Columbia LABORATORIES
A Tentamus Company

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

Report Number: 23-008064/D002.R000
Report Date: 07/17/2023
ORELAP#: OR100028
Purchase Order:
Received: 07/10/23 12:54

Customer: NW Natural Goods
Product identity: HEMP - HB 0097
Client/Metrc ID: .
Laboratory ID: 23-008064-0001

Summary

Potency:

Analyte per 4g	Result	Limits	Units	Status
CBC per 4g	0.183		mg/4g	
CBD per 4g	24.8		mg/4g	
CBG per 4g	0.676		mg/4g	

CBD-Total per Serving Size 24.8 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.

Testing in accordance with: OAR 333-007-0430

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Received: 07/10/23 12:54

Customer: NW Natural Goods

Product identity: HEMP - HB 0097
Client/Metrc ID: .
Sample Date:
Laboratory ID: 23-008064-0001
Evidence of Cooling: No
Temp: 25 °C
Serving Size #1: 4 g

Sample Results

Potency per 4g **Method:** J AOAC 2015 V98-6 (mod)[p] **Units** mg/se **Batch:** 2308968 **Analyze:** 7/11/23 10:49:00 PM

Analyte	Result	Limits	Units	LOQ	Notes
CBC per 4g	0.183		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	24.8		mg/4g	0.124	
CBD-A per 4g	< LOQ		mg/4g	0.124	
CBD-Total per 4g	24.8		mg/4g	0.233	
CBDV per 4g	< LOQ		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	0.676		mg/4g	0.124	
CBG-A per 4g	< LOQ		mg/4g	0.124	
CBG-Total per 4g	0.676		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	0.234	
Total Cannabinoids per 4g	25.6		mg/4g		

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Microbiology

Analyte	Result	Limits	Units	LOQ	Batch	Analyzed	Method	Status	Notes
E.coli	< LOQ		cfu/g	10	2308926	07/13/23	AOAC 991.14 (Petrifilm)þ		
Total Coliforms	< LOQ		cfu/g	10	2308926	07/13/23	AOAC 991.14 (Petrifilm)þ		
Mold (RAPID Petrifilm)	< LOQ		cfu/g	10	2308927	07/13/23	AOAC 2014.05 (RAPID)þ		
Yeast (RAPID Petrifilm)	< LOQ		cfu/g	10	2308927	07/13/23	AOAC 2014.05 (RAPID)þ		

Solvents

Method: Residual Solvents by GC/MSþ **Units** µg/g **Batch** 2308992 **Analyze** 07/12/23 11:24 AM

Analyte	Result	Limits	LOQ	Status	Notes	Analyte	Result	Limits	LOQ	Status	Notes
1,4-Dioxane	< LOQ	380	100	pass		2-Butanol	< LOQ	5000	200	pass	
2-Ethoxyethanol	< LOQ	160	30.0	pass		2-Methylbutane (Isopentane)	< LOQ		200		
2-Methylpentane	< LOQ		30.0			2-Propanol (IPA)	< LOQ	5000	200	pass	
2,2-Dimethy butane	< LOQ		30.0			2,2-Dimethylpropane (neo-pentane)	< LOQ		200		
2,3-Dimethy 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	
Isopropy 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)þ **Units** mg/kg **Batch** 2309129 **Analyze** 07/17/23 11:44 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	0.0154	2309029	07/12/23	AOAC 2013.06 (mod.)þ	pass	
Cadmium¥	< LOQ	0.200	mg/kg	0.0154	2309029	07/12/23	AOAC 2013.06 (mod.)þ	pass	
Lead¥	< LOQ	0.500	mg/kg	0.0154	2309029	07/12/23	AOAC 2013.06 (mod.)þ	pass	
Mercury¥	< LOQ	0.100	mg/kg	0.00768	2309029	07/12/23	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)	18.6		g/100g	0.10	2309055	07/13/23	AOAC 925.10 (mod.)[þ]		
Water Activity	0.692		Aw	0.030	2308948	07/11/23	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.

