

# 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

*For R&D Purposes Only.*

## Product Description

Client: **GVB Oregon**

Product Name: **CBD Iso GVL-TST284**

Matrix: Hemp Concentrate

Metrc Source ID: n/a

Metrc Package ID: n/a

License Number:

Date Collected: 2022-07-27

Date Received: 2022-07-27

Report Date: 2022-08-02

Report ID: A7490-01

Tests Requested: Cannabinoid Potency Analysis  
Pesticide Analysis  
Residual Solvent Analysis

## Evaluation Summary

Moisture Analysis

Test Not Required

### Cannabinoid Potency Analysis

**Total THC \***

< LOQ

< LOQ

**Total CBD \***

100.00 % (A)

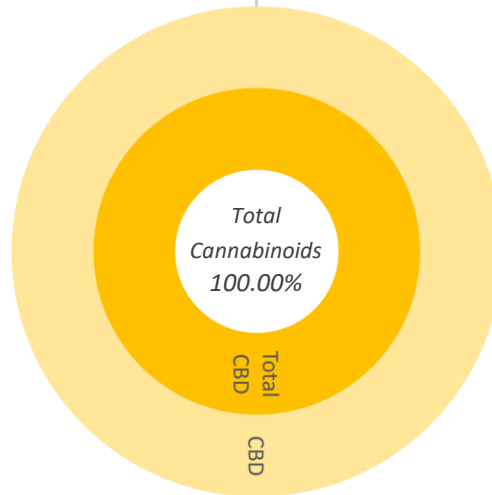
1000.0 mg/g (A)

Abv.

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	100.00 % (A)	1000.0 mg/g
CBGA	< LOQ	< LOQ
CBG	< LOQ	< LOQ
CBDVA	< LOQ	< LOQ
CBDV	< LOQ	< LOQ
CBN	< LOQ	< LOQ
CBL	< LOQ	< LOQ
CBC	< LOQ	< LOQ



Pesticide Analysis

Pesticide Status

Pass

No pesticides were detected above Oregon's action limit as stated in OAR 333-007-0400.

# Report: Case Narrative

*This certificate of analysis is prepared for...*

**GVB Oregon**

**2490 Ewald Ave SE Salem, OR 97302**

This report presents the analytical findings for the sample collected on 2022-07-27 by Joshua Allen and received by PREE Laboratory on 2022-07-27. The sample was assigned a laboratory ID of A7490-01. The results in this report only apply to sample A7490-01.

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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.

All analyses were performed in accordance with PREE Laboratory's NELAP/TNI approved quality control system and all quality control data was within the laboratory's predefined acceptance criteria unless otherwise noted in the case narrative of this report. General comments are also recorded below.

**Notes:**

The Oregon Department of Agriculture requires hemp products to not contain more than 0.35% total THC, per OAR 603-048. Residual solvent analysis was subcontracted. The report from the subcontracting laboratory is attached. R&D sample results may not be used for compliance purposes.



Sardar, Tamzid M. | Laboratory Director  
Corvallis, Oregon



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

# Report: Evaluation Detail

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<b>Moisture Analysis</b>	<b>Evaluation Detail</b>					
	Moisture Analysis	Test Not Requested/Required				
<b>Cannabinoid Potency Analysis</b>	<b>Evaluation Detail</b>					
Product Name: <b>CBD Iso GVL-TST284</b>	Cannabinoid Potency Analysis	Compound	Abrv.	Dry Wt. (%)	Dry Wt. (mg/g)	RL (%)
Analysis Date: 2022-08-01	<b>Total THC *</b>	Tetrahydro-cannabinolic acid	THCA	< LOQ	< LOQ	0.15
Testing Batch ID: POM220801D	< LOQ	Delta9 Tetrahydro-cannabinol	Δ-9-THC	< LOQ	< LOQ	0.15
Testing Method: <i>LSOP #303 Cannabinoid Quantification</i>	< LOQ	Delta8 Tetrahydro-cannabinol	Δ-8-THC	< LOQ	< LOQ	0.15
		Tetrahydrocannabivarin	THCV	< LOQ	< LOQ	0.15
	<b>Total CBD *</b>	Cannabidiolic acid	CBDA	< LOQ	< LOQ	0.15
	<b>100.00 % (A)</b>	Cannabidiol	CBD	100.00 % (A)	1000.0	0.15
	<b>1000.0 mg/g (A)</b>	Cannabigerolic acid	CBGA	< LOQ	< LOQ	0.15
		Cannabigerol	CBG	< LOQ	< LOQ	0.15
		Cannabidivarinic acid	CBDVA	< LOQ	< LOQ	0.15
		Cannabidivarin	CBDV	< LOQ	< LOQ	0.15
		Cannabinol	CBN	< LOQ	< LOQ	0.15
		Cannabicyclol	CBL	< LOQ	< LOQ	0.15
		Cannabichromene	CBC	< LOQ	< LOQ	0.15

