



Donny Juarez
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
USA

WP-312  **Final Report**

WatR™ Pollution Proficiency Testing

WatR™ Pollution Study

Open Date: 01/19/21

Close Date: 03/05/21

Report Issued Date: 03/09/21



A Waters Company

March 9, 2021

Donny Juarez
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601

Enclosed is your final report for ERA's WP-312 WatR™ Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-312 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the most current TNI Fields of Proficiency Testing (FoPT) table the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the table and the evaluation criteria contained in the 2016 TNI Standard, Volume 3. If the analyte is not included in the TNI FoPT table, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 730002268).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (Quik™ Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have many years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be useful in helping you work through your technical issues.

Thank you for your participation in ERA's WP-312 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink, appearing to read "Matthew Seebeck", written in a cursive style.

Matthew Seebeck
Quality Officer

attachments



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type
ANAB	Zaneta Popovska / 414-501-5341	All Analytes
Florida	Vanessa Soto / 904-791-1599	All Analytes
Montana	Russell Leu / 406-444-5259	All Analytes
Nebraska	Laurie Wieting / 402-471-8407	All Analytes
Nevada	Paige Menicucci / 775-687-9311	All Analytes
New Mexico (WP)	Barbara Cooney / 505-827-0212	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes



WP-312 Definitions & Study Discussion

Study Dates: 01/19/21 - 03/05/21

Report Issued: 03/09/21

WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current TNI Fields of Proficiency Testing (FoPT) table. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2016 TNI Standard. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the criteria contained in the most current TNI FoPT table or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

- Acceptable = Reported Value falls within the Acceptance Limits.
- Not Acceptable = Reported Value falls outside the Acceptance Limits.
- No Evaluation = Reported Value cannot be evaluated.
- Not Reported = No Value reported.

The Method Description is the method the laboratory reported to ERA.

WP Study Discussion

ERA's WP-312 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2016 TNI Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) table.

ERA's WP-312 WatR™Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the 2016 TNI Standard and the criteria contained in the most current TNI FoPT table.

All activities associated with this proficiency testing study were performed by Waters/ERA with the exception of those noted below. The following physical samples/products were manufactured for Waters/ERA by a subcontractor:

Microbiology products with the following catalog numbers:
880, 935, 079, 077, 080, 595, 595A, 576, 576A

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-312 WatR™Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR™Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





A Waters Company

WP-312 Laboratory Exception Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
WP Simple Nutrients (cat# 584, lot# P312-505)							
1515	Ammonia as N	mg/L	18	14.4	11.6 - 17.1	Not Acceptable	EPA 350.1 2 1993
WP Hexavalent Chromium (cat# 898, lot# P312-984)							
1045	Hexavalent Chromium	µg/L	203	249	206 - 290	Not Acceptable	SM3500Cr B 22nd ED 2011



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.





Final Report Results For Laboratory Energy Laboratories

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : WP-312





Final Evaluation Report

Study: **WP-312**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Inorganic Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Minerals (cat# 581, lot# P312-506)

1505	Alkalinity as CaCO3	mg/L	95.4	95.5	81.2 - 110	Acceptable	SM2320B 22nd ED 2011	1/21/2021	-0.0459	95.6	3.34	dmb
1575	Chloride	mg/L	80.5	77.8	68.0 - 87.8	Acceptable	EPA 300.0 2.1 1993	1/22/2021	0.559	78.9	2.94	dmb
1610	Conductivity at 25°C	µmhos/cm	501	498	448 - 548	Acceptable	SM2510B 22nd ED 2011	1/22/2021	0.308	497	14.1	kjp
1730	Fluoride	mg/L	3.5	3.39	2.74 - 3.90	Acceptable	EPA 300.0 2.1 1993	1/22/2021	0.332	3.43	0.208	dmb
1125	Potassium	mg/L	22.2	22.0	17.6 - 26.4	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.108	22.3	1.22	meh
1155	Sodium	mg/L	93.7	92.4	73.9 - 111	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.0246	93.8	4.67	meh
2000	Sulfate	mg/L	18.6	18.4	14.4 - 21.6	Acceptable	EPA 300.0 2.1 1993	1/22/2021	0.135	18.5	1.05	dmb
1955	Total Dissolved Solids at 180°C	mg/L		375	330 - 420	Not Reported				376	19.6	
1950	Total Solids at 105°C	mg/L		398	353 - 443	Not Reported				391	22.3	

WP Minerals (cat# 581, lot# P312-506)

1505	Alkalinity as CaCO3	mg/L		95.5	81.2 - 110	Not Reported				95.6	3.34	
1575	Chloride	mg/L		77.8	68.0 - 87.8	Not Reported				78.9	2.94	
1610	Conductivity at 25°C	µmhos/cm		498	448 - 548	Not Reported				497	14.1	
1730	Fluoride	mg/L	3.55	3.39	2.74 - 3.90	Acceptable	SM4500F- C 22nd ED 2011	1/26/2021	0.573	3.43	0.208	dmb
1125	Potassium	mg/L	23.3	22.0	17.6 - 26.4	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.795	22.3	1.22	meh
1155	Sodium	mg/L	98.9	92.4	73.9 - 111	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.09	93.8	4.67	meh
2000	Sulfate	mg/L		18.4	14.4 - 21.6	Not Reported				18.5	1.05	
1955	Total Dissolved Solids at 180°C	mg/L		375	330 - 420	Not Reported				376	19.6	
1950	Total Solids at 105°C	mg/L		398	353 - 443	Not Reported				391	22.3	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study #: WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Minerals (cat# 581, lot# P312-506)

1505	Alkalinity as CaCO3	mg/L		95.5	81.2 - 110	Not Reported				95.6	3.34	
1575	Chloride	mg/L		77.8	68.0 - 87.8	Not Reported				78.9	2.94	
1610	Conductivity at 25°C	µmhos/cm		498	448 - 548	Not Reported				497	14.1	
1730	Fluoride	mg/L		3.39	2.74 - 3.90	Not Reported				3.43	0.208	
1125	Potassium	mg/L	22.1	22.0	17.6 - 26.4	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.190	22.3	1.22	jcg
1155	Sodium	mg/L	93	92.4	73.9 - 111	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.174	93.8	4.67	jcg
2000	Sulfate	mg/L		18.4	14.4 - 21.6	Not Reported				18.5	1.05	
1955	Total Dissolved Solids at 180°C	mg/L		375	330 - 420	Not Reported				376	19.6	
1950	Total Solids at 105°C	mg/L		398	353 - 443	Not Reported				391	22.3	