ᵇ = ISO/IEC 17025:2017 accredited method.
¥ = 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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Compound	LOQ (mg/kg)
Abamec in	0.100
Acepha e	0.100
Acequinocyl	0.100
Ace amiprid	0.020
Ace ochlor	0.100
Acrina hrin	0.100
Alachlor	0.100
Aldicarb	0.100
Aldicarb sul oxide	0.100
Aldoxycarb (Aldicarb-sul one)	0.100
Aldrin	0.100
Ame ocr radin	0.020
Ame ryn	0.500
Aspon	0.100
Asulam	0.100
A razine	0.100
A razine-dese hyl	0.100
Azinphos-e hyl	0.020
Azinphos-me hyl	0.020
Azoxys robin	0.020
Benalaxyl	0.020
Bendiocarb	0.020
Ben luralin	0.100
Benoxacor	0.050
Bensulide	0.050
B C alpha isomer	0.100
B C be a isomer	0.100
B C del a isomer	0.500
Bi enaza e	0.020
Bi en hrin	0.020
Boscalid	0.020
Bromophos-e hyl	0.100
Bromophos-me hyl	0.200
Bromopropyla e	0.100
Bromuconazole	0.100
Bupirima e	0.020
Bupro ezin	0.050
Bu achlor	0.500
Bu ralin	0.200
Bu yla e	0.100
Cadusa os	0.020
Cap an	1.000
Carbaryl	0.050
Carbendazim	0.100
Carbo uran	0.020
Carbopheno hion	0.200
Carboxin	0.020
Car en razone-e hyl	0.100
Chloran raniliprole	0.020
Chlordane, cis-	0.200
Chlordane, rans-	0.200
Chlor enapyr	0.500
Chlor enson	0.200
Chlor envinphos	0.050
Chlorobenzila e	0.100
Chloroneb	0.200
Chlorpyri os	0.050
Chlorpyri os-me hyl	0.200
C PC	1.000

Compound	LOQ (mg/kg)
Cle hodim	0.050
Cle hodim Sul one	0.050
Cle hodim Sul oxide	0.050
Clo en ezine	0.020
Clomazone	0.020
Clo hianidin	0.200
Coumaphos	0.050
Cro oxyphos	0.020
Cyanazine	0.020
Cyano enphos	0.020
Cyan raniliprole	0.050
Cyazo amid	0.020
Cycloa e	0.100
Cy lu hrin	0.200
Cyhalo hrin, lambda	0.200
Cymoxanil	0.050
Cyperme hrin	0.200
Cyprodinil	0.100
Dac hal	0.100
Daminozide	0.100
DCPMU	0.050
DDD, o,p'-	0.100
DDD, p,p'-	0.100
DD , o,p'-	0.100
DD , p,p'-	0.100
DDT, o,p'-	0.100
DDT, p,p'-	0.100
D (Tribu os)	0.100
Del ame hrin	0.100
Desmedipham	0.100
Dialla e	0.100
Diazinon	0.020
Diazoxon	0.100
Dichlobenil	0.100
Dichlo luanid	0.100
Dichlorvos	0.100
Diclobu razol	0.050
Dico ol	0.100
Dicro ophos	0.050
Dieldrin	0.100
Die ho encarb	0.020
Die hyl oluamide (D T)	0.050
Di enoconazole	0.100
Dime henamid	0.050
Dime hoa e	0.050
Dime homorph	0.050
Diniconazole	0.200
Dino e uran	0.200
Dioxa hion	0.100
Diphenamid	0.020
Diphenylamine	0.100
Disul o on	0.100
Disul o on sul one	0.100
Disul o on sul oxide	0.100
Diuron	0.050
di enphos	0.050
ndosul an alpha	0.200
ndosul an be a	0.200
ndosul an sul a e	0.100