*Note: Accreditation for THCV, CBGA, CBG, CBDVA, CBDV, CBL, CBC, CBN is not offered by ORELAP and therefore are not accredited tests.*

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

# Report: Evaluation Detail

## Pesticide Analysis

Product Name: **CBD Iso GVL-TST284**

Analysis Date: 2022-07-28

Testing Batch ID: PEE220728A

Testing Method: LSOP #307 Pesticides by LCMS/MS

## Evaluation Detail

Pesticide Name	Tested Value (ppm)	Pass Criteria (ppm)	LOQ (ppm)	Status Pass/Unsatisfactory
Abamectin	< LOQ	0.50	0.10	Pass
Acephate	< LOQ	0.40	0.02	Pass
Acequinocyl	< LOQ	2.00	0.10	Pass
Acetamiprid	< LOQ	0.20	0.02	Pass
Aldicarb	< LOQ	0.40	0.02	Pass
Azoxystrobin	< LOQ	0.20	0.02	Pass
Bifenazate	< LOQ	0.20	0.02	Pass
Bifenthrin	< LOQ	0.20	0.10	Pass
Boscalid	< LOQ	0.40	0.02	Pass
Carbaryl	< LOQ	0.20	0.02	Pass
Carbofuran	< LOQ	0.20	0.10	Pass
Chlorantraniliprole	< LOQ	0.20	0.02	Pass
Chlorfenapyr	< LOQ	1.00	0.50	Pass
Chlorpyrifos	< LOQ	0.20	0.02	Pass
Clofentezine	< LOQ	0.20	0.10	Pass
Cyfluthrin	< LOQ	1.00	0.50	Pass
Cypermethrin	< LOQ	1.00	0.50	Pass
Daminozide	< LOQ	1.00	0.10	Pass
Diazinon	< LOQ	0.20	0.02	Pass
Dichlorvos	< LOQ	1.00	0.10	Pass
Dimethoate	< LOQ	0.20	0.02	Pass
Ethoprophos	< LOQ	0.20	0.02	Pass
Etofenprox	< LOQ	0.40	0.10	Pass
Etoxazole	< LOQ	0.20	0.02	Pass
Fenoxycarb	< LOQ	0.20	0.02	Pass
Fenpyroximate	< LOQ	0.40	0.10	Pass
Fipronil	< LOQ	0.40	0.02	Pass
Flonicamid	< LOQ	1.00	0.02	Pass
Fludioxonil	< LOQ	0.40	0.10	Pass
Hexythiazox	< LOQ	1.00	0.02	Pass
Imazalil	< LOQ	0.20	0.02	Pass
Imidacloprid	< LOQ	0.40	0.02	Pass
Kresoxim-methyl	< LOQ	0.40	0.10	Pass

