

## AFPC

## Sample

2021-10

Grade

MAP+S

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
<b>AMMONIACAL NITROGEN</b>					
Ammoniacal Nitrogen, Other		001.99	4	11.68	0.10
Method Group 001.XX PCT			4	11.68	0.12
<b>TOTAL NITROGEN</b>					
Total Nitrogen, Combustion	993.13	010.60	9	11.71	0.10
Method Group 010.XX PCT			9	11.71	0.12
<b>TOTAL PHOSPHATE</b>					
Total Phosphate, Spectrometric	978.02	020.20	5	40.79	0.18
Total Phosphate, ICP	970.03	020.40	2	41.99	1.78
Total Phosphate, Other	993.13	020.99	1	40.97	0.00
Method Group 020.XX PCT			8	40.80	0.33
<b>INSOLUBLE PHOSPHATE</b>					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	3	0.34	0.05
Method Group 030.XX PCT			3	0.34	0.06
<b>INDIRECT AVAILABLE PHOSPHATE</b>					
Indirect Available Phosphate, Spectrometric	960.02	040.20	3	40.54	0.03
Method Group 040.XX PCT			3	40.54	0.04
<b>DIRECT AVAILABLE PHOSPHATE</b>					
Direct Available Phosphate, ICP		041.50	2	39.42	0.43
Direct Available Phosphate, EDTA Extract	993.01	041.60	3	40.50	0.97
Direct Available Phosphate, Other		041.99	1	36.89	0.00
Method Group 041.XX PCT			6	39.42	1.68
<b>WATER SOLUBLE PHOSPHATE</b>					
Water Soluble Phosphate, Spectrometric	970.01	048.20	5	34.59	0.01
Water Soluble Phosphate, Other		048.99	1	34.50	0.00
Method Group 048.XX PCT			6	34.59	0.08
<b>SOLUBLE POTASH AS K<sub>2</sub>O</b>					
Soluble Potash, ICP(Citrate)		050.51	1	0.17	0.00
Soluble Potash, Other		050.99	2	0.13	0.01
Method Group 050.XX PCT			3	0.14	0.02
<b>FREE WATER</b>					

AFPC Check Sample 10-2021

Free Water, Vacuum Oven	965.08B	060.00	3	0.81	0.04
Free Water, Other		060.99	2	0.91	0.00
Method Group 060.XX PCT			5	0.85	0.09
<b>ACID SOLUBLE CALCIUM AS CaO</b>					
Acid Soluble Calcium, ICP		101.30	5	0.24	0.05
Method Group 101.XX PCT			5	0.24	0.06
<b>ACID SOLUBLE MAGNESIUM AS MgO</b>					
Acid Soluble Magnesium, ICP		121.30	5	1.18	0.03
Method Group 121.XX PCT			5	1.18	0.04
<b>SULFATE SULFUR (S)</b>					
Sulfur, Gravimetric	980.02(a)	144.01	1	5.03	0.00
Sulfur, Other		144.99	4	5.12	0.24
Method Group 144.XX PCT			5	5.06	0.13
<b>TOTAL SULFUR (S)</b>					
Sulfur, Other		145.99	9	10.27	0.1
Method Group 145.XX PCT			9	10.27	0.2
<b>TOTAL ARSENIC</b>					
Total Arsenic, ICP	980.02(b)	151.02	2	9.2	2.4
Method Group 151.XX PPM			2	9.2	2.9
<b>TOTAL CADMIUM</b>					
Total Cadmium, ICP		181.30	1	1.1	0.0
Method Group 181.XX PPM			1	1.1	0.0
<b>ALUMINUM AS Al<sub>2</sub>O<sub>3</sub></b>					
ICP, %			4	1.49	0.04
Method Group 190.XX PCT			4	1.49	0.05
<b>TOTAL CHROMIUM</b>					
Total Chromium, ICP		191.30	1	91	0.0
Method Group 191.XX PPM			1	91	0.0
<b>ACID SOLUBLE COBALT</b>					
Acid Soluble Cobalt, ICP		202.30	1	3	0.0
Method Group 202.XX PPM			1	3	0.0
<b>ACID SOLUBLE COPPER</b>					
Acid Soluble Copper, Other		221.99	1	0.9	0.0
Method Group 221.XX PPM			1	4.9	0.0
<b>ACID SOLUBLE IRON AS Fe<sub>2</sub>O<sub>3</sub></b>					
Acid Soluble Iron, ICP		241.30	4	1.46	0.01