Compound	LOQ (mg/kg)
ndrin	0.100
PN	0.050
PTC	0.100
s envalera e/ envalera e	0.200
aconazole	0.100
hal luralin	0.100
hio encarb	0.050
hion	0.200
hirimol	0.100
ho umesa e	0.050
hoprophos	0.020
o enprox	0.020
oxazole	0.020
ridiazole	0.100
rim os	0.020
amoxadone	0.200
amphur	0.100
enamidone	0.020
enamiphos	0.020
enamiphos sul one	0.020
enamiphos sul oxide	0.020
enazaquin	0.100
enbuconazole	0.100
enchlorphos	0.100
enchlorphos-oxon	0.100
enhexamid	0.100
eni ro hion	0.100
enobucarb	0.050
enoxycarb	0.020
enpropa hrin	0.050
enpyroxima e	0.020
enson	0.100
ensul o hion	0.020
ensul o hion oxon	0.020
ensul o hion sul one	0.100
Fensulfothion-oxon-sulfone	0.020
en hion	0.050
en hion oxon	0.020
en hion oxon sul one	0.100
en hion sul one	0.050
enuron	0.020
ipronil	0.100
lonicamid	0.100
luchloralin	0.100
lucy hrina e	0.100
ludioxonil	0.200
lu enace	0.020
lumioxazin	0.100
luome uron	0.020
luopicolide	0.050
luopyram	0.020
luoxas robin	0.050
lupyradi urone	0.020
luridone	0.100
lusilazole	0.020
lu olanil	0.020
lu ria ol	0.020
luvalina e, au-	0.100
luxapyroxad	0.020

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Compound	LOQ (mg/kg)
omesa en	0.100
ono os	0.100
orchlor enuron	0.050
orme ana e	0.050
ura hiocarb	0.020
ep achlor	0.100
ep achlor epoxide	0.100
ep enophos	0.100
exachlorobenzene	0.100
exaconazole	0.100
exazinone	0.100
exy hiazox	0.020
mazalil	0.100
midacloprid	0.100
ndazi lam	0.020
ndoxacarb	0.020
proben os	0.100
prodione	0.100
sobenzan	0.100
socarbophos	0.500
sodrin	0.100
so enphos	0.050
so enphos-me hyl	0.020
so enphos oxon	0.050
soprocarb	0.020
sopropalin	0.200
sopro hiolane	0.050
sopro uron	0.050
soxaben	0.050
soxa lu ole	0.050
Kresoxim-me hyl	0.050
ac o en	0.500
enacil	0.100
indane (gamma B C)	0.100
inuron	0.020
Malaoxon	0.050
Mala hion	0.050
Mandipropamid	0.020
Mecarbam	0.020
Mepanipyrim	0.050
Merphos	0.500
Me alaxyl	0.050
Me aldehyde	0.050
Me conazole	0.100
Me hacri os	0.100
Me hamidophos	0.050
Me hida hion	0.050
Me hiocarb	0.050
Me hiocarb sul one	0.100
Me hiocarb sul oxide	0.100
Me homyl	0.100
Me hoxychlor	0.100
Me hoxy enozide	0.020
Me obromuron	0.050
Me olachlor	0.100
Me olcarb	0.050
Me ra enone	0.050
Me ribuzin	0.100
Mevinphos	0.100