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# Report: Evaluation Detail

## Pesticide Analysis

## Evaluation Detail

Pesticide Name	Tested Value (ppm)	Pass Criteria (ppm)	LOQ (ppm)	Status Pass/Unsatisfactory
Malathion	< LOQ	0.20	0.02	Pass
Metalaxyl	< LOQ	0.20	0.02	Pass
Methiocarb	< LOQ	0.20	0.02	Pass
Methomyl	< LOQ	0.40	0.02	Pass
Methyl-Parathion	< LOQ	0.20	0.10	Pass
MGK-264 Total	< LOQ	0.20	0.10	Pass
Myclobutanil	< LOQ	0.20	0.10	Pass
Naled	< LOQ	0.50	0.02	Pass
Oxamyl	< LOQ	1.00	0.02	Pass
Paclobutrazol	< LOQ	0.40	0.02	Pass
Permethrins	< LOQ	0.20	0.10	Pass
Phosmet	< LOQ	0.20	0.02	Pass
Piperonyl butoxide	< LOQ	2.00	0.02	Pass
Prallethrin	< LOQ	0.20	0.10	Pass
Propiconazole	< LOQ	0.40	0.10	Pass
Propoxur	< LOQ	0.20	0.02	Pass
Pyrethrins	< LOQ	1.00	0.50	Pass
Pyridaben	< LOQ	0.20	0.02	Pass
Spinosad	< LOQ	0.20	0.10	Pass
Spiromesifen	< LOQ	0.20	0.10	Pass
Spirotetramat	< LOQ	0.20	0.02	Pass
Spiroxamine	< LOQ	0.40	0.10	Pass
Tebuconazole	< LOQ	0.40	0.02	Pass
Thiacloprid	< LOQ	0.20	0.02	Pass
Thiamethoxam	< LOQ	0.20	0.02	Pass
Trifloxystrobin	< LOQ	0.20	0.02	Pass

# Report: Quality Check

<b>Moisture Analysis</b>	<b>Quality Control Detail</b>						
	Moisture Analysis						
<b>Cannabinoid Potency Analysis</b>	<b>Quality Control Detail</b>						
Analysis Date: 2022-08-01	Cannabinoid Potency Analysis		MB	LCS	Expected Value (%)	Tested Value (%)	Pass Criteria
Testing Batch ID: POM220801D	Tetrahydro-cannabinolic acid	○			< 0.1%	< 0.1%	< 0.1%
	Delta9 Tetrahydro-cannabinol	○			< 0.1%	< 0.1%	< 0.1%
	Delta8 Tetrahydro-cannabinol	○			< 0.1%	< 0.1%	< 0.1%
	Cannabidiolic acid	○			< 0.1%	< 0.1%	< 0.1%
	Cannabidiol	○			< 0.1%	< 0.1%	< 0.1%
	Tetrahydro-cannabinolic acid		●		100.0%	96.9%	± 10%
	Delta9 Tetrahydro-cannabinol		●		100.0%	92.8%	± 10%
	Delta8 Tetrahydro-cannabinol		●		100.0%	100.3%	± 10%
	Cannabidiolic acid		●		100.0%	94.0%	± 10%
	Cannabidiol		●		100.0%	99.4%	± 10%
<p><i>Note: Accreditation for THCV, CBGA,CBG, CBDVA, CBDV, CBL, CBC, CBN is not offered by ORELAP and therefore are not accredited tests.</i></p>							

