

# Report: COA Evaluation Summary

OLCC License No. 10087092BDA | ORELAP ID. 4147

545 SW 2nd Street, Corvallis OR. 97333 | 541.257.5002 | services@preelab.com | Preelab.com

## Product Description

Client: **GVB Oregon**

Product Name: **3.4.20 CBD - ISO Batch 8235 Prim**

Matrix: Concentrate

Metric Source ID: n/a

Metric Package ID: n/a

License Number: n/a

Report ID: A1290-01

Date Collected: 2020-03-04

Date Received: 2020-03-04

Report Date: 2020-03-09

Tests Requested: Cannabinoid Potency Analysis  
Pesticide Analysis  
Residual Solvent Analysis

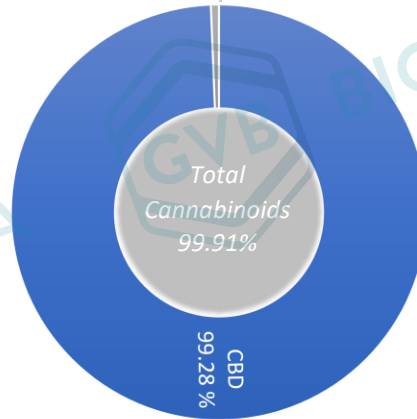
## Evaluation Summary

Moisture Analysis | Test Not Requested/Required

### Cannabinoid Potency Analysis

**Total THC \***  
**0.00 %**  
**0.0 mg/g**

**Total CBD \***  
**99.28 %**  
**992.8 mg/g**



Abrv.	Dry Wt. %	Dry Wt. mg/g
THCA	< LOQ	< LOQ
Δ-9-THC	< LOQ	< LOQ
Δ-8-THC	< LOQ	< LOQ
THCV	< LOQ	< LOQ
CBDA	< LOQ	< LOQ
CBD	99.28 %	992.8 mg/g
CBGA	< LOQ	< LOQ
CBG	< LOQ	< LOQ
CBDVA	< LOQ	< LOQ
CBDV	0.63 %	6.3 mg/g
CBN	< LOQ	< LOQ
CBL	< LOQ	< LOQ
CBC	< LOQ	< LOQ



**3.4.20 CBD - ISO Batch 8235 Prim**

Pesticide Analysis | Pesticide Status

No Pesticides Were Detected above Oregon's action limit as stated in OAR 333-007-0400.

\* moisture compensated & adjusted for the loss of carboxylic acid group - OAR 333-064-0100

# Report: Dear Customer

**Dear GVB Oregon,**

PREE Laboratory received samples on 2020-03-04, which were collected on 2020-03-04 by Robert Vingelen. The results in this report are only applicable for the samples listed in this report.

All analyses were performed in accordance with PREE Laboratory NELAP/TNI approved quality control system unless otherwise noted in the case narrative of this report. All quality control data is within the laboratory's predefined acceptance criteria unless otherwise noted in the case narrative of this report.

The testing methods used are of sufficient sensitivity to meet the compliance criteria set in OAR 333-007, however it is the responsibility of the client to utilize the data to comply with standards set in OAR 333-007.

If you have any questions regarding information in this report, please feel free to call 541-257-5002 or email the laboratory at services@preelab.com.



Sardar, Tamzid | Laboratory Director  
Corvallis, Oregon

## **Case Narrative**

This report presents the results of the analyses of the sample received on 2020-03-04 and assigned the Laboratory Number of - A1290-01. The subsequent data is only for the sample listed and parameters tested.

This report shall not be reproduced, except in full, without written consent of PREE Laboratory. This report may not be altered in anyway by any other entity beside PREE Laboratory, and will be noted on this case narrative if modifications are made after the initial release.

All analyses were performed in accordance with PREE Laboratory's Quality Control Program. All QC requirements were met, except as noted below.

Analytical comments are noted on the Certificate of Analysis with data flags, and/or recorded below.