Compound	LOQ (mg/kg)
Mexacarba e	0.020
MGK 264	0.020
Mirex	0.100
Molina e	0.050
Monocro ophos	0.100
Monolinuron	0.020
Myclobu anil	0.050
Naled	0.100
Napropamide	0.050
Neburon	0.020
Ni rapyrin	0.100
Nor lurazon	0.050
Ome hoa e	0.100
O-Phenylphenol	0.100
Oxadixyl	0.100
Oxamyl	0.100
Oxamyl-oxime	0.100
Oxychlordane	0.100
Oxydeme on-Me hyl	0.100
Oxy hioquinox	0.200
Paclobu razol	0.050
Paraoxon-e hyl	0.020
Paraoxon me hyl	0.100
Para hion e hyl	0.100
Para hion me hyl	0.200
Penconazole	0.050
Pendime halin	0.050
Pen lu en	0.020
Pen achloroaniline	0.100
Pen achloroanisole	0.100
Pen achlorobenzene (PCB)	0.100
Pentachlorothioanisole (PCTA)	0.100
Pen hiopyrad	0.020
Perme hrin	0.050
Per hane	0.100
Phenmedipham	0.050
Phen hoa e	0.050
Phora e	0.050
Phora e Sul one	0.050
Phora e Sul oxide	0.050
Phosalone	0.050
Phosme	0.100
Phosphamidon	0.050
Phoxim	0.050
Pinoxaden	0.020
Piperonyl bu oxide	0.050
Pirimicarb	0.020
Pirimiphos-me hyl	0.050
Pirimiphos-e hyl	0.020
Pralle hrin	0.100
Prochloraz	0.020
Procymidone	0.100
Pro eno os	0.100
Pro luralin	0.100
Promecarb	0.050
Prome on	0.100
Prome ryn	0.020
Propachlor	0.020

Compound	LOQ (mg/kg)
Propamocarb	0.050
Propanil	0.050
Propargi e	0.050
Propazine	0.020
Prope amphos	0.050
Propham	0.050
Propiconazole	0.050
Propoxur	0.050
Propoxycarbazone Na	0.050
Propyzamide	0.050
Pro hio os	0.100
Pyraclos robin	0.020
Pyrazophos	0.050
Pyre hrins	0.050
Pyridaben	0.020
Pyrida ol	0.100
Pyrida e	0.020
Pyrime hanil	0.050
Pyriproxi en	0.020
Pyroxasul one	0.020
Pyroxsulam	0.020
Quinalphos	0.050
Quinoxy en	0.050
Quin ozene (PCNB)	0.200
Resme hrin	0.050
Ro enone	0.050
S421	0.100
Simazine	0.100
Sime ryn	0.200
Spine oram	0.020
Spinosad	0.050
Spirodiclo en	0.100
Spiromesi en	0.050
Spiro e rama	0.050
Spiroxamine	0.020
Sul o ep	0.050
Sul oxa lor	0.050
Sulpro os	0.020
Tebuconazole	0.100
Tebu enozide	0.020
Tebu hiuron	0.020
Tecnazene	0.100
Te lu hrin	0.100
Terbu os	0.020
Terbu os sul one	0.050
Terbu os sul oxide	0.050
Terbu hylazine	0.020
Terbu ryn	0.020
Te rachlorvinphos	0.050
Te raconazole	0.050
Te radi on	0.200
Te rame hrin	0.050
Te rasul	0.100
Thiabendazole	0.100
Thiabendazole, 5-hydroxy	0.100
Thiacloprid	0.050
Thiame hoxam	0.100
Thiobencarb	0.050
Thiodicarb	0.050
Thiophana e-me hyl	0.050

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Cannab s Mu t -Res due Prof e, L m ts of Quant tat on

Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)	Compound	LOQ (mg/kg)
Tolclo os-me hyl	0.100	Triazophos	0.020	Tri loxys robin	0.020
Tri orin	0.100	Tolyl luanid	0.050	Tri iconazole	0.050
Tralkoxydim	0.100	Tridiphane	0.500	Vinclozolin	0.100
Triadime on	0.050	Tri lumizole	0.020	Zoxamide	0.020
Trialla e	0.100	Tri luralin	0.100		

OQ = imi o Quan i a ion, mg/kg

ac ors a ec ing he OQ include ins rumen a ion sensi ivi y or a par icular analy e, sample size, mois ure con en (percen solids) o he sample, e ec iveness o he cleanup on he sample ex rac , and especially he ype o sample ma rix.