WP Minerals (cat# 581, lot# P312-506)

1505	Alkalinity as CaCO3	mg/L		95.5	81.2 - 110	Not Reported				95.6	3.34	
1575	Chloride	mg/L		77.8	68.0 - 87.8	Not Reported				78.9	2.94	
1610	Conductivity at 25°C	µmhos/cm		498	448 - 548	Not Reported				497	14.1	
1730	Fluoride	mg/L		3.39	2.74 - 3.90	Not Reported				3.43	0.208	
1125	Potassium	mg/L	22.6	22.0	17.6 - 26.4	Acceptable	EPA 6020A 1 2007	2/1/2021	0.221	22.3	1.22	jcg
1155	Sodium	mg/L	98.2	92.4	73.9 - 111	Acceptable	EPA 6020A 1 2007	2/1/2021	0.938	93.8	4.67	jcg
2000	Sulfate	mg/L		18.4	14.4 - 21.6	Not Reported				18.5	1.05	
1955	Total Dissolved Solids at 180°C	mg/L		375	330 - 420	Not Reported				376	19.6	
1950	Total Solids at 105°C	mg/L		398	353 - 443	Not Reported				391	22.3	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study #: WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Hardness (cat# 580, lot# P312-507)

1960	Total Suspended Solids	mg/L		88.8	73.0 - 98.5	Not Reported				86.9	4.43	
1035	Calcium	mg/L	31.3	29.5	25.1 - 33.9	Acceptable	EPA 6010B 2 1996	1/26/2021	0.755	30.2	1.46	meh
1085	Magnesium	mg/L	37.7	35.9	30.5 - 41.3	Acceptable	EPA 6010B 2 1996	1/26/2021	0.683	36.6	1.63	meh
1550	Calcium Hardness as CaCO3	mg/L	78.3	73.5	62.5 - 84.5	Acceptable	SM2340B 22nd ED 2011	1/29/2021	0.723	75.8	3.49	tif
1755	Total Hardness as CaCO3	mg/L	236	221	188 - 254	Acceptable	SM2340B 22nd ED 2011	1/29/2021	1.18	225	9.61	tif

WP Hardness (cat# 580, lot# P312-507)

1960	Total Suspended Solids	mg/L		88.8	73.0 - 98.5	Not Reported				86.9	4.43	
1035	Calcium	mg/L	31.3	29.5	25.1 - 33.9	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.755	30.2	1.46	meh
1085	Magnesium	mg/L	38.2	35.9	30.5 - 41.3	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.989	36.6	1.63	meh
1550	Calcium Hardness as CaCO3	mg/L		73.5	62.5 - 84.5	Not Reported				75.8	3.49	
1755	Total Hardness as CaCO3	mg/L		221	188 - 254	Not Reported				225	9.61	

WP Hardness (cat# 580, lot# P312-507)

1960	Total Suspended Solids	mg/L		88.8	73.0 - 98.5	Not Reported				86.9	4.43	
1035	Calcium	mg/L	29.1	29.5	25.1 - 33.9	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.755	30.2	1.46	jcg
1085	Magnesium	mg/L	36.4	35.9	30.5 - 41.3	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.112	36.6	1.63	jcg
1550	Calcium Hardness as CaCO3	mg/L		73.5	62.5 - 84.5	Not Reported				75.8	3.49	
1755	Total Hardness as CaCO3	mg/L		221	188 - 254	Not Reported				225	9.61	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Hardness (cat# 580, lot# P312-507)

1960	Total Suspended Solids	mg/L		88.8	73.0 - 98.5	Not Reported				86.9	4.43	
1035	Calcium	mg/L	31.4	29.5	25.1 - 33.9	Acceptable	EPA 6020A 1 2007	2/1/2021	0.824	30.2	1.46	jcg
1085	Magnesium	mg/L	38.7	35.9	30.5 - 41.3	Acceptable	EPA 6020A 1 2007	2/1/2021	1.30	36.6	1.63	jcg
1550	Calcium Hardness as CaCO ₃	mg/L		73.5	62.5 - 84.5	Not Reported				75.8	3.49	
1755	Total Hardness as CaCO ₃	mg/L		221	188 - 254	Not Reported				225	9.61	

WP pH (cat# 577, lot# P312-977)

1900	pH	S.U.	6.85	6.76	6.56 - 6.96	Acceptable	SM4500H+ B 22nd ED 2011	1/22/2021	0.621	6.82	0.0477	kjp
------	----	------	------	------	-------------	------------	-------------------------	-----------	-------	------	--------	-----

WP Solids (cat# 241, lot# P312-499)

1960	Total Suspended Solids	mg/L	49	51.9	40.4 - 59.3	Acceptable	SM2540D 22nd ED 2011	1/25/2021	-0.287	49.9	3.19	kjp
1955	Total Dissolved Solids at 180°C	mg/L	427	411	366 - 456	Acceptable	SM2540C 21st ED 1997	1/26/2021	0.456	421	13.9	kjp
1950	Total Solids at 105°C	mg/L		496	446 - 546	Not Reported				477	24.9	

WP Simple Nutrients (cat# 584, lot# P312-505)

1515	Ammonia as N	mg/L	18	14.4	11.6 - 17.1	Not Acceptable	EPA 350.1 2 1993	1/26/2021	3.89	14.4	0.928	dmb
1820	Nitrate + Nitrite as N	mg/L	25.5	22.9	19.2 - 26.4	Acceptable	EPA 300.0 2.1 1993	1/25/2021	2.26	22.9	1.14	dmb
1810	Nitrate as N	mg/L	23.2	22.9	19.2 - 26.5	Acceptable	EPA 353.2 (calc)	1/25/2021	0.306	22.9	1.10	jlw
1870	ortho-Phosphate as P	mg/L	2.82	2.69	2.29 - 3.09	Acceptable	EPA 365.1 2 1993	2/2/2021	1.01	2.69	0.133	dmb

WP Simple Nutrients (cat# 584, lot# P312-505)