### **Notes:**

The initial calibration verification did not meet acceptance criteria for the following analytes: Chlofentezine, Daminozide, Dichlorvos, Permethrin

# Report: Evaluation Detail

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## Moisture Analysis

### Evaluation Detail

Moisture Analysis	Test Not Requested/Required
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## Cannabinoid Potency Analysis

### Evaluation Detail

Product Name: **3.4.20 CBD - ISO Batch 8235 Prim**

Analysis Date: 2020-03-08

Cannabinoid Potency Analysis	Compound	Abrv.	Dry Wt. (%)	Dry Wt. (mg/g)	RL (%)
<b>Total THC *</b>	Tetrahydro-cannabinolic acid	THCA	< LOQ	< LOQ	0.5 %
<b>0.00 %</b>	Delta9 Tetrahydro-cannabinol	Δ-9-THC	< LOQ	< LOQ	0.5 %
<b>0.0 mg/g</b>	Delta8 Tetrahydro-cannabinol	Δ-8-THC	< LOQ	< LOQ	0.5 %
	Tetrahydrocannabivarin	THCV	< LOQ	< LOQ	0.5 %
<b>Total CBD *</b>	Cannabidiolic acid	CBDA	< LOQ	< LOQ	0.5 %
<b>99.28 %</b>	Cannabidiol	CBD	99.28 %	992.8	0.5 %
<b>992.8 mg/g</b>	Cannabidivarinic Acid	CBGA	< LOQ	< LOQ	0.5 %
	Cannabidivarin	CBG	< LOQ	< LOQ	0.5 %
	Cannabigerolic acid	CBDVA	< LOQ	< LOQ	0.5 %
	Cannabigerol	CBDV	0.63 %	6.3	0.5 %
	Cannabinol	CBN	< LOQ	< LOQ	0.5 %
	Cannabicyclol	CBL	< LOQ	< LOQ	0.5 %
	Cannabichromene	CBC	< LOQ	< LOQ	0.5 %

\* moisture compensated & adjusted for the loss of carboxylic acid group - OAR 333-064-0100

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## Pesticide Analysis

Product Name: **3.4.20 CBD - ISO Batch 8235 Prim**

Analysis Date: 2020-03-05  
LCMS

Analysis Date: 2020-03-05  
GCMS

## Evaluation Detail

Pesticide Name	Tested Value (ppm)	Pass Criteria (ppm)	LOQ (ppm)	Status Pass/Unsatisfactory
Abamectin B1a	< LOQ	0.50	0.20	Pass
Acephate	< LOQ	0.40	0.20	Pass
Acequinocyl	< LOQ	2.00	0.20	Pass
Acetamiprid	< LOQ	0.20	0.20	Pass
Aldicarb	< LOQ	0.40	0.20	Pass
Azoxystrobin	< LOQ	0.20	0.20	Pass
Bifenazate	< LOQ	0.20	0.20	Pass
Bifenthrin	< LOQ	0.20	0.20	Pass
Boscalid	< LOQ	0.40	0.20	Pass
Carbaryl	< LOQ	0.20	0.20	Pass
Carbofuran	< LOQ	0.20	0.20	Pass
Chlorantraniliprole	< LOQ	0.20	0.20	Pass
Chlorfenapyr***	< LOQ	1.00	0.10	Pass
Chlorpyrifos	< LOQ	0.20	0.20	Pass
Clofentezine	< LOQ	0.20	0.20	Pass
Cyfluthrin***	< LOQ	1.00	1.00	Pass
Cypermethrin***	< LOQ	1.00	1.00	Pass
Daminozide	< LOQ	1.00	0.20	Pass
Diazinon	< LOQ	0.20	0.20	Pass
Dichlorvos	< LOQ	1.00	0.20	Pass
Dimethoate	< LOQ	0.20	0.20	Pass
Ethoprophos	< LOQ	0.20	0.20	Pass
Etofenprox	< LOQ	0.40	0.20	Pass
Etoxazole	< LOQ	0.20	0.20	Pass
Fenoxycarb	< LOQ	0.20	0.20	Pass
Fenpyroximate	< LOQ	0.40	0.20	Pass
Fipronil***	< LOQ	0.40	0.10	Pass
Flonicamid	< LOQ	1.00	0.20	Pass
Fludioxonil***	< LOQ	0.40	0.20	Pass
Hexythiazox	< LOQ	1.00	0.20	Pass
Imazalil	< LOQ	0.20	0.20	Pass
Imidacloprid	< LOQ	0.40	0.20	Pass
Kresoxim-methyl	< LOQ	0.40	0.20	Pass

\*\*\* Compounds were tested on GCMS. All others on LCMS. Continued on next page...