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Hemp & Cannabis
Chain of Custody

Northwest-Natural-
Goods-1888763192

ORELAP ID: OR100028 ANAB ISO 17025 ID: AT1508

[redacted]

Project Information
Project Name: HEMP - HB 0097
PO Number: N/A
Turnaround Time: 5 Business Days | Reg. For Micro Testing | Standard
Samples Delivered to Laboratory: Schedule Pick-Up
Cannabis Type: Industrial

[redacted]

#	Sample Name	Material	Amount Provided	Testing Comments	Testing: H0010 Potency Cannabinoid Basic + Extended Profile	P2320 Pesticides - Multi-Residue Profile	H0008 Residual Solvents - GR	H0003 Heavy Metals Profile GR (As Cd, Pb & Hg)	M075 Total Coliforms + E.Coli	M283 Yeast and Mold	N190 Moisture as Loss on Drying
1	HEMP - HB 0097	Edible	20 units for sale	n/a	✓	✓	✓	✓	✓	✓	✓

Relinquished By	Date	Time	Temp., °C
Kristen Johnston	7/7/2023	13:53	
BR	7/10/2023	11:11	19.5

Received By	Date	Time	Received Temp., °C	Evidence of Cooling?
BR	7/10/2023	10:18		No
rdv	7/10/2023	12:51		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 COC. By signing 'Relinquished by' you are agreeing to these terms.

Columbia Laboratories
12423 NE Whitaker Way
Portland, OR 97230

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Columbia LABORATORIES
A Tentamus Company

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

Report Number: 23-008064/D002.R000
Report Date: 07/17/2023
ORELAP#: OR100028
Purchase Order:
Received: 07/10/23 12:54

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

Laboratory Quality Control Results

J AOAC 2015 V98-6 **Batch ID: 2308968**

Laboratory Control Sample

Analyte	LCS	Result	Spike	Units	% Rec	Limits	Evaluation	Notes
CBDVA	2	0.0325	0.0316	%	103	80.0 - 120	Acceptable	
CBDV	2	0.0295	0.0315	%	93.6	80.0 - 120	Acceptable	
CBE	2	0.0340	0.0348	%	97.7	80.0 - 120	Acceptable	
CBDA	1	0.0326	0.0325	%	100	90.0 - 110	Acceptable	
CBGA	1	0.0326	0.0326	%	100	80.0 - 120	Acceptable	
CBG	1	0.0332	0.0332	%	100.0	80.0 - 120	Acceptable	
CBD	1	0.0339	0.0337	%	100	90.0 - 110	Acceptable	
THCV	2	0.0247	0.0236	%	105	80.0 - 120	Acceptable	
d8THCV	2	0.0288	0.0279	%	103	80.0 - 120	Acceptable	
THCVA	2	0.0313	0.0308	%	101	80.0 - 120	Acceptable	
CBN	1	0.0334	0.0340	%	98.1	80.0 - 120	Acceptable	
exo-THC	2	0.0291	0.0283	%	103	80.0 - 120	Acceptable	
d9THC	1	0.0328	0.0329	%	99.8	90.0 - 110	Acceptable	
d8THC	1	0.0319	0.0320	%	99.8	90.0 - 110	Acceptable	
9S-d10THC	1	0.0342	0.0343	%	99.9	80.0 - 120	Acceptable	
CBL	2	0.0323	0.0311	%	104	80.0 - 120	Acceptable	
9S-HHC	3	0.0300	0.0333	%	89.9	80.0 - 120	Acceptable	
9R-d10THC	1	0.0309	0.0313	%	98.8	80.0 - 120	Acceptable	
CBC	2	0.0302	0.0293	%	103	80.0 - 120	Acceptable	
9R-HHC	3	0.0284	0.0333	%	85.1	80.0 - 120	Acceptable	
THCA	1	0.0321	0.0322	%	99.5	90.0 - 110	Acceptable	
CBCA	2	0.0333	0.0320	%	104	80.0 - 120	Acceptable	
CBLA	2	0.0313	0.0302	%	104	80.0 - 120	Acceptable	
d9THCP	2	0.0333	0.0326	%	102	80.0 - 120	Acceptable	
d8THCO	3	0.0335	0.0333	%	101	80.0 - 120	Acceptable	
CBT	2	0.0332	0.0326	%	102	80.0 - 120	Acceptable	
d9THCO	3	0.0307	0.0333	%	92.2	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	
9S-HHC	<LOQ	0.00322	%	< 0.00322	Acceptable	
9R-d10THC	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBC	<LOQ	0.00322	%	< 0.00322	Acceptable	
9R-HHC	<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	
d8THCO	<LOQ	0.00322	%	< 0.00322	Acceptable	
CBT	<LOQ	0.00322	%	< 0.00322	Acceptable	
d9THCO	<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