1515	Ammonia as N	mg/L		14.4	11.6 - 17.1	Not Reported				14.4	0.928	
1820	Nitrate + Nitrite as N	mg/L	23.2	22.9	19.2 - 26.4	Acceptable	EPA 353.2 2 1993	1/22/2021	0.240	22.9	1.14	dmb
1810	Nitrate as N	mg/L		22.9	19.2 - 26.5	Not Reported				22.9	1.10	
1870	ortho-Phosphate as P	mg/L		2.69	2.29 - 3.09	Not Reported				2.69	0.133	

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Complex Nutrients (cat# 579, lot# P312-525)

1795	Total Kjeldahl Nitrogen	mg/L		13.4	9.92 - 16.5	Not Reported				13.1	1.03	
1910	Total phosphorus as P	mg/L	2.36	2.43	1.98 - 2.87	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.126	2.38	0.157	meh

WP Complex Nutrients (cat# 579, lot# P312-525)

1795	Total Kjeldahl Nitrogen	mg/L		13.4	9.92 - 16.5	Not Reported				13.1	1.03	
1910	Total phosphorus as P	mg/L	2.41	2.43	1.98 - 2.87	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.193	2.38	0.157	meh

WP Complex Nutrients (cat# 579, lot# P312-525)

1795	Total Kjeldahl Nitrogen	mg/L		13.4	9.92 - 16.5	Not Reported				13.1	1.03	
1910	Total phosphorus as P	mg/L	2.21	2.43	1.98 - 2.87	Acceptable	EPA 365.1 2 1993	1/25/2021	-1.08	2.38	0.157	dmb

WP Nitrite (cat# 888, lot# P312-770)

1840	Nitrite as N	mg/L	1.51	1.44	1.20 - 1.68	Acceptable	SM4500NO2- B 22nd ED 2011	1/22/2021	0.728	1.45	0.0841	dmb
------	--------------	------	------	------	-------------	------------	---------------------------	-----------	-------	------	--------	-----

WP Demand (cat# 578, lot# P312-516)

1530	BOD	mg/L	37.9	41.1	21.1 - 61.1	Acceptable	SM5210B 21st ED 2001	1/27/2021	-0.410	40.8	7.14	kjp
1555	CBOD	mg/L	33.3	37.2	16.0 - 58.4	Acceptable	SM5210B 21st ED 2001	1/27/2021	-0.749	38.7	7.16	kjp
1565	COD	mg/L		66.2	47.2 - 82.5	Not Reported				65.0	6.50	
2040	TOC	mg/L	28	26.1	21.3 - 30.8	Acceptable	SM5310C 22nd ED 2011	1/27/2021	1.03	26.3	1.69	dmb

WP Demand (cat# 578, lot# P312-516)

1530	BOD	mg/L		41.1	21.1 - 61.1	Not Reported				40.8	7.14	
1555	CBOD	mg/L		37.2	16.0 - 58.4	Not Reported				38.7	7.16	
1565	COD	mg/L		66.2	47.2 - 82.5	Not Reported				65.0	6.50	
2040	TOC	mg/L	28.1	26.1	21.3 - 30.8	Acceptable	EPA 9060A 2004	1/28/2021	1.09	26.3	1.69	dmb

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Oil & Grease (cat# 582, lot# P312-518)

1803	n-Hexane Extractable Material(O&G)(Grav)	mg/L	100	106	75.7 - 123	Acceptable	EPA 1664A 1999	1/26/2021	0.101	99.2	7.93	
1803	n-Hexane Extractable Material(O&G)(IR)	mg/L		131	95.1 - 150	Not Reported				89.1	43.5	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L		3730	3110 - 4230	Not Reported				3790	196	
1005	Antimony	µg/L	94.3	96.1	61.7 - 126	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.110	93.6	5.91	jcg
1010	Arsenic	µg/L	766	783	663 - 892	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.446	751	33.2	jcg
1015	Barium	µg/L	1810	1950	1660 - 2240	Acceptable	EPA 200.8 5.4 1994	2/2/2021	-1.69	1960	86.6	jcg
1020	Beryllium	µg/L	378	419	356 - 482	Acceptable	EPA 200.8 5.4 1994	2/12/2021	-1.88	414	19.3	jcg
1025	Boron	µg/L		893	759 - 1030	Not Reported				887	50.8	
1030	Cadmium	µg/L	754	740	629 - 851	Acceptable	EPA 200.8 5.4 1994	2/1/2021	1.09	724	27.5	jcg
1040	Chromium	µg/L	184	183	156 - 210	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.171	185	7.46	jcg
1050	Cobalt	µg/L	252	228	194 - 262	Acceptable	EPA 200.8 5.4 1994	2/2/2021	1.75	234	10.3	jcg
1055	Copper	µg/L	926	864	734 - 994	Acceptable	EPA 200.8 5.4 1994	2/2/2021	1.70	862	37.3	jcg
1070	Iron	µg/L	2682	2700	2300 - 3100	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.499	2740	120	jcg
1075	Lead	µg/L	370	384	326 - 442	Acceptable	EPA 200.8 5.4 1994	2/2/2021	-0.948	388	18.6	jcg
1090	Manganese	µg/L	1104	1070	910 - 1230	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.629	1080	46.0	jcg
1100	Molybdenum	µg/L	209	219	186 - 250	Acceptable	EPA 200.8 5.4 1994	2/2/2021	-0.819	217	9.34	jcg
1105	Nickel	µg/L	450	429	372 - 490	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.496	439	21.4	jcg
1140	Selenium	µg/L	271	266	226 - 306	Acceptable	EPA 200.8 5.4 1994	2/2/2021	0.484	264	15.3	jcg
1150	Silver	µg/L	870	835	710 - 960	Acceptable	EPA 200.8 5.4 1994	2/12/2021	0.740	839	41.9	jcg
1160	Strontium	µg/L	362	356	303 - 409	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.183	359	14.8	jcg
1165	Thallium	µg/L	213	220	173 - 262	Acceptable	EPA 200.8 5.4 1994	2/1/2021	-0.485	219	12.6	jcg
1185	Vanadium	µg/L	510	509	433 - 585	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.173	506	21.9	jcg

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L	1720	1730	1470 - 1990	Acceptable	EPA 200.8 5.4 1994	2/12/2021	0.0594	1720	72.3	jcg
------	------	------	------	------	-------------	------------	--------------------	-----------	--------	------	------	-----