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## Pesticide Analysis

## Evaluation Detail

Pesticide Name	Tested Value (ppm)	Pass Criteria (ppm)	LOQ (ppm)	Status Pass/Unsatisfactory
Malathion	< LOQ	0.20	0.20	Pass
Metalaxyl	< LOQ	0.20	0.20	Pass
Methiocarb	< LOQ	0.20	0.20	Pass
Methomyl	< LOQ	0.40	0.20	Pass
MGK-264	< LOQ	0.20	0.20	Pass
Myclobutanil	< LOQ	0.20	0.20	Pass
Naled	< LOQ	0.50	0.20	Pass
Oxamyl	< LOQ	1.00	0.20	Pass
Paclobutrazol	< LOQ	0.40	0.20	Pass
Parathion-methyl***	< LOQ	0.20	0.10	Pass
Permethrin, cis-trans	< LOQ	0.20	0.20	Pass
Phosmet	< LOQ	0.20	0.20	Pass
Piperonyl butoxide	< LOQ	2.00	0.20	Pass
Prallethrin	< LOQ	0.20	0.20	Pass
Propiconazole***	< LOQ	0.40	0.20	Pass
Propoxur	< LOQ	0.20	0.20	Pass
Pyrethrins (3 isomers)	< LOQ	1.00	0.20	Pass
Pyridaben	< LOQ	0.20	0.20	Pass
Spinosad	< LOQ	0.20	0.20	Pass
Spiromesifen	< LOQ	0.20	0.20	Pass
Spirotetramat	< LOQ	0.20	0.20	Pass
Spiroxamine	< LOQ	0.40	0.20	Pass
Tebuconazole	< LOQ	0.40	0.20	Pass
Thiacloprid	< LOQ	0.20	0.20	Pass
Thiamethoxam	< LOQ	0.20	0.20	Pass
Trifloxystrobin	< LOQ	0.20	0.20	Pass

\*\*\* Compounds were tested on GCMS. All others on LCMS.

# Report: Quality Check

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## Moisture Analysis

## Quality Control Detail

Moisture Analysis |

## Cannabinoid Potency Analysis

## Quality Control Detail

Analysis Date: 2020-03-08

Cannabinoid Potency Analysis	MB	LCS	Expected Value (%)	Tested Value (%)	Pass Criteria
Tetrahydro-cannabinolic acid	○		< 0.1%	< 0.1%	< 0.1%
Delta9 Tetrahydro-cannabinol	○		< 0.1%	< 0.1%	< 0.1%
Cannabidiolic acid	○		< 0.1%	< 0.1%	< 0.1%
Cannabidiol	○		< 0.1%	< 0.1%	< 0.1%
Cannabinol	○		< 0.1%	< 0.1%	< 0.1%
Tetrahydro-cannabinolic acid		●	100.0%	106.8%	80%-120%
Delta9 Tetrahydro-cannabinol		●	100.0%	110.2%	80%-120%
Cannabidiolic acid		●	100.0%	110.1%	80%-120%
Cannabidiol		●	100.0%	103.1%	80%-120%
Cannabinol		●	100.0%	105.8%	80%-120%

