

Sample	AFPC		2013-08	Grade	Feed Phosphate	
	AOAC Ref.	Method #			# of Labs.	Grand Median
TOTAL NITROGEN						
Total Nitrogen, Combustion	993.13	010.60	1	0.10	0.00	
Method Group 010.XX PCT			1	0.10	0.00	
TOTAL PHOSPHATE						
Total Phosphate, Gravimetric Quimociac		020.10	1	18.53	0.00	
Total Phosphate, Spectrometric	978.02	020.20	11	18.54	0.06	
Total Phosphate, ICP	970.03	020.40	6	18.33	0.58	
Total Phosphate, Other	993.13	020.99	1	18.97	0.00	
Method Group 020.XX PCT			19	18.52	0.11	
INSOLUBLE PHOSPHATE						
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	2	6.53	0.21	
Method Group 030.XX PCT			2	6.53	0.26	
INDIRECT AVAILABLE PHOSPHATE						
Indirect Available Phosphate, Spectrometric	960.02	040.20	2	12.00	0.20	
Method Group 040.XX PCT			2	12.00	0.24	
DIRECT AVAILABLE PHOSPHATE						
Direct Available Phosphate, ICP		041.50	1	12.79	0.00	
Method Group 041.XX PCT			1	12.79	0.00	
WATER SOLUBLE PHOSPHATE						
Water Soluble Phosphate, Spectrometric	970.01	048.20	2	0.78	0.04	
Method Group 048.XX PCT			2	0.78	0.05	
SOLUBLE POTASH AS K						
Soluble Potash, ICP(Oxalate)		050.50	1	0.14	0.00	
Soluble Potash, Flame Photometric(Citrate)	983.02B(b)	050.61	1	0.22	0.00	
Soluble Potash, Other		050.99	3	0.12	0.01	
Method Group 050.XX PCT			5	0.13	0.02	
FREE WATER						
Free Water, Vacuum Oven	965.08B	060.00	1	0.05	0.00	
Free Water, Vacuum Desiccate	965.08A	060.10	1	0.05	0.00	
Free Water, Other		060.99	4	0.07	0.06	
Method Group 060.XX PCT			6	0.05	0.05	
ACID SOLUBLE CALCIUM AS Ca						
Acid Soluble Calcium, ICP		101.30	7	30.25	1.25	
Acid Soluble Calcium, Titrimetric	945.03	101.70	2	30.98	0.03	
Acid Soluble Calcium, Other		101.99	4	30.85	0.35	
Method Group 101.XX PCT			13	30.62	0.63	
ACID SOLUBLE MAGNESIUM AS Mg						
Acid Soluble Magnesium, ICP		121.30	9	0.69	0.04	
Method Group 121.XX PCT			9	0.69	0.05	
SULFATE SULFUR (S)						
Sulfur, Other		144.99	2	0.02	0.00	
Method Group 144.XX PCT			2	0.02	0.00	
TOTAL ARSENIC						
Total Arsenic, Other		151.99	3	1	0.4	
Method Group 151.XX PPM			3	1	0.5	
ACID SOLUBLE BORON						
Acid Soluble Boron, Other		165.99	1	25	0.0	
Method Group 165.XX PPM			1	25	0.0	
TOTAL CADMIUM						
Total Cadmium, Other		181.99	3	7.3	0.24	

Method Group 181.XX PPM		3	7.3	0.30
ALUMINUM AS Al				
ICP, %		2	0.44	0.01
Other	190.99	5	0.44	0.03
Method Group 190.XX PCT		7	0.44	0.03
TOTAL CHROMIUM				
Total Chromium, ICP	191.30	1	102	0.0
Total Chromium, Other	191.99	1	111	0.0
Method Group 191.XX PPM		2	107	4.1
ACID SOLUBLE COBALT				
Acid Soluble Cobalt, Other	202.99	1	1	0.0
Method Group 202.XX PPM		1	1	0.0
ACID SOLUBLE COPPER				
Acid Soluble Copper, Other	221.99	1	0	0.0
Method Group 221.XX PPM		1	8	0.0
ACID SOLUBLE IRON AS Fe				
Acid Soluble Iron, ICP	241.30	3	0.54	0.03
Acid Soluble Iron, Other	241.99	6	0.56	0.02
Method Group 241.XX PCT		9	0.56	0.03
TOTAL LEAD				
Total Lead, Other	251.99	3	1	0.4
Method Group 251.XX PPM		3	1	0.4
ACID SOLUBLE MANGANESE				
Acid Soluble Manganese, Other	261.99	1	35	0.0
Method Group 261.XX PPM		1	35	0.0
TOTAL MOLYBDENUM				
Total Molybdenum, Other	289.99	3	4	1.1
Method Group 289.XX PPM		3	4	1.3
TOTAL NICKEL				
Total Nickel, Other	291.99	1	17	0.0
Method Group 291.XX PPM		1	17	0.0
TOTAL SELENIUM				
Total Selenium, Other	301.99	1	1	0.0
Method Group 301.XX PPM		1	1	0.0
SODIUM AS Na				
Sodium, Atomic Absorbtion	983.04 311.00	2	5.93	0.06
Sodium, Other	311.99	2	5.91	0.06
Method Group 311.XX PCT		4	5.92	0.13
ACID SOLUBLE ZINC				
Acid Soluble Zinc, ICP	321.30	1	231.0	0.0
Acid Soluble Zinc, Other	321.99	3	200.0	14.6
Method Group 321.XX PPM		4	215.5	30.0
FLUORIDE				
Distilled/Electrode	325.99	10	0.13	0.01
Method Group 325.XX PCT		10	0.13	0.01