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L	3589	3730	3110 - 4230	Acceptable	EPA 6020A 1 2007	2/1/2021	-1.02	3790	196	jcg
1005	Antimony	µg/L	93.2	96.1	61.7 - 126	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.0758	93.6	5.91	jcg
1010	Arsenic	µg/L	727	783	663 - 892	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.728	751	33.2	jcg
1015	Barium	µg/L	1979	1950	1660 - 2240	Acceptable	EPA 6020A 1 2007	2/1/2021	0.266	1960	86.6	jcg
1020	Beryllium	µg/L	378	419	356 - 482	Acceptable	EPA 6020A 1 2007	2/1/2021	-1.88	414	19.3	jcg
1025	Boron	µg/L	962	893	759 - 1030	Acceptable	EPA 6020A 1 2007	2/2/2021	1.47	887	50.8	jcg
1030	Cadmium	µg/L	708	740	629 - 851	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.588	724	27.5	jcg
1040	Chromium	µg/L	194	183	156 - 210	Acceptable	EPA 6020A 1 2007	2/1/2021	1.17	185	7.46	jcg
1050	Cobalt	µg/L	223	228	194 - 262	Acceptable	EPA 6020A 1 2007	2/1/2021	-1.08	234	10.3	jcg
1055	Copper	µg/L	888	864	734 - 994	Acceptable	EPA 6020A 1 2007	2/2/2021	0.685	862	37.3	jcg
1070	Iron	µg/L	2805	2700	2300 - 3100	Acceptable	EPA 6020A 1 2007	2/1/2021	0.530	2740	120	jcg
1075	Lead	µg/L	384	384	326 - 442	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.195	388	18.6	jcg
1090	Manganese	µg/L	1102	1070	910 - 1230	Acceptable	EPA 6020A 1 2007	2/1/2021	0.586	1080	46.0	jcg
1100	Molybdenum	µg/L	210	219	186 - 250	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.712	217	9.34	jcg
1105	Nickel	µg/L	468	429	372 - 490	Acceptable	EPA 6020A 1 2007	2/1/2021	1.34	439	21.4	jcg
1140	Selenium	µg/L	251	266	226 - 306	Acceptable	EPA 6020A 1 2007	2/2/2021	-0.820	264	15.3	jcg
1150	Silver	µg/L		835	710 - 960	Not Reported				839	41.9	
1160	Strontium	µg/L	353	356	303 - 409	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.425	359	14.8	jcg
1165	Thallium	µg/L	223	220	173 - 262	Acceptable	EPA 6020A 1 2007	2/1/2021	0.307	219	12.6	jcg
1185	Vanadium	µg/L	524	509	433 - 585	Acceptable	EPA 6020A 1 2007	2/1/2021	0.812	506	21.9	jcg



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study #: WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L	1716	1730	1470 - 1990	Acceptable	EPA 6020A 1 2007	2/2/2021	0.00411	1720	72.3	jcg
------	------	------	------	------	-------------	------------	------------------	----------	---------	------	------	-----



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L	3998	3730	3110 - 4230	Acceptable	EPA 6010B 2 1996	2/26/2021	1.07	3790	196	meh
1005	Antimony	µg/L	107	96.1	61.7 - 126	Acceptable	EPA 6010B 2 1996	2/26/2021	2.26	93.6	5.91	meh
1010	Arsenic	µg/L	792	783	663 - 892	Acceptable	EPA 6010B 2 1996	1/26/2021	1.23	751	33.2	meh
1015	Barium	µg/L	2015	1950	1660 - 2240	Acceptable	EPA 6010B 2 1996	1/26/2021	0.682	1960	86.6	meh
1020	Beryllium	µg/L	428	419	356 - 482	Acceptable	EPA 6010B 2 1996	1/26/2021	0.717	414	19.3	meh
1025	Boron	µg/L	895	893	759 - 1030	Acceptable	EPA 6010B 2 1996	1/26/2021	0.156	887	50.8	meh
1030	Cadmium	µg/L	728	740	629 - 851	Acceptable	EPA 6010B 2 1996	1/26/2021	0.140	724	27.5	meh
1040	Chromium	µg/L	190	183	156 - 210	Acceptable	EPA 6010B 2 1996	1/26/2021	0.634	185	7.46	meh
1050	Cobalt	µg/L	237	228	194 - 262	Acceptable	EPA 6010B 2 1996	1/26/2021	0.287	234	10.3	meh
1055	Copper	µg/L	874	864	734 - 994	Acceptable	EPA 6010B 2 1996	1/26/2021	0.310	862	37.3	meh
1070	Iron	µg/L	2867	2700	2300 - 3100	Acceptable	EPA 6010B 2 1996	1/26/2021	1.05	2740	120	meh
1075	Lead	µg/L	399	384	326 - 442	Acceptable	EPA 6010B 2 1996	1/26/2021	0.613	388	18.6	meh
1090	Manganese	µg/L	1084	1070	910 - 1230	Acceptable	EPA 6010B 2 1996	1/26/2021	0.194	1080	46.0	meh
1100	Molybdenum	µg/L	222	219	186 - 250	Acceptable	EPA 6010B 2 1996	1/26/2021	0.572	217	9.34	meh
1105	Nickel	µg/L	438	429	372 - 490	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.0654	439	21.4	meh
1140	Selenium	µg/L	278	266	226 - 306	Acceptable	EPA 6010B 2 1996	1/26/2021	0.940	264	15.3	meh
1150	Silver	µg/L		835	710 - 960	Not Reported				839	41.9	
1160	Strontium	µg/L	374	356	303 - 409	Acceptable	EPA 6010B 2 1996	1/26/2021	0.993	359	14.8	meh
1165	Thallium	µg/L		220	173 - 262	Not Reported				219	12.6	
1185	Vanadium	µg/L	526	509	433 - 585	Acceptable	EPA 6010B 2 1996	1/26/2021	0.904	506	21.9	meh



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study #: WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L	1708	1730	1470 - 1990	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.107	1720	72.3	meh
------	------	------	------	------	-------------	------------	------------------	-----------	--------	------	------	-----