# AFPC Check Sample 10-2021

Acid Soluble Iron, Other	241.99	1	0.89	0.00
Method Group 241.XX PCT		5	1.45	0.01
<b>TOTAL LEAD</b>				
Total Lead, ICP	251.30	1	0.6	0.0
Method Group 251.XX PPM		1	0.6	0.0
<b>ACID SOLUBLE MANGANESE</b>				
Acid Soluble Manganese, Other	261.99	1	198	0.0
Method Group 261.XX PPM		1	198	0.0
<b>TOTAL MERCURY</b>				
Total Mercury, ICP	281.30	1	0.00	0.00
Method Group 281.XX PPM		1	0.01	0.00
<b>TOTAL NICKEL</b>				
Total Nickel, ICP	291.30	1	17.8	0.0
Method Group 291.XX PPM		1	17.8	0.0
<b>TOTAL SELENIUM</b>				
Total Selenium, ICP	301.30	1	1.2	0.0
Method Group 301.XX PPM		1	1.2	0.0
<b>SODIUM AS Na<sub>2</sub>O</b>				
Sodium, Other	311.99	3	0.16	0.06
Method Group 311.XX PCT		3	0.16	0.07
<b>ACID SOLUBLE ZINC</b>				
Acid Soluble Zinc, ICP	321.30	1	1.2	0.0
Acid Soluble Zinc, Other	321.99	1	1.2	0.0
Method Group 321.XX %		2	1.2	0.0
<b>FLUORIDE</b>				
Volumetric	325.10	4	1.58	0.07
Method Group 325.XX PCT		4	1.58	0.09

001.99 Ammoniacal Nitrogen		
Lab		Other
335	11.86	-1.778
Std Dev	11.78	-1.000
24	11.69	-0.125
Median	11.68	0.000
24	11.67	0.125
Std Dev	11.58	1.000
275	11.40	2.830

001.XX Ammoniacal Nitrogen		
Lab		Total Method
335	11.86	-1.778
Std Dev	11.78	-1.000
24	11.69	-0.125
Median	11.68	0.000
24	11.67	0.125
Std Dev	11.58	1.000
275	11.40	2.830

010.60 Total Nitrogen		
Lab		Combustion
140	11.87	-1.588
39	11.86	-1.474
103	11.82	-1.092
Std Dev	11.81	-1.000
77	11.80	-0.893
14	11.71	0.000
14	11.71	0.000
Median	11.71	0.000
137	11.69	0.248
63	11.62	0.943
Std Dev	11.61	1.000
80	11.15	5.559

010.XX Total Nitrogen		
Lab		Total Method
140	11.87	-1.588
39	11.86	-1.474
103	11.82	-1.092
Std Dev	11.81	-1.000
77	11.80	-0.893
14	11.71	0.000
14	11.71	0.000

Median 11.71 0.000		
137	11.69	0.248
63	11.62	0.943
Std Dev	11.61	1.000
80	11.15	5.559

020.20 Total Phosphate		
Lab		Spectrometric
140	40.91	-0.642
24	40.81	-0.084
24	40.79	0.000
Median	40.79	0.000
Std Dev	40.61	1.000
14	40.57	1.256
14	40.55	1.340

020.40 Total Phosphate		
Lab		Automated
137	44.37	-1.340
Std Dev	43.77	-1.000
Median	41.99	0.000
Std Dev	40.21	1.000
335	39.61	1.340

