



A Waters Company

WP-312 Final Evaluation Report

Josh Kirkpatrick
Quality Assurance Manager
Basic Laboratory - Chico
2218 Railroad Ave
Redding, CA 96001
(530) 243-7234 x204

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

CA01570
B664812
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
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WP Minerals (cat# 581, lot# P312-506)

1505	Alkalinity as CaCO3	mg/L	93	95.5	81.2 - 110	Acceptable	SM 2320 B-2011 2011	1/28/2021	-0.764	95.6	3.34	Jennifer Wing
1575	Chloride	mg/L		77.8	68.0 - 87.8	Not Reported				78.9	2.94	
1610	Conductivity at 25°C	µmhos/cm	486	498	448 - 548	Acceptable	SM 2510 B-2011 2011	1/28/2021	-0.754	497	14.1	Jennifer Wing
1730	Fluoride	mg/L		3.39	2.74 - 3.90	Not Reported				3.43	0.208	
1125	Potassium	mg/L		22.0	17.6 - 26.4	Not Reported				22.3	1.22	
1155	Sodium	mg/L		92.4	73.9 - 111	Not Reported				93.8	4.67	
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	363	375	330 - 420	Acceptable	SM 2540 C-2011 2011	1/28/2021	-0.678	376	19.6	Jennifer Wing
1950	Total Solids at 105°C	mg/L		398	353 - 443	Not Reported				391	22.3	

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

1960	Total Suspended Solids	mg/L	90.5	88.8	73.0 - 98.5	Acceptable	SM 2540 D-2011 2011	1/26/2021	0.820	86.9	4.43	Jennifer Wing
1035	Calcium	mg/L		29.5	25.1 - 33.9	Not Reported				30.2	1.46	
1085	Magnesium	mg/L		35.9	30.5 - 41.3	Not Reported				36.6	1.63	
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	215	221	188 - 254	Acceptable	SM 2340 C-2011 2011	1/27/2021	-1.00	225	9.61	Jennifer Wing

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

1900	pH	S.U.	6.77	6.76	6.56 - 6.96	Acceptable	SM 4500-H+ B-2011 2011	1/26/2021	-1.06	6.82	0.0477	Jennifer Wing
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WP Settleable Solids (cat# 883, lot# P312-911)

1965	Settleable Solids	mL/L	11.0	10.6	7.79 - 14.3	Acceptable	SM 2540 F-2011 2011	1/27/2021	0.0305	11.0	1.06	Jennifer Wing
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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.

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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	23.4	22.9	19.2 - 26.4	Acceptable	EPA 353.2 2 1993	1/29/2021	0.416	22.9	1.14	Jennifer Wing
1810	Nitrate as N	mg/L	23.4	22.9	19.2 - 26.5	Acceptable	EPA 353.2 (calc)	1/29/2021	0.488	22.9	1.10	Jennifer Wing
1870	ortho-Phosphate as P	mg/L	2.66	2.69	2.29 - 3.09	Acceptable	SM 4500-P E-2011 2011	1/29/2021	-0.188	2.69	0.133	Jennifer Wing

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

1840	Nitrite as N	mg/L	1.47	1.44	1.20 - 1.68	Acceptable	EPA 353.2 2 1993	1/29/2021	0.252	1.45	0.0841	Jennifer Wing
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WP Nitrite (cat# 888, lot# P312-770)

1840	Nitrite as N	mg/L	1.34	1.44	1.20 - 1.68	Acceptable	SM 4500-NO2 B-2011 2011	1/29/2021	-1.29	1.45	0.0841	Jennifer Wing
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WP Demand (cat# 578, lot# P312-516)

1530	BOD	mg/L	41	41.1	21.1 - 61.1	Acceptable	SM 5210 B-2011 2011	2/1/2021	0.0242	40.8	7.14	Jennifer Wing
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		26.1	21.3 - 30.8	Not Reported				26.3	1.69	

WP Turbidity (cat# 893, lot# P312-777)

2055	Turbidity	NTU	5.5	5.55	4.27 - 6.80	Acceptable	SM 2130 B-2011 2011	2/3/2021	0.394	5.38	0.316	Bryan Ervin
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WP Total Residual Chlorine (cat# 587, lot# P312-501)

1945	Free Residual Chlorine	mg/L	0.91	0.907	0.678 - 1.10	Acceptable	SM 4500-Cl G-2011 2011	2/4/2021	-0.190	0.924	0.0730	Bryan Ervin
1940	Total Residual Chlorine	mg/L	0.94	0.948	0.708 - 1.14	Acceptable	SM 4500-Cl G-2011 2011	2/4/2021	-0.0666	0.944	0.0558	Bryan Ervin



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.

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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	238	253	127 - 507	Acceptable	SM 9223 B (Colilert-18 Quanti-Tray)-2004 2004	1/30/2021	-0.0151	253	63.4	William Royal
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	238	249	119 - 518	Acceptable	SM 9223 B (Colilert-18 Quanti-Tray)-2004 2004	1/30/2021	-0.0105	249	66.5	William Royal

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	291	253	127 - 507	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2004 2004	1/30/2021	0.0334	253	63.4	William Royal
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	291	249	119 - 518	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2004 2004	1/30/2021	0.0374	249	66.5	William Royal

WP WasteWatR™ Coliform MicrobE™ - SM 9221 (cat# 576A, lot# P312-083A)

2500	Total Coliform (MPN-Multiple Tube)	MPN/100mL	800	188	26.9 - 1310	Acceptable	SM 9221 B + C-2006 2006	2/4/2021	0.270	188	214	Jennifer Wing
2530	Fecal Coliform (MPN-Multiple Tube)	MPN/100mL	800	165	22.1 - 1230	Acceptable	SM 9221 B + E + C-2006 2006	2/4/2021	0.298	165	201	Jennifer Wing
2525	E.coli (MPN-Multiple Tube)	MPN/100mL		157	29.7 - 829	Not Reported				157	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.

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