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L	3857	3730	3110 - 4230	Acceptable	EPA 200.7 4.4 1994	2/26/2021	0.348	3790	196	meh
1005	Antimony	µg/L	92.9	96.1	61.7 - 126	Acceptable	EPA 200.7 4.4 1994	1/26/2021	-0.127	93.6	5.91	meh
1010	Arsenic	µg/L	808	783	663 - 892	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.71	751	33.2	meh
1015	Barium	µg/L	2104	1950	1660 - 2240	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.71	1960	86.6	meh
1020	Beryllium	µg/L	443	419	356 - 482	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.50	414	19.3	meh
1025	Boron	µg/L	932	893	759 - 1030	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.885	887	50.8	meh
1030	Cadmium	µg/L	755	740	629 - 851	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.12	724	27.5	meh
1040	Chromium	µg/L	196	183	156 - 210	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.44	185	7.46	meh
1050	Cobalt	µg/L	241	228	194 - 262	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.676	234	10.3	meh
1055	Copper	µg/L	906	864	734 - 994	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.17	862	37.3	meh
1070	Iron	µg/L	2855	2700	2300 - 3100	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.948	2740	120	meh
1075	Lead	µg/L	387	384	326 - 442	Acceptable	EPA 200.7 4.4 1994	1/26/2021	-0.0332	388	18.6	meh
1090	Manganese	µg/L	1108	1070	910 - 1230	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.716	1080	46.0	meh
1100	Molybdenum	µg/L	225	219	186 - 250	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.893	217	9.34	meh
1105	Nickel	µg/L	453	429	372 - 490	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.636	439	21.4	meh
1140	Selenium	µg/L	284	266	226 - 306	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.33	264	15.3	meh
1150	Silver	µg/L		835	710 - 960	Not Reported				839	41.9	
1160	Strontium	µg/L	387	356	303 - 409	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.87	359	14.8	meh
1165	Thallium	µg/L		220	173 - 262	Not Reported				219	12.6	
1185	Vanadium	µg/L	535	509	433 - 585	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.32	506	21.9	meh

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L	1749	1730	1470 - 1990	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.461	1720	72.3	meh
------	------	------	------	------	-------------	------------	--------------------	-----------	-------	------	------	-----



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L	3764	3730	3110 - 4230	Acceptable	EPA 200.8 5.4 1994	2/16/2021	-0.127	3790	196	srm
1005	Antimony	µg/L		96.1	61.7 - 126	Not Reported				93.6	5.91	
1010	Arsenic	µg/L		783	663 - 892	Not Reported				751	33.2	
1015	Barium	µg/L		1950	1660 - 2240	Not Reported				1960	86.6	
1020	Beryllium	µg/L		419	356 - 482	Not Reported				414	19.3	
1025	Boron	µg/L	969	893	759 - 1030	Acceptable	EPA 200.8 5.4 1994	2/24/2021	1.61	887	50.8	srm
1030	Cadmium	µg/L		740	629 - 851	Not Reported				724	27.5	
1040	Chromium	µg/L		183	156 - 210	Not Reported				185	7.46	
1050	Cobalt	µg/L		228	194 - 262	Not Reported				234	10.3	
1055	Copper	µg/L		864	734 - 994	Not Reported				862	37.3	
1070	Iron	µg/L		2700	2300 - 3100	Not Reported				2740	120	
1075	Lead	µg/L		384	326 - 442	Not Reported				388	18.6	
1090	Manganese	µg/L		1070	910 - 1230	Not Reported				1080	46.0	
1100	Molybdenum	µg/L		219	186 - 250	Not Reported				217	9.34	
1105	Nickel	µg/L		429	372 - 490	Not Reported				439	21.4	
1140	Selenium	µg/L		266	226 - 306	Not Reported				264	15.3	
1150	Silver	µg/L		835	710 - 960	Not Reported				839	41.9	
1160	Strontium	µg/L		356	303 - 409	Not Reported				359	14.8	
1165	Thallium	µg/L		220	173 - 262	Not Reported				219	12.6	
1185	Vanadium	µg/L		509	433 - 585	Not Reported				506	21.9	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L		1730	1470 - 1990	Not Reported				1720	72.3	
------	------	------	--	------	-------------	--------------	--	--	--	------	------	--



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500)

1000	Aluminum	µg/L		3730	3110 - 4230	Not Reported				3790	196	
1005	Antimony	µg/L		96.1	61.7 - 126	Not Reported				93.6	5.91	
1010	Arsenic	µg/L		783	663 - 892	Not Reported				751	33.2	
1015	Barium	µg/L		1950	1660 - 2240	Not Reported				1960	86.6	
1020	Beryllium	µg/L		419	356 - 482	Not Reported				414	19.3	
1025	Boron	µg/L		893	759 - 1030	Not Reported				887	50.8	
1030	Cadmium	µg/L		740	629 - 851	Not Reported				724	27.5	
1040	Chromium	µg/L		183	156 - 210	Not Reported				185	7.46	
1050	Cobalt	µg/L		228	194 - 262	Not Reported				234	10.3	
1055	Copper	µg/L		864	734 - 994	Not Reported				862	37.3	
1070	Iron	µg/L		2700	2300 - 3100	Not Reported				2740	120	
1075	Lead	µg/L		384	326 - 442	Not Reported				388	18.6	
1090	Manganese	µg/L		1070	910 - 1230	Not Reported				1080	46.0	
1100	Molybdenum	µg/L		219	186 - 250	Not Reported				217	9.34	
1105	Nickel	µg/L		429	372 - 490	Not Reported				439	21.4	
1140	Selenium	µg/L		266	226 - 306	Not Reported				264	15.3	
1150	Silver	µg/L	875	835	710 - 960	Acceptable	EPA 6020A 1 2007	2/16/2021	0.859	839	41.9	srm
1160	Strontium	µg/L		356	303 - 409	Not Reported				359	14.8	
1165	Thallium	µg/L		220	173 - 262	Not Reported				219	12.6	
1185	Vanadium	µg/L		509	433 - 585	Not Reported				506	21.9	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Trace Metals (cat# 586, lot# P312-500) (Continued)

1190	Zinc	µg/L		1730	1470 - 1990	Not Reported				1720	72.3	
------	------	------	--	------	-------------	--------------	--	--	--	------	------	--

WP Hexavalent Chromium (cat# 898, lot# P312-984)