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## Pesticide Analysis

Analysis Date: 2020-03-05

LCMS

Analysis Date: 2020-03-05

GCMS

## Quality Control Detail

Pesticide Name	MB	LCS	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Abamectin	o		< 0.25	< 0.25	< 0.25
Acephate	o		< 0.2	< 0.2	< 0.2
Acequinocyl	o		< 1	< 1	< 1
Acetamiprid	o		< 0.1	< 0.1	< 0.1
Aldicarb	o		< 0.2	< 0.2	< 0.2
Azoxystrobin	o		< 0.1	< 0.1	< 0.1
Bifenazate	o		< 0.1	< 0.1	< 0.1
Bifenthrin	o		< 0.1	< 0.1	< 0.1
Boscalid	o		< 0.2	< 0.2	< 0.2
Carbaryl	o		< 0.1	< 0.1	< 0.1
Carbofuran	o		< 0.1	< 0.1	< 0.1
Chlorantraniliprole	o		< 0.1	< 0.1	< 0.1
Chlorfenapyr***	o		< 0.5	< 0.5	< 0.5
Chlorpyrifos	o		< 0.1	< 0.1	< 0.1
Clofentezine	o		< 0.1	< 0.1	< 0.1
Cyfluthrin***	o		< 0.5	< 0.5	< 0.5
Cypermethrin***	o		< 0.5	< 0.5	< 0.5
Daminozide	o		< 0.5	< 0.5	< 0.5
Diazinon	o		< 0.1	< 0.1	< 0.1
Dichlorvos	o		< 0.5	< 0.5	< 0.5
Dimethoate	o		< 0.1	< 0.1	< 0.1
Ethoprophos	o		< 0.1	< 0.1	< 0.1
Etofenprox	o		< 0.2	< 0.2	< 0.2
Etoxazole	o		< 0.1	< 0.1	< 0.1
Fenoxycarb	o		< 0.1	< 0.1	< 0.1
Fenpyroximate	o		< 0.2	< 0.2	< 0.2
Fipronil***	o		< 0.2	< 0.2	< 0.2
Flonicamid	o		< 0.5	< 0.5	< 0.5
Fludioxonil***	o		< 0.2	< 0.2	< 0.2
Hexythiazox	o		< 0.5	< 0.5	< 0.5
Imazalil	o		< 0.1	< 0.1	< 0.1
Imidacloprid	o		< 0.2	< 0.2	< 0.2
Kresoxim-methyl	o		< 0.2	< 0.2	< 0.2

\*\*\* Compounds were tested on GCMS. All others on LCMS. Continued on next page...



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## Pesticide Analysis

## Quality Control Detail

Pesticide Name	MB	LCS	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Malathion	○		< 0.1	< 0.1	< 0.1
Metalaxyl	○		< 0.1	< 0.1	< 0.1
Methiocarb	○		< 0.1	< 0.1	< 0.1
Methomyl	○		< 0.2	< 0.2	< 0.2
MGK-264	○		< 0.1	< 0.1	< 0.1
Myclobutanil	○		< 0.1	< 0.1	< 0.1
Naled	○		< 0.25	< 0.25	< 0.25
Oxamyl	○		< 0.5	< 0.5	< 0.5
Paclobutrazol	○		< 0.2	< 0.2	< 0.2
Parathion-methyl***	○		< 0.1	< 0.1	< 0.1
Permethrin, cis-trans	○		< 0.1	< 0.1	< 0.1
Phosmet	○		< 0.1	< 0.1	< 0.1
Piperonyl butoxide	○		< 1	< 1	< 1
Prallethrin	○		< 0.1	< 0.1	< 0.1
Propiconazole***	○		< 0.2	< 0.2	< 0.2
Propoxur	○		< 0.1	< 0.1	< 0.1
Pyrethrins (3 isomers)	○		< 0.5	< 0.5	< 0.5
Pyridaben	○		< 0.1	< 0.1	< 0.1
Spinosad	○		< 0.1	< 0.1	< 0.1
Spiromesifen	○		< 0.1	< 0.1	< 0.1
Spirotetramat	○		< 0.1	< 0.1	< 0.1
Spiroxamine	○		< 0.2	< 0.2	< 0.2
Tebuconazole	○		< 0.2	< 0.2	< 0.2
Thiacloprid	○		< 0.1	< 0.1	< 0.1
Thiamethoxam	○		< 0.1	< 0.1	< 0.1
Trifloxystrobin	○		< 0.1	< 0.1	< 0.1
Abamectin		●	1.5	1.398	0.15 - 2.4
Acephate		●	1.5	2.016	0.15 - 2.4
Acequinocyl		●	1.5	1.632	0.15 - 2.4
Acetamiprid		●	1.5	1.556	0.15 - 2.4
Aldicarb		●	1.5	1.489	0.15 - 2.4
Azoxystrobin		●	1.5	1.615	0.15 - 2.4
Bifentazate		●	1.5	1.665	0.15 - 2.4

\*\*\* Compounds were tested on GCMS. All others on LCMS. Continued on next page...