020.99 Total Phosphate		
Lab		Other
275	40.97	0.000
Median	40.97	0.000

020.XX Total Phosphate		
Lab		Total Method
137	44.37	-13.293
Std Dev	41.07	-1.000
275	40.97	-0.644
140	40.91	-0.400
24	40.81	-0.028
Median	40.80	0.000
24	40.79	0.028
14	40.57	0.865
14	40.55	0.921
Std Dev	40.53	1.000
335	39.61	4.419

030.20 Insoluble Phosphate		
Lab		Spectrometric
140	0.37	-0.515
24	0.34	0.000
Median	0.34	0.000
Std Dev	0.29	1.000
24	0.24	2.165

030.XX Insoluble Phosphate		
Lab		Total Method
140	0.37	-0.515
24	0.34	0.000
Median	0.34	0.000
Std Dev	0.29	1.000
24	0.24	2.165

040.20 Indirect Available Phosphate		
Lab		Spectrometric
24	40.56	-0.447
140	40.54	0.000
Median	40.54	0.000
Std Dev	40.51	1.000
24	40.47	2.233

040.XX Indirect Available Phosphate		
Lab		Total Method
24	40.56	-0.447
140	40.54	0.000
Median	40.54	0.000
Std Dev	40.51	1.000
24	40.47	2.233

041.50 Direct Available Phosphate		
Lab		ICP
63	40.00	-1.340
Std Dev	39.85	-1.000
Median	39.42	0.000
Std Dev	39.00	1.000
80	38.85	1.340

041.60 Direct Available Phosphate		
Lab		EDTA Extract
77	41.02	-0.531
137	40.50	0.000

Median 40.50 0.000		
Std Dev	39.53	1.000
103	38.42	2.149

041.99 Direct Available Phosphate		
Lab		Other
335	36.89	0.000
Median	36.89	0.000

041.XX Direct Available Phosphate		
Lab		Total Method
77	41.02	-1.153
Std Dev	40.80	-1.000
137	40.50	-0.780
63	40.00	-0.415
Median	39.42	0.000
80	38.85	0.415
103	38.42	0.730
Std Dev	38.04	1.000
335	36.89	1.834

048.20 Water Soluble Phosphate		
Lab		Spectrometric
140	34.69	-6.365
24	34.61	-1.340
Std Dev	34.60	-1.000
14	34.59	0.000
14	34.59	0.000
Median	34.59	0.000
Std Dev	34.58	1.000
24	34.49	6.700

048.99 Water Soluble Phosphate		
Lab		Other
335	34.50	0.000
Median	34.50	0.000

048.XX Water Soluble Phosphate		
Lab		Total Method
140	34.69	-1.476
Std Dev	34.65	-1.000
24	34.61	-0.311
14	34.59	0.000
14	34.59	0.000

Median	34.59	0.000
Std Dev	34.53	1.000
335	34.50	1.476
24	34.49	1.554

050.51	%K <sub>2</sub> O	Soluble Potash
Lab		ICP(Citrate)
137	0.17	0.000
Median	0.17	0.000

050.99	%K <sub>2</sub> O	Soluble Potash
Lab		Other
24	0.14	-1.340
Std Dev	0.14	-1.000
Median	0.13	0.000
Std Dev	0.13	1.000
24	0.13	1.340

050.XX	%K <sub>2</sub> O	Soluble Potash
Lab		Total Method
137	0.17	-1.787
Std Dev	0.16	-1.000
24	0.14	0.000
Median	0.14	0.000
24	0.13	0.893

060.00		Free Water
Lab		Vacuum Oven
24	0.85	-1.072
Std Dev	0.85	-1.000
24	0.81	0.000
Median	0.81	0.000
Std Dev	0.77	1.000
140	0.75	1.608