# Report: Quality Check



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## Pesticide Analysis

Analysis Date: 2022-07-28

Testing Batch ID: PEE220728A

## Quality Control Detail

Pesticide Name	MB	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Abamectin	o	< 0.1	< 0.1	< 0.1
Acephate	o	< 0.02	< 0.02	< 0.02
Acequinocyl	o	< 0.1	< 0.1	< 0.1
Acetamiprid	o	< 0.02	< 0.02	< 0.02
Aldicarb	o	< 0.02	< 0.02	< 0.02
Azoxystrobin	o	< 0.02	< 0.02	< 0.02
Bifenazate	o	< 0.02	< 0.02	< 0.02
Bifenthrin	o	< 0.1	< 0.1	< 0.1
Boscalid	o	< 0.02	< 0.02	< 0.02
Carbaryl	o	< 0.02	< 0.02	< 0.02
Carbofuran	o	< 0.1	< 0.1	< 0.1
Chlorantraniliprole	o	< 0.02	< 0.02	< 0.02
Chlorfenapyr	o	< 0.5	< 0.5	< 0.5
Chlorpyrifos	o	< 0.02	< 0.02	< 0.02
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	< 0.1	< 0.1	< 0.1
Diazinon	o	< 0.02	< 0.02	< 0.02
Dichlorvos	o	< 0.1	< 0.1	< 0.1
Dimethoate	o	< 0.02	< 0.02	< 0.02
Ethoprophos	o	< 0.02	< 0.02	< 0.02
Etofenprox	o	< 0.1	< 0.1	< 0.1
Etoxazole	o	< 0.02	< 0.02	< 0.02
Fenoxycarb	o	< 0.02	< 0.02	< 0.02
Fenpyroximate	o	< 0.1	< 0.1	< 0.1
Fipronil	o	< 0.02	< 0.02	< 0.02
Flonicamid	o	< 0.02	< 0.02	< 0.02
Fludioxonil	o	< 0.1	< 0.1	< 0.1
Hexythiazox	o	< 0.02	< 0.02	< 0.02
Imazalil	o	< 0.02	< 0.02	< 0.02
Imidacloprid	o	< 0.02	< 0.02	< 0.02
Kresoxim-methyl	o	< 0.1	< 0.1	< 0.1

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## Pesticide Analysis

## Quality Control Detail

Pesticide Name	MB	Expected Value (ppm)	Tested Value (ppm)	Pass Criteria (ppm)
Malathion	o	< 0.02	< 0.02	< 0.02
Metalaxyl	o	< 0.02	< 0.02	< 0.02
Methiocarb	o	< 0.02	< 0.02	< 0.02
Methomyl	o	< 0.02	< 0.02	< 0.02
Methyl-Parathion	o	< 0.1	< 0.1	< 0.1
MGK-264 I	o	< 0.1	< 0.1	< 0.1
MGK-264 II	o	< 0.1	< 0.1	< 0.1
Myclobutanil	o	< 0.1	< 0.1	< 0.1
Naled	o	< 0.02	< 0.02	< 0.02
Oxamyl	o	< 0.02	< 0.02	< 0.02
Paclobutrazol	o	< 0.02	< 0.02	< 0.02
Permethrin - trans	o	< 0.1	< 0.1	< 0.1
Permethrin - cis	o	< 0.1	< 0.1	< 0.1
Phosmet	o	< 0.02	< 0.02	< 0.02
Piperonyl butoxide	o	< 0.02	< 0.02	< 0.02
Prallethrin	o	< 0.1	< 0.1	< 0.1
Propiconazole	o	< 0.1	< 0.1	< 0.1
Propoxur	o	< 0.02	< 0.02	< 0.02
Pyrethrin - Cinerin	o	< 0.5	< 0.5	< 0.5
Pyrethrin - Jasmolin	o	< 0.5	< 0.5	< 0.5
Pyrethrin - Pyrethrins	o	< 0.5	< 0.5	< 0.5
Pyridaben	o	< 0.02	< 0.02	< 0.02
Spinosyn A	o	< 0.1	< 0.1	< 0.1
Spinosyn D	o	< 0.1	< 0.1	< 0.1
Spiromesifen	o	< 0.1	< 0.1	< 0.1
Spirotetramat	o	< 0.02	< 0.02	< 0.02
Spiroxamine	o	< 0.1	< 0.1	< 0.1
Tebuconazole	o	< 0.02	< 0.02	< 0.02
Thiacloprid	o	< 0.02	< 0.02	< 0.02
Thiamethoxam	o	< 0.02	< 0.02	< 0.02
Trifloxystrobin	o	< 0.02	< 0.02	< 0.02