# Report: Quality Check

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## Pesticide Analysis

## Quality Control Detail

Pesticide Name	MB	LCS	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Bifenthrin		•	1.5	1.506	0.15 - 2.4
Boscalid		•	1.5	1.603	0.15 - 2.4
Carbaryl		•	1.5	1.822	0.15 - 2.4
Carbofuran		•	1.5	1.688	0.15 - 2.4
Chlorantraniliprole		•	1.5	0.830	0.15 - 2.4
Chlorfenapyr***		•	1.5	1.467	0.75 - 2.4
Chlorpyrifos		•	1.5	1.662	0.15 - 2.4
Clofentezine		•	1.5	1.562	0.15 - 2.4
Cyfluthrin***		•	1.5	1.485	0.75 - 2.4
Cypermethrin***		•	1.5	1.490	0.75 - 2.4
Daminozide		•	1.5	1.480	0.15 - 2.4
Diazinon		•	1.5	1.725	0.15 - 2.4
Dichlorvos		•	1.5	1.669	0.15 - 2.4
Dimethoate		•	1.5	1.582	0.15 - 2.4
Ethoprophos		•	1.5	1.674	0.15 - 2.4
Etofenprox		•	1.5	1.802	0.15 - 2.4
Etoxazole		•	1.5	1.677	0.15 - 2.4
Fenoxycarb		•	1.5	1.665	0.15 - 2.4
Fenpyroximate		•	1.5	1.760	0.15 - 2.4
Fipronil***		•	1.5	1.366	0.75 - 2.4
Fonicamid		•	1.5	1.745	0.15 - 2.4
Fludioxonil***		•	1.5	1.584	0.75 - 2.4
Hexythiazox		•	1.5	1.674	0.15 - 2.4
Imazalil		•	1.5	1.643	0.15 - 2.4
Imidacloprid		•	1.5	1.616	0.15 - 2.4
Kresoxim-methyl		•	1.5	2.048	0.15 - 2.4
Malathion		•	1.5	1.599	0.15 - 2.4
Metalaxyl		•	1.5	1.573	0.15 - 2.4
Methiocarb		•	1.5	1.508	0.15 - 2.4
Methomyl		•	1.5	1.608	0.15 - 2.4
MGK-264		•	1.5	1.713	0.15 - 2.4
Myclobutanil		•	1.5	1.601	0.15 - 2.4
Naled		•	1.5	1.531	0.15 - 2.4

\*\*\* Compounds were tested on GCMS. All others on LCMS. Continued on next page...

# Report: Quality Check

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## Pesticide Analysis

## Quality Control Detail

Pesticide Name	MB	LCS	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Oxamyl		•	1.5	1.662	0.15 - 2.4
Paclobutrazol		•	1.5	1.725	0.15 - 2.4
Parathion-methyl***		•	1.5	1.476	0.75 - 2.4
Permethrin, cis-trans		•	1.5	1.534	0.15 - 2.4
Phosmet		•	1.5	1.946	0.15 - 2.4
Piperonyl butoxide		•	1.5	1.618	0.15 - 2.4
Prallethrin		•	1.5	1.674	0.15 - 2.4
Propiconazole***		•	1.5	1.470	0.15 - 2.4
Propoxur		•	1.5	1.676	0.15 - 2.4
Pyrethrins (3 isomers)		•	1.5	1.818	0.15 - 2.4
Pyridaben		•	1.5	1.618	0.15 - 2.4
Spinosad		•	1.5	1.596	0.15 - 2.4
Spiromesifen		•	1.5	1.527	0.15 - 2.4
Spirotetramat		•	1.5	1.630	0.15 - 2.4
Spiroxamine		•	1.5	1.660	0.15 - 2.4
Tebuconazole		•	1.5	1.663	0.15 - 2.4
Thiacloprid		•	1.5	1.588	0.15 - 2.4
Thiamethoxam		•	1.5	1.657	0.15 - 2.4
Trifloxystrobin		•	1.5	1.628	0.15 - 2.4

\*\*\* Compounds were tested on GCMS. All others on LCMS.