J AOAC 2015 V98-6 **Batch ID: 2308968**

Sample Duplicate Sample ID **23-008031-0001**

Analyte	Result	Org. Result	LOQ	Units	RPD	Limits	Evaluation	Notes
CBDVA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBDV	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBE	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBDA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBGA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBG	0.0167	0.0167	0.00312	%	0.329	< 20	Acceptable	
CBD	0.610	0.612	0.00312	%	0.307	< 20	Acceptable	
THCV	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d8THCV	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
THCVA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBN	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
exo-THC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d9THC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d8THC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
9S-d10THC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBL	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
9S-HHC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
9R-d10THC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBC	0.00469	0.00449	0.00312	%	4.32	< 20	Acceptable	
9R-HHC	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
THCA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBCA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBLA	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d9THCP	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d8THCO	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
CBT	<LOQ	<LOQ	0.00312	%	NA	< 20	Acceptable	
d9THCO	<LOQ	<LOQ	0.00312	%	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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Laboratory Quality Control Results

Residual Solvents — Batch ID: 2308992

Analyte	Method Blank Result		LOQ	Notes	Laboratory Control Sample Result	Spike	Units	%Rec	Limits	Notes
Propane	ND	<	200		632	584	µg/g	108.2	60 - 120	
Isobutane	ND	<	200		833	767	µg/g	108.6	60 - 120	
Butane	ND	<	200		831	782	µg/g	106.3	60 - 120	
2,2-Dimethylpropane	ND	<	200		1020	939	µg/g	108.6	60 - 120	
Methanol	ND	<	200		1850	1640	µg/g	112.8	60 - 120	
Ethylene Oxide	ND	<	30		73.5	57.1	µg/g	128.7	60 - 120	Q1
2-Methylbutane	ND	<	200		1670	1600	µg/g	104.4	60 - 120	
Pentane	ND	<	200		1700	1620	µg/g	104.9	60 - 120	
Ethanol	ND	<	200		1920	1610	µg/g	119.3	70 - 130	
Ethyl Ether	ND	<	200		1730	1610	µg/g	107.5	60 - 120	
2,2-Dimethylbutane	ND	<	30		177	168	µg/g	105.4	60 - 120	
Acetone	ND	<	200		1750	1620	µg/g	108.0	60 - 120	
2-Propanol	ND	<	200		1970	1600	µg/g	123.1	60 - 120	Q1