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# Report: Quality Check

## Pesticide Analysis

## Quality Control Detail

Pesticide Name	LCS	Expected Recovery (%)	Actual Recovery (%)	Pass Criteria (%)
Abamectin	•	100.00	106.63	50 - 150
Acephate	•	100.00	106.16	60 - 120
Acequinocyl	•	100.00	104.06	40 - 160
Acetamiprid	•	100.00	98.10	60 - 120
Aldicarb	•	100.00	89.47	60 - 120
Azoxystrobin	•	100.00	112.02	60 - 120
Bifenazate	•	100.00	111.71	60 - 120
Bifenthrin	•	100.00	101.06	50 - 150
Boscalid	•	100.00	107.76	60 - 120
Carbaryl	•	100.00	102.38	60 - 120
Carbofuran	•	100.00	104.56	60 - 120
Chlorantraniliprole	•	100.00	99.81	60 - 120
Chlorfenapyr	•	100.00	163.423 (Q)	60 - 120
Chlorpyrifos	•	100.00	94.40	60 - 120
Clofentezine	•	100.00	86.86	60 - 120
Cyfluthrin	•	100.00	81.91	50 - 150
Cypermethrin	•	100.00	75.83	50 - 150
Daminozide	•	100.00	102.27	60 - 120
Diazinon	•	100.00	107.46	60 - 120
Dichlorvos	•	100.00	84.52	60 - 120
Dimethoate	•	100.00	110.76	60 - 120
Ethoprophos	•	100.00	104.68	60 - 120
Etofenprox	•	100.00	113.43	50 - 150
Etoxazole	•	100.00	104.26	60 - 120
Fenoxycarb	•	100.00	94.02	60 - 120
Fenpyroximate	•	100.00	117.97	60 - 120
Fipronil	•	100.00	92.89	60 - 120
Flonicamid	•	100.00	108.05	60 - 120
Fludioxonil	•	100.00	90.05	50 - 150
Hexythiazox	•	100.00	115.99	60 - 120
Imazalil	•	100.00	109.23	60 - 120
Imidacloprid	•	100.00	107.87	60 - 120
Kresoxim-methyl	•	100.00	90.48	60 - 120

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# Report: Quality Check



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## Pesticide Analysis

## Quality Control Detail

Pesticide Name	LCS	Expected Recovery (%)	Actual Recovery (%)	Pass Criteria (%)
Malathion	•	100.00	104.48	60 - 120
Metalaxyl	•	100.00	114.55	60 - 120
Methiocarb	•	100.00	106.30	60 - 120
Methomyl	•	100.00	113.14	60 - 120
Methyl-Parathion	•	100.00	93.94	50 - 150
MGK-264 I	•	100.00	89.28	50 - 150
MGK-264 II	•	100.00	105.86	50 - 150
Myclobutanil	•	100.00	105.69	60 - 120
Naled	•	100.00	84.88	50 - 150
Oxamyl	•	100.00	101.77	60 - 120
Paclobutrazol	•	100.00	100.62	60 - 120
Permethrin - trans	•	100.00	73.50	50 - 150
Permethrin - cis	•	100.00	107.78	50 - 150
Phosmet	•	100.00	105.04	50 - 150
Piperonyl butoxide	•	100.00	103.68	60 - 120
Prallethrin	•	100.00	88.48	60 - 120
Propiconazole	•	100.00	99.79	60 - 120
Propoxur	•	100.00	106.02	60 - 120
Pyrethrin - Cinerin	•	100.00	78.35	60 - 120
Pyrethrin - Jasmolin	•	100.00	105.06	60 - 120
Pyrethrin - Pyrethrins	•	100.00	103.30	60 - 120
Pyridaben	•	100.00	106.41	50 - 150
Spinosyn A	•	100.00	106.35	50 - 150
Spinosyn D	•	100.00	102.07	50 - 150
Spiromesifen	•	100.00	114.01	60 - 120
Spirotetramat	•	100.00	110.96	60 - 120
Spiroxamine	•	100.00	106.29	60 - 120
Tebuconazole	•	100.00	84.92	60 - 120
Thiacloprid	•	100.00	96.62	60 - 120
Thiamethoxam	•	100.00	107.13	60 - 120
Trifloxystrobin	•	100.00	100.12	60 - 120

## 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.
- Report Flag (A) : Compound tested over 100% or 1000 mg/g. The test result is within the method uncertainty and instrument result is not above the upper limit of quantitation. Value will be adjusted down to 100% or 1000 mg/mg in the reporting process.
- Report Flag (B) : Blank contamination - The analyte was detected above one-half the reporting limit in an associated blank.
- Report Flag (E) : Compound tested above the upper limit of quantitation.
- Report Flag (Q) : One or more quality control criteria (for example, LCS recovery, surrogate spike recovery) failed.

