2209737	11/11/22	AOAC 2013.06 (mod.)þ	pass	
Mercury	< LOQ	0.100	mg/kg	0.00820	2209737	11/11/22	AOAC 2013.06 (mod.)þ	pass	

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Nutrition

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
Moisture (Loss on Drying)	18.0		g/100g	0.10	2209646	11/07/22	AOAC 925.10 (mod.)[þ]		
Water Activity	0.694		Aw	0.030	2209542	11/07/22	AOAC 978.18[þ]		

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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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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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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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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 22-013576

32 Revision: 5
:: 01/04/2022

NW Natural Goods

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: (____) - _____

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*

Analysis Requested

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 - BB 0087	11/04/22		✔	✔	✔	✔	✔	✔	✔	✔			80g	

Signature - Relinquished By:	Date	Time	Signature - Received By:	Date	Time
Annie Nair	11/04/22	10:15	MRM	11/4	10:15
MRM	11/4	10:53	RBS	11/4/22	1055

Lab Use Only:
☐ Shipped Via: _____ or ☐ Client drop off
Evidence of cooling: ☐ Yes | ☐ No - Temp (°C): 18.1
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

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

Laboratory Quality Control Results

JAOAC 2015 V98-6 Batch ID: 2209590

Laboratory Control Sample

Analyte	LCS	Result	Spike	Units	%Rec	Limits	Evaluation	Notes
CBDVA	2	0.0352	0.034	%	105	80.0 - 120	Acceptable	
CBDV	2	0.0383	0.037	%	105	80.0 - 120	Acceptable	
CBE	2	0.0357	0.034	%	105	80.0 - 120	Acceptable	
CBDA	1	0.0347	0.035	%	98.9	90.0 - 110	Acceptable	
CBGA	1	0.0349	0.035	%	100	80.0 - 120	Acceptable	
CBG	1	0.0364	0.037	%	99.4	80.0 - 120	Acceptable	
CBD	1	0.0359	0.037	%	97.9	90.0 - 110	Acceptable	
THCV	2	0.0363	0.035	%	103	80.0 - 120	Acceptable	
d8THCV	2	0.0363	0.035	%	103	80.0 - 120	Acceptable	
THCVA	2	0.0345	0.033	%	105	80.0 - 120	Acceptable	
CBN	1	0.0353	0.036	%	98.4	90.0 - 110	Acceptable	
exo-THC	2	0.0344	0.034	%	99.9	80.0 - 120	Acceptable	
d9THC	1	0.0366	0.037	%	97.7	90.0 - 110	Acceptable	
d8THC	1	0.0361	0.035	%	103	90.0 - 110	Acceptable	
CBL	2	0.0316	0.032	%	97.9	80.0 - 120	Acceptable	
d10THC	1	0.0318	0.034	%	93.6	80.0 - 120	Acceptable	
CBC	2	0.0350	0.036	%	97.8	80.0 - 120	Acceptable	
THCA	1	0.0353	0.034	%	103	90.0 - 110	Acceptable	
CBCA	2	0.0359	0.034	%	104	80.0 - 120	Acceptable	
CBLA	2	0.0357	0.035	%	102	80.0 - 120	Acceptable	
CBT	2	0.0315	0.036	%	88.0	80.0 - 120	Acceptable	

Method Blank

Analyte	Result	LOQ	Units	Limits	Evaluation	Notes
CBDVA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBDV	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBE	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBDA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBGA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBG	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBD	<LOQ	0.0006	%	< 0.0006	Acceptable	
THCV	<LOQ	0.0006	%	< 0.0006	Acceptable	
d8THCV	<LOQ	0.0006	%	< 0.0006	Acceptable	
THCVA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBN	<LOQ	0.0006	%	< 0.0006	Acceptable	
exo-THC	<LOQ	0.0006	%	< 0.0006	Acceptable	
d9THC	<LOQ	0.0006	%	< 0.0006	Acceptable	
d8THC	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBL	<LOQ	0.0006	%	< 0.0006	Acceptable	
d10THC	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBC	<LOQ	0.0006	%	< 0.0006	Acceptable	
THCA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBCA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBLA	<LOQ	0.0006	%	< 0.0006	Acceptable	
CBT	<LOQ	0.0006	%	< 0.0006	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
Portland, OR 97230
503-254-1794

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Laboratory Quality Control Results

JAOAC 2015 V98-6 Batch ID: 2209590
Sample Duplicate Sample ID: 22-013209-0001-01

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	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBD	0.0673	0.0645	0.003	%	4.22	< 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	<LOQ	<LOQ	0.003	%	NA	< 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	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
THCA	0.0009	0.0008	0.003	%	8.76	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.003	%	NA	< 20	Acceptable	
CBT	0.0008	0.0008	0.003	%	0.748	< 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:** 2209634