1045	Hexavalent Chromium	µg/L	203	249	206 - 290	Not Acceptable	SM3500Cr B 22nd ED 2011	2/3/2021	-3.23	247	13.7	dmb
------	---------------------	------	-----	-----	-----------	----------------	-------------------------	----------	-------	-----	------	-----

WP Tin & Titanium (cat# 573, lot# P312-517)

1175	Tin	µg/L	660	653	457 - 849	Acceptable	EPA 200.8 5.4 1994	2/1/2021	0.599	641	32.0	jcg
1180	Titanium	µg/L	110	111	94.4 - 128	Acceptable	EPA 200.8 5.4 1994	2/2/2021	-0.0341	110	4.73	jcg

WP Tin & Titanium (cat# 573, lot# P312-517)

1175	Tin	µg/L	650	653	457 - 849	Acceptable	EPA 6020A 1 2007	2/1/2021	0.287	641	32.0	jcg
1180	Titanium	µg/L		111	94.4 - 128	Not Reported				110	4.73	

WP Tin & Titanium (cat# 573, lot# P312-517)

1175	Tin	µg/L		653	457 - 849	Not Reported				641	32.0	
1180	Titanium	µg/L	113	111	94.4 - 128	Acceptable	EPA 6010B 2 1996	1/26/2021	0.600	110	4.73	meh

WP Tin & Titanium (cat# 573, lot# P312-517)

1175	Tin	µg/L		653	457 - 849	Not Reported				641	32.0	
1180	Titanium	µg/L	117	111	94.4 - 128	Acceptable	EPA 200.7 4.4 1994	1/26/2021	1.45	110	4.73	meh

WP Tin & Titanium (cat# 573, lot# P312-517)

1175	Tin	µg/L		653	457 - 849	Not Reported				641	32.0	
1180	Titanium	µg/L	100	111	94.4 - 128	Acceptable	EPA 6020A 1 2007	2/25/2021	-2.15	110	4.73	srm

WP Uranium (cat# 4400, lot# P312-4402)

3055	Uranium (Nat) mass	µg/L	173	177	133 - 206	Acceptable	EPA 6020A 1 2007	2/1/2021	-0.154	174	7.22	
------	--------------------	------	-----	-----	-----------	------------	------------------	----------	--------	-----	------	--

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
WP Uranium (cat# 4400, lot# P312-4402)												
3055	Uranium (Nat) mass	µg/L	165	177	133 - 206	Acceptable	EPA 200.8 5.4 1994	2/2/2021	-1.26	174	7.22	
WP Silica (cat# 890, lot# P312-775)												
1990	Silica as SiO2	mg/L	99.9	99.3	74.5 - 124	Acceptable	EPA 6020A 1 2007	2/2/2021	0.0266	99.7	6.68	jcg
WP Silica (cat# 890, lot# P312-775)												
1990	Silica as SiO2	mg/L	95.9	99.3	74.5 - 124	Acceptable	EPA 6010B 2 1996	1/26/2021	-0.572	99.7	6.68	meh
WP Silica (cat# 890, lot# P312-775)												
1990	Silica as SiO2	mg/L	101	99.3	74.5 - 124	Acceptable	EPA 200.7 4.4 1994	1/26/2021	0.191	99.7	6.68	meh
WP Sulfide (cat# 891, lot# P312-071)												
2005	Sulfide	mg/L	1.68	2.54	0.563 - 4.09	Acceptable	SM 4500-S2 F-2011 2011	1/25/2021	-0.688	2.10	0.610	dmb
WP Sulfide (cat# 891, lot# P312-071)												
2005	Sulfide	mg/L	1.89	2.54	0.563 - 4.09	Acceptable	SM 4500-S2 D-2011 2011	1/25/2021	-0.344	2.10	0.610	dmb
WP Acidity (cat# 885, lot# P312-915)												
1500	Acidity as CaCO3	mg/L	1663	1610	1450 - 1770	Acceptable	SM2310B 22nd ED 2011	1/21/2021	1.36	1580	62.5	dmb
WP Bromide (cat# 887, lot# P312-769)												
1540	Bromide	mg/L	9.1	7.86	6.67 - 9.10	Acceptable	EPA 300.0 2.1 1993	1/22/2021	2.39	8.03	0.447	dmb



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.





Final Evaluation Report

Study: **WP-312**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Microbiology Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : WP-312





WP-312 Final Evaluation Report

A Waters Company

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP WasteWatR™ Coliform MicrobE™ (cat# 576, lot# P312-083)

2500	Total Coliforms (MF)	CFU/100mL		189	85.0 - 419	Not Reported				189	55.7	
2530	Fecal Coliforms (MF)	CFU/100mL		99.0	30.0 - 329	Not Reported				98.6	49.9	
2525	E.coli (MF)	CFU/100mL		112	37.0 - 340	Not Reported				112	50.5	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	345	253	127 - 507	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2004 2004	1/21/2021	0.0744	253	63.4	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL		152	65.0 - 356	Not Reported				152	48.4	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	345	249	119 - 518	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2004 2004	1/21/2021	0.0780	249	66.5	

WP WasteWatR™ Coliform MicrobE™ (cat# 576, lot# P312-083)

2500	Total Coliforms (MF)	CFU/100mL		189	85.0 - 419	Not Reported				189	55.7	
2530	Fecal Coliforms (MF)	CFU/100mL		99.0	30.0 - 329	Not Reported				98.6	49.9	
2525	E.coli (MF)	CFU/100mL		112	37.0 - 340	Not Reported				112	50.5	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	205	253	127 - 507	Acceptable	SM 9223 B (Colilert-18 Quanti-Tray)-2004 2004	1/21/2021	-0.0511	253	63.4	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL	125	152	65.0 - 356	Acceptable	Colilert®-18 (Fecal Coliforms) 2010	1/21/2021	-0.0504	152	48.4	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	205	249	119 - 518	Acceptable	SM 9223 B (Colilert-18 Quanti-Tray)-2004 2004	1/21/2021	-0.0460	249	66.5	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312

Final Evaluation Report

Study: **WP-312**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Organic Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study # : WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Volatiles (cat# 830, lot# P312-710)