## Calculations

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

## Disclaimers

- Disposal : All marijuana and hemp products received by PREE will be disposed of following the OLCC's rules for Marijuana Waste Management, regardless of product type, unless PREE is given specific disposal instructions for a product based on test results from state regulatory agencies.



# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

## A7490-01

Lab ID: 2207293-01

PREE Laboratories

Harvest / Process Lot: R&D

METRC Batch ID: R&D

Date Sampled: 07/29/22

Date Printed: 08/3/22

Report cannot be used for OLCC/OHA compliance.

### Residual Solvents

Analysis Method/SOP: RS

Solvent	Results in ppm	LOQ	Action Level	Notes
Acetone	< LOQ	2500	5000	
Acetonitrile	< LOQ	205.0	400	
Benzene	< LOQ	1.000	2	
2-Butanol	< LOQ	2500	5000	
Cumene	< LOQ	35.00	70	
Cyclohexane	< LOQ	1940	3880	
Dichloromethane	< LOQ	300.0	600	
1,4-Dioxane	< LOQ	190.0	380	
2-Ethoxyethanol	< LOQ	80.00	160	
Ethyl acetate	< LOQ	2500	5000	
Ethylene glycol	< LOQ	310.0	620	
Ethylene oxide	< LOQ	25.00	50	
Ethyl ether	< LOQ	2500	5000	
Heptane	< LOQ	2500	5000	
Isopropyl acetate	< LOQ	2500	5000	
Methanol	< LOQ	1500	3000	
Propane	< LOQ	2500	5000	
2-Propanol (IPA)	< LOQ	2500	5000	
Tetrahydrofuran	< LOQ	360.0	720	
Toluene	< LOQ	445.0	890	
Butanes	< LOQ	2500	5000	
Hexanes	< LOQ	145.0	290	

**Chris Griffey**  
Lab Director

Sample tested in compliance with OAR 333-007 (TNI standards). Test results meet all requirements of NELAP and the Rose City Laboratories quality assurance plan unless otherwise noted. Samplings performed by RCL personnel follow sampling SOP 30. Samples not collected by RCL personnel are analyzed in "as received" condition. These results relate only to the sample included on this report. The report may not be reproduced except in full, without the written permission of Rose City Labs.



# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

## A7490-01

*PREE Laboratories*

Laboratory ID: 2207293-01

Analysis Method/SOP: RS

Solvent	Results in ppm	LOQ	Action Level	Notes
Pentanes	< LOQ	2500	5000	
Xylenes	< LOQ	1085	2170	

Results above the Action Level fail state testing requirements and will be highlighted **Red**.

A handwritten signature in black ink that reads "Chris Griffey".