## Definitions

- Limit of Quantitation (LOQ): The minimum level, concentration, or quantity of a target analyte that can be reported with a specific degree of confidence.
- Method Blank (MB): A quality control sample that is free of the analyte being measured.
- Laboratory Control Sample (LCS): A quality control sample with a known amount of the analyte used to demonstrate accuracy.
- Field Duplicate: A second sample collected in the field using the same sampling method as the primary sample.
- Action Limit: Analyte levels set by the state of Oregon (OAR 333-007) indicating that follow-up action is necessary.
- ppm: parts per million, equivalent to 1 µg/g and 1 µg/L or 0.001 mg/g and 0.001 mg/L
- COA: Certificate of Analysis.

## Calculations

- Cannabinoid Potency :  
Wet WT% = (Exported concentration ppm) x (Dilution) x (Extraction Vol./Wet wt mg) x 100  
Total THC% = (%THCA) x 0.877 + (%THC)  
Total CBD% = (%CBDA) x 0.877 + (%CBD)  
Total THC (Dry WT)% = % total THC(wet) / [1-(% moisture/100)]  
Total CBD (Dry WT)% = % total CBD(wet) / [1-(% moisture/100)]
- Percentage Recovery :  
% Rec. = [(Amount measured) / (Known amount)] \* 100

EVIO Labs Portland  
 14775 SW 74th Ave, Tigard, OR 97224  
 503-954-2562 / OLCC 010-10046111391 / www.EVIOLabs.com

**A1290-01**

**FREE Labs**

**010-10087092BDA**

**Sample ID: P200218-01 METRC Batch #:**

**Matrix: Extract/Concentrate**

**Date Sampled: 03/04/20 09:00**

**Date Accepted: 03/04/20**

**Batch ID:**

**Batch Size:**

**Sampling Method/SOP: SOP.T.20.010**

## Residual Solvents

Analyte	LOQ	Action Level	Result	Units
<b>Butanes</b>	250	5000 <sup>3</sup>	< LOQ	ppm
n-Butane	250	5000	< LOQ	ppm
iso-Butane	250	5000	< LOQ	ppm
<b>Hexanes</b>	174	290 <sup>4</sup>	< LOQ	ppm
n-Hexane	174	290	< LOQ	ppm
2-Methylpentane	174	290	< LOQ	ppm
3-Methylpentane	174	290	< LOQ	ppm
2,2-Dimethylbutane	174	290	< LOQ	ppm
2,3-Dimethylbutane	174	290	< LOQ	ppm
<b>Pentanes</b>	1400	5000 <sup>5</sup>	< LOQ	ppm
n-Pentane	1400	5000	< LOQ	ppm
iso-Pentane	1400	5000	< LOQ	ppm
Neopentane	250	5000	< LOQ	ppm
<b>Xylenes</b>	1302	2170	< LOQ	ppm
1,2-Dimethylbenzene	1302	2170	< LOQ	ppm
1,3-Dimethylbenzene	1302	2170	< LOQ	ppm
1,4-Dimethylbenzene	1302	2170	< LOQ	ppm
Xylenes MP	1302	2170	< LOQ	ppm
Ethyl benzene	1302	NA	< LOQ	ppm
2-Propanol (IPA)	1400	5000	< LOQ	ppm
Acetone	1400	5000	< LOQ	ppm
Acetonitrile	246	410	< LOQ	ppm
Benzene	1.2	2	< LOQ	ppm
Methanol	1000	3000	< LOQ	ppm
Propane	250	5000	< LOQ	ppm
Toluene	534	890	< LOQ	ppm
Dichloromethane	360	600	< LOQ	ppm
1,4-Dioxane	228	380	< LOQ	ppm
2-Butanol	1400	5000	< LOQ	ppm
2-Ethoxyethanol	96	160	< LOQ	ppm
Cumene	42	70	< LOQ	ppm
Cyclohexane	2278	3880	< LOQ	ppm
Ethyl acetate	1400	5000	< LOQ	ppm
Ethyl ether	1400	5000	< LOQ	ppm
Ethylene glycol	558	620	< LOQ	ppm
Ethylene oxide	30	50	< LOQ	ppm
Heptane	1400	5000	< LOQ	ppm
Isopropyl acetate	1400	5000	< LOQ	ppm
Tetrahydrofuran	432	720	< LOQ	ppm