4315	Acetone	µg/L	47.8	44.5	10.7 - 75.3	Acceptable	EPA 8260B 2 1996	2/1/2021	0.768	41.9	7.66	adw
4320	Acetonitrile	µg/L	< 20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4325	Acrolein	µg/L	< 20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4340	Acrylonitrile	µg/L	< 20	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4375	Benzene	µg/L	106	102	71.4 - 133	Acceptable	EPA 8260B 2 1996	2/1/2021	0.612	100	9.82	adw
4385	Bromobenzene	µg/L	< 1	< 3.40	0.00 - 3.40	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4390	Bromochloromethane	µg/L	< 1	< 3.50	0.00 - 3.50	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4395	Bromodichloromethane	µg/L	< 6	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4400	Bromoform	µg/L	< 6	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4950	Bromomethane	µg/L	51.2	47.6	19.0 - 76.2	Acceptable	EPA 8260B 2 1996	2/1/2021	1.39	38.6	9.07	adw
4410	2-Butanone (MEK)	µg/L	< 20	< 1.70	0.00 - 1.70	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4435	n-Butylbenzene	µg/L	< 6.3	< 3.00	0.00 - 3.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4440	sec-Butylbenzene	µg/L	< 1	< 3.20	0.00 - 3.20	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4445	tert-Butylbenzene	µg/L	< 1	< 3.00	0.00 - 3.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5000	tert-Butyl methyl ether (MTBE)	µg/L	< 9	< 9.00	0.00 - 9.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4450	Carbon disulfide	µg/L	< 1	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4455	Carbon tetrachloride	µg/L	36.6	32.1	17.6 - 44.1	Acceptable	EPA 8260B 2 1996	2/1/2021	1.37	30.1	4.77	adw
4475	Chlorobenzene	µg/L	14.9	14.9	10.4 - 19.4	Acceptable	EPA 8260B 2 1996	2/1/2021	0.224	14.6	1.48	adw
4575	Chlorodibromomethane	µg/L	< 6	< 6.00	0.00 - 6.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4485	Chloroethane	µg/L	< 8	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study #: WP-312



A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Volatiles (cat# 830, lot# P312-710) (Continued)

4500	2-Chloroethylvinylether	µg/L	< 1	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4505	Chloroform	µg/L	< 7	< 7.00	0.00 - 7.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4960	Chloromethane	µg/L	0.724	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4535	2-Chlorotoluene	µg/L	< 1	< 3.20	0.00 - 3.20	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4540	4-Chlorotoluene	µg/L	< 1	< 3.30	0.00 - 3.30	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/L	30.5	35.0	21.0 - 49.0	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.0725	30.8	4.65	adw
4585	1,2-Dibromoethane (EDB)	µg/L	< 6.5	< 6.50	0.00 - 6.50	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4595	Dibromomethane	µg/L	91.7	94.7	61.5 - 128	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.583	95.4	6.39	adw
4610	1,2-Dichlorobenzene	µg/L	30.1	31.2	21.8 - 40.6	Acceptable	EPA 8260B 2 1996	2/1/2021	0.178	29.5	3.54	adw
4615	1,3-Dichlorobenzene	µg/L	19	19.4	13.6 - 25.2	Acceptable	EPA 8260B 2 1996	2/1/2021	0.433	17.9	2.46	adw
4620	1,4-Dichlorobenzene	µg/L	110	117	81.9 - 152	Acceptable	EPA 8260B 2 1996	2/1/2021	0.215	107	15.1	adw
4625	Dichlorodifluoromethane (Freon 12)	µg/L	< 1	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4630	1,1-Dichloroethane	µg/L	< 6.4	< 6.40	0.00 - 6.40	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4635	1,2-Dichloroethane	µg/L	77.1	73.3	52.1 - 95.0	Acceptable	EPA 8260B 2 1996	2/1/2021	0.444	74.1	6.82	adw
4640	1,1-Dichloroethylene	µg/L	114	110	63.1 - 159	Acceptable	EPA 8260B 2 1996	2/1/2021	0.0999	112	16.8	adw
4645	cis-1,2-Dichloroethylene	µg/L	67.9	64.1	43.2 - 85.4	Acceptable	EPA 8260B 2 1996	2/1/2021	0.480	64.7	6.77	adw
4700	trans-1,2-Dichloroethylene	µg/L	108	107	64.2 - 150	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.0114	108	13.2	adw
4655	1,2-Dichloropropane	µg/L	30.8	31.4	22.0 - 40.8	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.190	31.4	3.11	adw
4660	1,3-Dichloropropane	µg/L	< 1	< 3.50	0.00 - 3.50	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4665	2,2-Dichloropropane	µg/L	< 1	< 2.50	0.00 - 2.50	Acceptable	EPA 8260B 2 1996	2/1/2021				adw

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Volatiles (cat# 830, lot# P312-710) (Continued)

4670	1,1-Dichloropropene	µg/L	< 1	< 3.10	0.00 - 3.10	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4680	cis-1,3-Dichloropropylene	µg/L	< 6.5	< 6.50	0.00 - 6.50	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4685	trans-1,3-Dichloropropylene	µg/L	21.4	22.4	14.6 - 30.2	Acceptable	EPA 8260B 2 1996	2/1/2021	0.652	20.1	2.06	adw
4765	Ethylbenzene	µg/L	< 7	< 7.00	0.00 - 7.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4835	Hexachlorobutadiene	µg/L	< 4.3	< 4.30	0.00 - 4.30	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4840	Hexachloroethane	µg/L		< 3.30	0.00 - 3.30	Not Reported						
4860	2-Hexanone	µg/L	40.3	44.3	17.6 - 69.1	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.369	42.4	5.64	adw
4900	Isopropylbenzene	µg/L	< 1	< 3.20	0.00 - 3.20	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4910	4-Isopropyltoluene	µg/L	< 1	< 3.20	0.00 - 3.20	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
4975	Methylene chloride	µg/L	68.9	68.6	41.2 - 96.0	Acceptable	EPA 8260B 2 1996	2/1/2021	0.421	66.4	6.04	adw
4995	4-Methyl-2-pentanone (MIBK)	µg/L	113	119	72.3 - 164	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.332	118	16.3	adw
5005	Naphthalene	µg/L	93.6	97.0	45.5 - 128	Acceptable	EPA 8260B 2 1996	2/1/2021	0.235	89.8	15.9	adw
5015	Nitrobenzene	µg/L		< 6.20	0.00 - 6.20	Not Reported						
5090	n-Propylbenzene	µg/L	< 1	< 3.30	0.00 - 3.30	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5100	Styrene	µg/L	83.2	74.2	48.2 - 100	Acceptable	EPA 8260B 2 1996	2/1/2021	1.04	74.3	8.50	adw
5105	1,1,1,2-Tetrachloroethane	µg/L	< 9.8	< 9.80	0.00 - 9.80	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5110	1,1,2,2-Tetrachloroethane	µg/L	< 9.8	< 9.80	0.00 - 9.80	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5115	Tetrachloroethylene	µg/L	< 4.3	< 4.30	0.00 - 4.30	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5140	Toluene	µg/L	79	75.8	53.1 - 98.5	Acceptable	EPA 8260B 2 1996	2/1/2021	0.597	73.9	8.50	adw
5150	1,2,3-Trichlorobenzene	µg/L	< 1	< 2.90	0.00 - 2.90	Acceptable	EPA 8260B 2 1996	2/1/2021				adw