**Chris Griffey**  
Lab Director



# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

## A7490-01

PREE Laboratories

Laboratory ID: 2207293-01

## Quality Control Solvent Analysis

Batch: B22G178 - ResSolv

### Blank(B22G178-BLK1)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Acetonitrile	< LOQ	205.0	ppm		07/29/22 20:44	07/30/22 00:33	
Benzene	< LOQ	1.000	ppm		07/29/22 20:44	07/30/22 00:33	
2-Butanol	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Cumene	< LOQ	35.00	ppm		07/29/22 20:44	07/30/22 00:33	
Cyclohexane	< LOQ	1940	ppm		07/29/22 20:44	07/30/22 00:33	
Dichloromethane	< LOQ	300.0	ppm		07/29/22 20:44	07/30/22 00:33	
1,4-Dioxane	< LOQ	190.0	ppm		07/29/22 20:44	07/30/22 00:33	
2-Ethoxyethanol	< LOQ	80.00	ppm		07/29/22 20:44	07/30/22 00:33	
Ethyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Ethylene glycol	< LOQ	310.0	ppm		07/29/22 20:44	07/30/22 00:33	
Ethylene oxide	< LOQ	25.00	ppm		07/29/22 20:44	07/30/22 00:33	
Ethyl ether	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Heptane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Isopropyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Methanol	< LOQ	1500	ppm		07/29/22 20:44	07/30/22 00:33	
Propane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
2-Propanol (IPA)	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Tetrahydrofuran	< LOQ	360.0	ppm		07/29/22 20:44	07/30/22 00:33	
Toluene	< LOQ	445.0	ppm		07/29/22 20:44	07/30/22 00:33	
Butanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Hexanes	< LOQ	145.0	ppm		07/29/22 20:44	07/30/22 00:33	
Pentanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 00:33	
Xylenes	< LOQ	1085	ppm		07/29/22 20:44	07/30/22 00:33	

### Blank(B22G178-BLK2)

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Acetonitrile	< LOQ	205.0	ppm		07/29/22 20:44	07/30/22 01:04	
Benzene	< LOQ	1.000	ppm		07/29/22 20:44	07/30/22 01:04	
2-Butanol	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Cumene	< LOQ	35.00	ppm		07/29/22 20:44	07/30/22 01:04	
Cyclohexane	< LOQ	1940	ppm		07/29/22 20:44	07/30/22 01:04	
Dichloromethane	< LOQ	300.0	ppm		07/29/22 20:44	07/30/22 01:04	
1,4-Dioxane	< LOQ	190.0	ppm		07/29/22 20:44	07/30/22 01:04	
2-Ethoxyethanol	< LOQ	80.00	ppm		07/29/22 20:44	07/30/22 01:04	

Chris Griffey  
Lab Director



# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

**A7490-01**

PREE Laboratories

Laboratory ID: 2207293-01

## Quality Control Solvent Analysis (Continued)

Batch: B22G178 - ResSolv (Continued)

**Blank(B22G178-BLK2)**

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Ethyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Ethylene glycol	< LOQ	310.0	ppm		07/29/22 20:44	07/30/22 01:04	
Ethylene oxide	< LOQ	25.00	ppm		07/29/22 20:44	07/30/22 01:04	
Ethyl ether	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Heptane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Isopropyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Methanol	< LOQ	1500	ppm		07/29/22 20:44	07/30/22 01:04	
Propane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
2-Propanol (IPA)	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Tetrahydrofuran	< LOQ	360.0	ppm		07/29/22 20:44	07/30/22 01:04	
Toluene	< LOQ	445.0	ppm		07/29/22 20:44	07/30/22 01:04	
Butanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Hexanes	< LOQ	145.0	ppm		07/29/22 20:44	07/30/22 01:04	
Pentanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:04	
Xylenes	< LOQ	1085	ppm		07/29/22 20:44	07/30/22 01:04	

**Blank(B22G178-BLK3)**

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Acetonitrile	< LOQ	205.0	ppm		07/29/22 20:44	07/30/22 01:36	
Benzene	< LOQ	1.000	ppm		07/29/22 20:44	07/30/22 01:36	
2-Butanol	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Cumene	< LOQ	35.00	ppm		07/29/22 20:44	07/30/22 01:36	
Cyclohexane	< LOQ	1940	ppm		07/29/22 20:44	07/30/22 01:36	
Dichloromethane	< LOQ	300.0	ppm		07/29/22 20:44	07/30/22 01:36	
1,4-Dioxane	< LOQ	190.0	ppm		07/29/22 20:44	07/30/22 01:36	
2-Ethoxyethanol	< LOQ	80.00	ppm		07/29/22 20:44	07/30/22 01:36	
Ethyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Ethylene glycol	< LOQ	310.0	ppm		07/29/22 20:44	07/30/22 01:36	
Ethylene oxide	< LOQ	25.00	ppm		07/29/22 20:44	07/30/22 01:36	
Ethyl ether	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Heptane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Isopropyl acetate	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Methanol	< LOQ	1500	ppm		07/29/22 20:44	07/30/22 01:36	
Propane	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
2-Propanol (IPA)	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	