*Date/Time Extracted: 03/04/20 15:03*

*Date/Time Analyzed: 03/05/20 12:33*

*Analysis Method/SOP: SOP.T.40.031*

**3** - Total butanes are calculated as sum of n-butanes (CAS# 106-97-8) and iso-butane (CAS# 75-28-5)

**4** - Total hexanes are calculated as sum of n-hexane (CAS# 110-54-3), 2-methylpentane (CAS# 107-83-5), 3-methylpentane (CAS# 96-14-0), 2,2-dimethylbutane (CAS# 75-83-2), 2,3-dimethylbutane (CAS# 79-29-8)

**5** - Total pentanes are calculated as sum of n-pentane (CAS# 109-66-0), iso-pentane (CAS# 78-78-4), and neo-pentane (CAS# 463-82-1)

**6** - Total xylenes are calculated as 1,2-dimethylbenzene (CAS# 95-47-6), 1,3-dimethylbenzene (CAS# 106-42-3), and 1-4-dimethylbenzene (CAS# 106-42-3)

**7** - Ethanol is not regulated under OAR-333-007-0410.

Results above the action level fail Oregon state testing requirements and will be highlighted **RED**. LOQ=Limit of Quantitation; PPM=Parts per million; ND=Not detected; NT=Not tested; AC=Above calibration range. PASS/FAIL status based on OAR 333-007.



Kawai Medeiros  
 Laboratory Manager - 3/5/2020


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## Quality Control

**Batch: P20C014 - SOP.T.40.031 Solvents**

Blank(P20C014-BLK1)			Extracted: 03/04/20 13:15		Analyzed: 03/05/20 12:33		
Analyte	Result	LOQ	Recovery Limits	Analyte	Result	LOQ	Recovery Limits
Butanes	< LOQ	250 (ppm)	< LOQ	n-Butane	< LOQ	250 (ppm)	< LOQ
iso-Butane	< LOQ	250 (ppm)	< LOQ	Hexanes	< LOQ	174 (ppm)	< LOQ
n-Hexane	< LOQ	174 (ppm)	< LOQ	2-Methylpentane	< LOQ	174 (ppm)	< LOQ
3-Methylpentane	< LOQ	174 (ppm)	< LOQ	2,2-Dimethylbutane	< LOQ	174 (ppm)	< LOQ
2,3-Dimethylbutane	< LOQ	174 (ppm)	< LOQ	Pentanes	< LOQ	1400 (ppm)	< LOQ
n-Pentane	< LOQ	1400 (ppm)	< LOQ	iso-Pentane	< LOQ	1400 (ppm)	< LOQ
Neopentane	< LOQ	250 (ppm)	< LOQ	Xylenes	< LOQ	1302 (ppm)	< LOQ
1,2-Dimethylbenzene	< LOQ	1302 (ppm)	< LOQ	1,3-Dimethylbenzene	< LOQ	1302 (ppm)	< LOQ
1,4-Dimethylbenzene	< LOQ	1302 (ppm)	< LOQ	Xylenes MP	< LOQ	1302 (ppm)	< LOQ
Ethyl benzene	< LOQ	1302 (ppm)	< LOQ	2-Propanol (IPA)	< LOQ	1400 (ppm)	< LOQ
Acetone	< LOQ	1400 (ppm)	< LOQ	Acetonitrile	< LOQ	246 (ppm)	< LOQ
Benzene	< LOQ	1.2 (ppm)	< LOQ	Methanol	< LOQ	1000 (ppm)	< LOQ
Propane	< LOQ	250 (ppm)	< LOQ	Toluene	< LOQ	534 (ppm)	< LOQ
Dichloromethane	< LOQ	360 (ppm)	< LOQ	1,4-Dioxane	< LOQ	228 (ppm)	< LOQ
2-Butanol	< LOQ	1400 (ppm)	< LOQ	2-Ethoxyethanol	< LOQ	96 (ppm)	< LOQ
Cumene	< LOQ	42 (ppm)	< LOQ	Cyclohexane	< LOQ	2278 (ppm)	< LOQ
Ethyl acetate	< LOQ	1400 (ppm)	< LOQ	Ethyl ether	< LOQ	1400 (ppm)	< LOQ
Ethylene glycol	< LOQ	558 (ppm)	< LOQ	Ethylene oxide	< LOQ	30 (ppm)	< LOQ
Heptane	< LOQ	1400 (ppm)	< LOQ	Isopropyl acetate	< LOQ	1400 (ppm)	< LOQ
Tetrahydrofuran	< LOQ	432 (ppm)	< LOQ				