Method Blank					Laboratory Control Sample							
Analyte	**Result**		**LOQ**	**Notes**	**Result**	**Spike**	**Units**	**% Rec**	**Limits**			**Notes**
Propane	ND	<	200		588	572	µg/g	102.8	60	-	120	
Isobutane	ND	<	200		708	731	µg/g	96.9	60	-	120	
Butane	ND	<	200		680	731	µg/g	93.0	60	-	120	
2,2-Dimethylpropane	ND	<	200		1250	936	µg/g	133.5	60	-	120	Q1
Methanol	ND	<	200		1830	1650	µg/g	110.9	60	-	120	
Ethylene Oxide	ND	<	30		55.9	56.2	µg/g	99.5	60	-	120	
2-Methylbutane	ND	<	200		1600	1650	µg/g	97.0	60	-	120	
Pentane	ND	<	200		1620	1650	µg/g	98.2	60	-	120	
Ethanol	ND	<	200		1680	1660	µg/g	101.2	70	-	130	
Ethyl Ether	ND	<	200		1570	1630	µg/g	96.3	60	-	120	
2,2-Dimethylbutane	ND	<	30		174	189	µg/g	92.1	60	-	120	
Acetone	ND	<	200		1660	1650	µg/g	100.6	60	-	120	
2-Propanol	ND	<	200		1810	1650	µg/g	109.7	60	-	120	
Ethyl Formate	ND	<	500		1460	1610	µg/g	90.7	70	-	130	
Acetonitrile	ND	<	100		564	504	µg/g	111.9	60	-	120	
Methyl Acetate	ND	<	500		1730	1630	µg/g	106.1	70	-	130	
2,3-Dimethylbutane	ND	<	30		173	174	µg/g	99.4	60	-	120	
Dichloromethane	ND	<	60		487	521	µg/g	93.5	60	-	120	
2-Methylpentane	ND	<	30		176	187	µg/g	94.1	60	-	120	
MTBE	ND	<	500		1650	1600	µg/g	103.1	70	-	130	
3-Methylpentane	ND	<	30		180	188	µg/g	95.7	60	-	120	
Hexane	ND	<	30		180	182	µg/g	98.9	60	-	120	
1-Propanol	ND	<	500		1720	1610	µg/g	106.8	70	-	130	
Methylethylketone	ND	<	500		1670	1600	µg/g	104.4	70	-	130	
Ethyl acetate	ND	<	200		1690	1630	µg/g	103.7	60	-	120	
2-Butanol	ND	<	200		1640	1630	µg/g	100.6	60	-	120	
Tetrahydrofuran	ND	<	100		465	506	µg/g	91.9	60	-	120	
Cyclohexane	ND	<	200		1470	1640	µg/g	89.6	60	-	120	
2-methyl-1-propanol	ND	<	500		1580	1620	µg/g	97.5	70	-	130	
Benzene	ND	<	1		4.31	4.93	µg/g	87.4	60	-	120	
Isopropyl Acetate	ND	<	200		1670	1640	µg/g	101.8	60	-	120	
Heptane	ND	<	200		1550	1630	µg/g	95.1	60	-	120	
1-Butanol	ND	<	500		1570	1600	µg/g	98.1	70	-	130	
Propyl Acetate	ND	<	500		1610	1620	µg/g	99.4	70	-	130	
1,4-Dioxane	ND	<	100		423	493	µg/g	85.8	60	-	120	
2-Ethoxyethanol	ND	<	30		175	171	µg/g	102.3	60	-	120	
Methylisobutylketone	ND	<	500		1520	1620	µg/g	93.8	70	-	130	
3-Methyl-1-butanol	ND	<	500		1530	1610	µg/g	95.0	70	-	130	
Ethylene Glycol	ND	<	200		398	494	µg/g	80.6	60	-	120	
Toluene	ND	<	100		410	506	µg/g	81.0	60	-	120	
Isobutyl Acetate	ND	<	500		1550	1620	µg/g	95.7	70	-	130	
1-Pentanol	ND	<	500		1490	1610	µg/g	92.5	70	-	130	
Butyl Acetate	ND	<	500		1490	1610	µg/g	92.5	70	-	130	
Ethylbenzene	ND	<	200		780	996	µg/g	78.3	60	-	120	
m,p-Xylene	ND	<	200		792	1010	µg/g	78.4	60	-	120	
o-Xylene	ND	<	200		732	979	µg/g	74.8	60	-	120	
Cumene	ND	<	30		135	188	µg/g	71.8	60	-	120	
Anisole	ND	<	500		1290	1610	µg/g	80.1	70	-	130	
DMSO	ND	<	500		1290	1600	µg/g	80.6	70	-	130	
1,2-dimethoxyethane	ND	<	50		196	190	µg/g	103.2	70	-	130	
Triethylamine	ND	<	500		1570	1610	µg/g	97.5	70	-	130	
N,N-dimethylformamide	ND	<	150		439	496	µg/g	88.5	70	-	130	
N,N-dimethylacetamide	ND	<	150		410	483	µg/g	84.9	70	-	130	
Pyridine	ND	<	50		150	167	µg/g	89.8	70	-	130	
Sulfolane	ND	<	50		121	161	µg/g	75.2	70	-	130	
1,2-Dichloroethane	ND	<	1		1.05	1	µg/g	105.0	70	-	130	
Chloroform	ND	<	1		1.02	1	µg/g	102.0	70	-	130	
Trichloroethylene	ND	<	1		0.955	1	µg/g	95.5	70	-	130	
1,1-Dichloroethane	ND	<	1		1.06	1	µg/g	106.0	70	-	130	

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QC - Sample Duplicate **Sample ID: 22-012806-0002**

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

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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.