060.99		Free Water
Lab		Other
14	0.91	0.000
14	0.91	0.000
Median	0.91	0.000

060.XX		Free Water
Lab		Total Method
14	0.91	-0.776

14	0.91	-0.776
24	0.85	0.000
Median	0.85	0.000
24	0.81	0.564
Std Dev	0.78	1.000
140	0.75	1.411

101.30	%CaO	Acid Soluble Calcium
Lab		ICP
24	0.32	-1.546
335	0.31	-1.340
Std Dev	0.29	-1.000
14	0.24	0.000
14	0.24	0.000
Median	0.24	0.000
24	0.21	0.618

101.XX	%CaO	Acid Soluble Calcium
Lab		Total Method
24	0.32	-1.546
335	0.31	-1.340
Std Dev	0.29	-1.000
14	0.24	0.000
14	0.24	0.000
Median	0.24	0.000
24	0.21	0.618

121.30	%MgO	Acid Soluble Magnesium
Lab		ICP
24	1.27	-2.680
24	1.23	-1.340
Std Dev	1.21	-1.000
14	1.18	0.000
14	1.18	0.000
Median	1.18	0.000
Std Dev	1.15	1.000
335	1.02	4.913

121.XX	%MgO	Acid Soluble Magnesium
Lab		Total Method
24	1.27	-2.680
24	1.23	-1.340
Std Dev	1.21	-1.000
14	1.18	0.000

14	1.18	0.000
Median	1.18	0.000
Std Dev	1.15	1.000
335	1.02	4.913

144.01		Sulfate Sulfur (S)
Lab		Gravimetric
140	5.03	0.000
Median	5.03	0.000

144.99		Sulfate Sulfur (S)
Lab		Other
335	5.90	-3.228
Std Dev	5.36	-1.000
275	5.18	-0.248
Median	5.12	0.000
24	5.06	0.248
24	4.96	0.642

144.XX		Sulfate Sulfur (S)
Lab		Total Method
335	5.90	-7.763
275	5.18	-1.109
Std Dev	5.16	-1.000
24	5.06	0.000
Median	5.06	0.000
140	5.03	0.231
24	4.96	0.878

145.99		Total Sulfur (S)
Lab		Other
39	10.49	-1.685
Std Dev	10.40	-1.000
24	10.39	-0.881
24	10.39	-0.881
140	10.37	-0.727
335	10.27	0.000
Median	10.27	0.000
80	10.25	0.153
77	10.21	0.459
Std Dev	10.14	1.000
275	10.05	1.665
137	9.78	3.790

145.XX		Total Sulfur (S)
Lab		Total Method
39	10.49	-1.685
Std Dev	10.40	-1.000
24	10.39	-0.881
24	10.39	-0.881
140	10.37	-0.727
335	10.27	0.000
Median	10.27	0.000
80	10.25	0.153
77	10.21	0.459
Std Dev	10.14	1.000
275	10.05	1.665
137	9.78	3.790

151.30		Total Arsenic
Lab		ICP
335	12.40	-1.340
Std Dev	11.59	-1.000
Median	9.22	0.000
Std Dev	6.85	1.000
140	6.05	1.340

151.XX		Total Arsenic
Lab		Total Method
335	12.40	-1.340
Std Dev	11.59	-1.000
Median	9.22	0.000
Std Dev	6.85	1.000
140	6.05	1.340

181.30	PPM	Total Cadmium
Lab		ICP
335	1.09	0.000
Median	1.09	0.000

181.XX	PPM	Total Cadmium
Lab		Total Method
335	1.09	0.000
Median	1.09	0.000

190.00	%Al <sub>2</sub> O <sub>3</sub>	Aluminum
Lab		ICP
14	1.51	-0.536

14	1.51	-0.536
Median	1.49	0.000
24	1.47	0.536
Std Dev	1.45	1.000
24	1.42	1.608

190.XX	Aluminum	
Lab	%Al <sub>2</sub> O <sub>3</sub>	Total Method
14	1.51	-0.536
14	1.51	-0.536
Median	1.49	0.000
24	1.47	0.536
Std Dev	1.45	1.000
24	1.42	1.608