Chris Griffey  
Lab Director



# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

**A7490-01**

PREE Laboratories

Laboratory ID: 2207293-01

## Quality Control Solvent Analysis (Continued)

Batch: B22G178 - ResSolv (Continued)

**Blank(B22G178-BLK3)**

Analyte	Result	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Tetrahydrofuran	< LOQ	360.0	ppm		07/29/22 20:44	07/30/22 01:36	
Toluene	< LOQ	445.0	ppm		07/29/22 20:44	07/30/22 01:36	
Butanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Hexanes	< LOQ	145.0	ppm		07/29/22 20:44	07/30/22 01:36	
Pentanes	< LOQ	2500	ppm		07/29/22 20:44	07/30/22 01:36	
Xylenes	< LOQ	1085	ppm		07/29/22 20:44	07/30/22 01:36	

**LCS(B22G178-BS1)**

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
Acetone	111	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Acetonitrile	110	205.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Benzene	110	1.000	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
n-Butane	122	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3
2-Butanol	107	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Cumene	119	35.00	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Cyclohexane	108	1940	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Dichloromethane	108	300.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
2,2-Dimethylbutane	112	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
2,3-Dimethylbutane 2-Methy	106	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
1,4-Dioxane	109	190.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
2-Ethoxyethanol	117	80.00	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Ethyl acetate	106	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Ethyl benzene	116	1085	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Ethylene glycol	154	310.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3
Ethylene oxide	105	25.00	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Ethyl ether	102	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Heptane	105	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
n-Hexane	108	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
iso-Butane	118	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Isopropyl acetate	107	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
iso-Pentane	117	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Methanol	112	1500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
3-Methylpentane	109	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
neo-Pentane	126	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3
n-Pentane	122	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3
Propane	129	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3

**Chris Griffey**  
Lab Director





# Analytical Test Report

Science First. ORELAP ID: 4096 OLCC#: 010-1002112892C

7200 Johnson Creek Blvd., Portland, OR 97206 (503) 307-0096

## A7490-01

PREE Laboratories

Laboratory ID: 2207293-01

## Quality Control Solvent Analysis (Continued)

Batch: B22G178 - ResSolv (Continued)

### LCS(B22G178-BS1)

Analyte	% Recovery	LOQ	Units	%Recovery Limits	Extracted	Analyzed	Notes
2-Propanol (IPA)	105	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Tetrahydrofuran	103	360.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Toluene	110	445.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
m,p Xylene	117	1085	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
o-Xylene	117	1085	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Butanes	120	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Hexanes	108	145.0	ppm	60-120	07/29/22 20:44	07/30/22 00:02	
Pentanes	122	2500	ppm	60-120	07/29/22 20:44	07/30/22 00:02	Q3
Xylenes	117	1085	ppm	60-120	07/29/22 20:44	07/30/22 00:02	

### Notes and Definitions

- B Analyte detected in method blank, but not associated samples.
  - B2 Analyte detected in sample and associate method blank.
  - C Interference due to co-elution.
  - D Initial result exceeded calibration range, reported data are based on analysis of a dilution.
  - H Non-homogenous sample matrix affecting RPD and/or QC.
  - I Manual Integration was performed.
  - L Duplicate sample relative percent difference (RPD) exceeds QC limits.
  - M Anomalous results due to matrix interference
  - P Peaks manually split.
  - Q1 QC out of limits but still ok
  - Q2 Quality Control outside QC limits. Data considered estimate.
  - Q3 CCV was above the acceptance criteria. Non-detect samples are considered acceptable.
  - Q4 CCV was below the acceptance criteria, however the sample still exceeds the regulatory limit.
  - R Marginal Exceedence.
  - U Reported result is an estimate. The analyte was detected above the calibration range.
  - X Problems with initial analysis, reported data are from reinjection of prepared sample.
- <LOQ - Results below the Limit of Quantitation - Compound not detected

Chris Griffey  
Lab Director