Ethyl Formate	ND	<	500		1610	1600	µg/g	100.6	70 - 130	
Acetonitrile	ND	<	100		516	484	µg/g	106.6	60 - 120	
Methyl Acetate	ND	<	500		1630	1610	µg/g	101.2	70 - 130	
2,3-Dimethylbutane	ND	<	30		177	162	µg/g	109.3	60 - 120	
Dichloromethane	ND	<	60		523	483	µg/g	108.3	60 - 120	
2-Methylpentane	ND	<	30		181	174	µg/g	104.0	60 - 120	
MTBE	ND	<	500		1610	1610	µg/g	100.0	70 - 130	
3-Methylpentane	ND	<	30		188	168	µg/g	111.9	60 - 120	
Hexane	ND	<	30		171	168	µg/g	101.8	60 - 120	
1-Propanol	ND	<	500		1790	1600	µg/g	111.9	70 - 130	
Methylethylketone	ND	<	500		1640	1620	µg/g	101.2	70 - 130	
Ethyl acetate	ND	<	200		1770	1600	µg/g	110.6	60 - 120	
2-Butanol	ND	<	200		2010	1600	µg/g	125.6	60 - 120	Q1
Tetrahydrofuran	ND	<	100		540	514	µg/g	105.1	60 - 120	
Cyclohexane	ND	<	200		1670	1600	µg/g	104.4	60 - 120	
2-methyl-1-propanol	ND	<	500		1880	1610	µg/g	116.8	70 - 130	
Benzene	ND	<	1		4.41	5.12	µg/g	86.1	60 - 120	
Isopropyl Acetate	ND	<	200		1790	1620	µg/g	110.5	60 - 120	
Heptane	ND	<	200		1700	1610	µg/g	105.6	60 - 120	
1-Butanol	ND	<	500		1870	1600	µg/g	116.9	70 - 130	
Propyl Acetate	ND	<	500		1640	1600	µg/g	102.5	70 - 130	
1,4-Dioxane	ND	<	100		509	493	µg/g	103.2	60 - 120	
2-Ethoxyethanol	ND	<	30		216	163	µg/g	132.5	60 - 120	Q1
Methylisobutylketone	ND	<	500		1680	1600	µg/g	105.0	70 - 130	
3-Methyl-1-butanol	ND	<	500		1830	1610	µg/g	113.7	70 - 130	
Ethylene Glycol	ND	<	200		473	483	µg/g	97.9	60 - 120	
Toluene	ND	<	100		508	493	µg/g	103.0	60 - 120	
Isobutyl Acetate	ND	<	500		1640	1600	µg/g	102.5	70 - 130	
1-Pentanol	ND	<	500		1970	1600	µg/g	123.1	70 - 130	
Butyl Acetate	ND	<	500		1640	1600	µg/g	102.5	70 - 130	
Ethylbenzene	ND	<	200		994	969	µg/g	102.6	60 - 120	
m,p-Xylene	ND	<	200		931	968	µg/g	96.2	60 - 120	
o-Xylene	ND	<	200		989	976	µg/g	101.3	60 - 120	
Cumene	ND	<	30		169	162	µg/g	104.3	60 - 120	
Anisole	ND	<	500		1550	1610	µg/g	96.3	70 - 130	
DMSO	ND	<	500		1450	1610	µg/g	90.1	70 - 130	
1,2-dimethoxyethane	ND	<	50		160	164	µg/g	97.6	70 - 130	
Triethylamine	ND	<	500		1470	1600	µg/g	91.9	70 - 130	
N,N-dimethylformamide	ND	<	150		513	484	µg/g	106.0	70 - 130	
N,N-dimethylacetamide	ND	<	150		478	489	µg/g	97.8	70 - 130	
Pyridine	ND	<	50		149	172	µg/g	86.6	70 - 130	
Sulfolane	ND	<	50		127	163	µg/g	77.9	70 - 130	
1,2-Dichloroethane	ND	<	1		1.07	1	µg/g	107.0	70 - 130	
Chloroform	ND	<	1		1.12	1	µg/g	112.0	70 - 130	
Trichloroethylene	ND	<	1		1.07	1	µg/g	107.0	70 - 130	
1,1-Dichloroethane	ND	<	1		1.03	1	µg/g	103.0	70 - 130	

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QC- Sample Duplicate — Sample ID: 23-007460-0001

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. On y 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.