191.30	Total Chromium	
Lab		ICP
335	90.77	0.000
Median	90.77	0.000

191.XX	Total Chromium	
Lab	PPM	Total Method
335	90.77	0.000
Median	90.77	0.000

202.30	Acid Soluble Cobalt	
Lab	PPM	ICP

202.XX	Acid Soluble Cobalt	
Lab	PPM	Total Method
335	2.87	0.000
Median	2.87	0.000

221.99	Acid Soluble Copper	
Lab		Other
335	4.90	0.000
Median	4.90	0.000

221.XX	Acid Soluble Copper	
Lab	PPM	Total Method
335	4.90	0.000
Median	4.90	0.000

241.30	Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	ICP
24	1.49	-1.843
Std Dev	1.47	-1.000
24	1.47	-0.502
Median	1.46	0.000
14	1.45	0.503
14	1.45	0.503

241.99	Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Other
335	0.89	0.000
Median	0.89	0.000

241.XX	Acid Soluble Iron	
Lab	%Fe <sub>2</sub> O <sub>3</sub>	Total Method
24	1.49	-3.127
24	1.47	-1.340
Std Dev	1.46	-1.000
14	1.45	0.000
14	1.45	0.000
Median	1.45	0.000
Std Dev	1.44	1.000
335	0.89	50.027

251.30	Total Lead	
Lab	PPM	ICP
335	0.57	0.000
Median	0.57	0.000

251.XX	Total Lead	
Lab	PPM	Total Method
335	0.57	0.000
Median	0.57	0.000

261.99	Acid Soluble Manganese	
Lab	PPM	Other
335	198.00	0.000
Median	198.00	0.000

261.XX	Acid Soluble Manganese	
Lab	PPM	Total Method
335	198.00	0.000
Median	198.00	0.000

281.30	Total Mercury	
Lab	PPM	ICP
335	0.01	0.000
Median	0.01	0.000

281.XX	Total Mercury	
Lab	PPM	Total Method
335	0.01	0.000
Median	0.01	0.000

289.30	Total Molybdenum	
Lab	PPM	ICP

291.30	Total Nickel	
Lab		ICP

291.XX	Total Nickel	
Lab	PPM	Total Method
335	17.82	0.000
Median	17.82	0.000

301.30	Total Selenium	
Lab	PPM	ICP
335	1.21	0.000
Median	1.21	0.000

301.XX	Total Selenium	
Lab	PPM	Total Method
335	1.21	0.000
Median	1.21	0.000

311.99	Sodium	
Lab	%Na <sub>2</sub> O	Other
335	0.28	-2.233
Std Dev	0.21	-1.000
24	0.16	0.000
Median	0.16	0.000
24	0.13	0.447

311.XX	Sodium	
Lab	%Na <sub>2</sub> O	Total Method
335	0.28	-2.233
Std Dev	0.21	-1.000

24	0.16	0.000
Median	0.16	0.000
24	0.13	0.447

321.30	Acid Soluble Zinc	
Lab	PPM	ICP
77	1.18	0.000
Median	1.18	0.000

321.99	Acid Soluble Zinc	
Lab		Other
335	1.19	0.000
Median	1.19	0.000

321.XX	Acid Soluble Zinc	
Lab	PPM	Total Method
335	1.19	-1.340
Std Dev	1.19	-1.000
Median	1.18	0.000
Std Dev	1.18	1.000
77	1.18	1.340

325.10	Fluoride	
Lab	%	Electrode
14	1.62	-0.585
14	1.62	-0.585
Median	1.58	0.000
24	1.54	0.585
24	1.49	1.265

325.XX	Fluoride	
Lab	%	Total Method
14	1.62	-0.585
14	1.62	-0.585
Median	1.58	0.000
24	1.54	0.585
24	1.49	1.265