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
Report Issued:
Study Dates:

WY00002
E772828
03/09/21
01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Volatiles (cat# 830, lot# P312-710) (Continued)

5155	1,2,4-Trichlorobenzene	µg/L	138	133	60.2 - 181	Acceptable	EPA 8260B 2 1996	2/1/2021	0.783	119	24.9	adw
5160	1,1,1-Trichloroethane	µg/L	17.8	16.3	9.78 - 22.8	Acceptable	EPA 8260B 2 1996	2/1/2021	1.15	15.6	1.96	adw
5165	1,1,2-Trichloroethane	µg/L	38.3	39.1	27.4 - 50.8	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.136	38.8	3.87	adw
5170	Trichloroethylene	µg/L	< 6.2	< 6.20	0.00 - 6.20	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5175	Trichlorofluoromethane	µg/L	75.5	75.4	30.2 - 121	Acceptable	EPA 8260B 2 1996	2/1/2021	0.970	65.4	10.4	adw
5180	1,2,3-Trichloropropane (TCP)	µg/L	23.3	24.3	8.74 - 38.3	Acceptable	EPA 8260B 2 1996	2/1/2021	0.0548	23.1	3.19	adw
5210	1,2,4-Trimethylbenzene	µg/L	22.1	24.7	16.1 - 33.3	Acceptable	EPA 8260B 2 1996	2/1/2021	-0.137	22.6	3.63	adw
5215	1,3,5-Trimethylbenzene	µg/L	46.6	43.1	28.0 - 58.2	Acceptable	EPA 8260B 2 1996	2/1/2021	1.07	39.2	6.84	adw
5225	Vinyl acetate	µg/L	< 1	< 5.00	0.00 - 5.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5235	Vinyl chloride	µg/L	< 8	< 8.00	0.00 - 8.00	Acceptable	EPA 8260B 2 1996	2/1/2021				adw
5240	m&p-Xylene	µg/L	109	106	63.6 - 148	Acceptable	EPA 8260B 2 1996	2/1/2021	0.570	101	13.7	adw
5250	o-Xylene	µg/L	117	105	63.0 - 147	Acceptable	EPA 8260B 2 1996	2/1/2021	1.10	101	14.3	adw
5260	Xylenes, total	µg/L	225	211	127 - 295	Acceptable	EPA 8260B 2 1996	2/1/2021	0.834	202	27.0	adw

WP Gasoline Range Organics (GRO) in Water (cat# 640, lot# P312-762)

9408	Gasoline Range Organics (GRO)	µg/L	1517	1460	500 - 2600	Acceptable	EPA 8015C 3 2007	1/28/2021	-0.797	1770	324	adw
4375	Benzene in GRO	µg/L		6.45	3.24 - 10.3	Not Reported				7.09	0.213	
4765	Ethylbenzene in GRO	µg/L		24.5	15.2 - 34.3	Not Reported				26.8	1.84	
5140	Toluene in GRO	µg/L		74.3	41.5 - 96.9	Not Reported				79.4	6.22	
5260	Xylenes, total in GRO	µg/L		126	79.1 - 175	Not Reported				128	8.37	

WP Diesel Range Organics (DRO) in Water (cat# 641, lot# P312-764)

9369	Diesel Range Organics (DRO)	µg/L	1927	2890	626 - 3680	Acceptable	EPA 8015C 3 2007	1/21/2021	-0.422	2140	502	dse
------	-----------------------------	------	------	------	------------	------------	------------------	-----------	--------	------	-----	-----

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com

Study #: WP-312





A Waters Company

WP-312 Final Evaluation Report

Donny Juarez
Quality Assurance Manager
Energy Laboratories
2393 Salt Creek Hwy
Casper, WY 82601
307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 03/09/21
Study Dates: 01/19/21 - 03/05/21

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
------------------	---------	-------	----------------	----------------	-------------------	------------------------	--------------------	---------------	---------	------------	--------------------------	--------------

WP Total Petroleum Hydrocarbons (TPH) in Water (cat# 642, lot# P312-642)

1853	TPH (Gravimetric)	mg/L	54.4	77.5	36.0 - 112	Acceptable	EPA 1664A 1999	2/4/2021	-0.734	59.1	6.39	
1853	TPH (IR)	mg/L		95.3	44.8 - 138	Not Reported				108	9.90	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

16341 Table Mountain Pkwy • Golden, CO 80403 • 800.372.0122 • 303.431.8454 • fax 303.421.0159 • www.eraqc.com



Study # : WP-312

CERTIFICATE OF RECOGNITION

ERA congratulates
Energy Laboratories
WP-312

For your participation and successful evaluation, we recognize the performance of this laboratory for achieving acceptable evaluation in the following standards.

Acidity	Bromide	Complex Nutrients	Demand
Diesel Range	Gasoline Range	Hardness	Minerals
Organics (DRO) in Water	Organics (GRO) in Water		
Nitrite	Oil & Grease	pH	Silica
Solids	Sulfide	Tin & Titanium	Total Petroleum Hydrocarbons (TPH) in Water
Trace Metals	Uranium	Volatiles	WasteWatR™ Coliform MicrobE™



Matthew Seebeck
Quality Officer