LCS(P20C014-BS1)			Extracted: 03/04/20 13:15		Analyzed: 03/05/20 12:33		
Analyte	% Recovery	LOQ	Recovery Limits	Analyte	% Recovery	LOQ	Recovery Limits
Butanes	78.2	(ppm)	0-200	n-Butane	82.4	(ppm)	50-150
iso-Butane	74.1	(ppm)	50-150	Hexanes	94.1	(ppm)	0-200
n-Hexane	95.3	(ppm)	70-130	2-Methylpentane	94.4	(ppm)	70-130
3-Methylpentane	95.5	(ppm)	70-130	2,2-Dimethylbutane	95.2	(ppm)	70-130
2,3-Dimethylbutane	89.1	(ppm)	70-130	Pentanes	94.0	(ppm)	0-200
n-Pentane	86.0	(ppm)	70-130	iso-Pentane	82.5	(ppm)	70-130
Neopentane	83.2	(ppm)	50-150	Xylenes	94.6	(ppm)	0-200
1,2-Dimethylbenzene	93.2	(ppm)	70-130	1,3-Dimethylbenzene	95.0	(ppm)	70-130
1,4-Dimethylbenzene	95.8	(ppm)	70-130	Xylenes MP	94.3	(ppm)	0-200
Ethyl benzene	94.8	(ppm)	70-130	2-Propanol (IPA)	101	(ppm)	70-130
Acetone	99.1	(ppm)	70-130	Acetonitrile	94.3	(ppm)	70-130
Benzene	98.6	(ppm)	70-130	Methanol	121	(ppm)	70-130
Propane	80.5	(ppm)	50-150	Toluene	89.7	(ppm)	70-130
Dichloromethane	102	(ppm)	70-130	1,4-Dioxane	95.0	(ppm)	70-130


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## Quality Control

Batch: P20C014 - SOP.T.40.031 Solvents (Continued)

LCS(P20C014-BS1)			Extracted: 03/04/20 13:15		Analyzed: 03/05/20 12:33		
Analyte	% Recovery	LOQ	Recovery Limits	Analyte	% Recovery	LOQ	Recovery Limits
2-Butanol	97.6	(ppm)	70-130	2-Ethoxyethanol	98.6	(ppm)	70-130
Cumene	92.8	(ppm)	50-150	Cyclohexane	99.3	(ppm)	70-130
Ethyl acetate	97.7	(ppm)	70-130	Ethyl ether	100	(ppm)	70-130
Ethylene glycol	86.1	(ppm)	70-130	Ethylene oxide	95.3	(ppm)	50-150
Heptane	93.1	(ppm)	70-130	Isopropyl acetate	98.6	(ppm)	70-130
Tetrahydrofuran	95.1	(ppm)	70-130				



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