010.60 Total Nitrogen Lab Combustion		
80	0.10	0.000
Median	0.10	0.000

010.XX Total Nitrogen Lab Total Method		
80	0.10	0.000
Median	0.10	0.000

020.10 Total Phosphate Lab Gravimetric Quimociac		
219	18.53	0.000
Median	18.53	0.000

020.20 Total Phosphate Lab Spectrometric		
14	18.65	-1.842
14	18.60	-1.005
Std Dev	18.60	-1.000
61	18.56	-0.251
9	18.55	-0.168
99	18.55	-0.091
24	18.54	0.000
Median	18.54	0.000
275	18.51	0.586
24	18.50	0.670
Std Dev	18.48	1.000
275	18.45	1.591
61	18.44	1.759
79	18.41	2.261

020.40 Total Phosphate Lab Automated		
219	18.87	-0.930
103	18.52	-0.325
66	18.43	-0.169
Median	18.33	0.000
9	18.24	0.169
Std Dev	17.76	1.000
63	17.56	1.349
63	17.55	1.366

020.99 Total Phosphate Lab Other		
49	18.97	0.000
Median	18.97	0.000

020.XX Total Phosphate Lab Total Method		
49	18.97	-4.969
219	18.87	-3.890
14	18.65	-1.452
Std Dev	18.61	-1.000
14	18.60	-0.893
61	18.56	-0.391
9	18.55	-0.335
99	18.55	-0.284
24	18.54	-0.223
219	18.53	-0.113
103	18.52	0.000
Median	18.52	0.000
275	18.51	0.167
24	18.50	0.223
275	18.45	0.837
61	18.44	0.949
Std Dev	18.43	1.000
66	18.43	1.005
79	18.41	1.284
9	18.24	3.182
63	17.56	10.776
63	17.55	10.887

030.20 Insoluble Phosphate Lab Spectrometric		
24	6.81	-1.340
Std Dev	6.74	-1.000
Median	6.53	0.000
Std Dev	6.31	1.000
24	6.24	1.340

030.XX Insoluble Phosphate Lab Total Method		
24	6.81	-1.340
Std Dev	6.74	-1.000
Median	6.53	0.000
Std Dev	6.31	1.000

24 6.24 1.340

040.20 Indirect Available Phosphate Lab Spectrometric		
24	12.26	-1.340
Std Dev	12.19	-1.000
Median	12.00	0.000
Std Dev	11.80	1.000
24	11.73	1.340

040.XX Indirect Available Phosphate Lab Total Method		
24	12.26	-1.340
Std Dev	12.19	-1.000
Median	12.00	0.000
Std Dev	11.80	1.000
24	11.73	1.340

041.50 Direct Available Phosphate Lab ICP		
80	12.79	0.000
Median	12.79	0.000

041.XX Direct Available Phosphate Lab Total Method		
80	12.79	0.000
Median	12.79	0.000

048.20 Water Soluble Phosphate Lab Spectrometric		
24	0.83	-1.340
Std Dev	0.82	-1.000
Median	0.78	0.000
Std Dev	0.74	1.000
24	0.73	1.340

048.XX Water Soluble Phosphate Lab Total Method		
24	0.83	-1.340
Std Dev	0.82	-1.000
Median	0.78	0.000
Std Dev	0.74	1.000
24	0.73	1.340

050.50 %K Soluble Potash Lab ICP(Oxalate)		
99	0.14	0.000
Median	0.14	0.000

050.61 Soluble Potash Lab Flame Photometric(Citrate)		
219	0.22	0.000
Median	0.22	0.000

050.99 Soluble Potash Lab %K Other		
24	0.13	-1.340
Std Dev	0.13	-1.000
24	0.12	0.000
Median	0.12	0.000
Std Dev	0.10	1.000
80	0.10	1.340

050.XX Soluble Potash Lab %K Total Method		
219	0.22	-4.403
Std Dev	0.15	-1.000
99	0.14	-0.571
24	0.13	0.000
Median	0.13	0.000
24	0.12	0.769
Std Dev	0.11	1.000
80	0.10	1.539

060.00 Free Water Lab Vacuum Oven		
79	0.05	0.000
Median	0.05	0.000

060.10 Free Water Lab Vacuum Desiccate		
61	0.05	0.000
Median	0.05	0.000

060.99 Free Water Lab Other		
24	0.12	-0.735
24	0.11	-0.648

Median	0.07	0.000
275	0.04	0.648
275	0.03	0.735

060.XX		Free Water
Lab	%CaO	Total Method
24	0.12	-1.639
24	0.11	-1.520
Std Dev	0.09	-1.000
79	0.05	-0.018
Median	0.05	0.000
61	0.05	0.018
275	0.04	0.254
275	0.03	0.373

101.30		Acid Soluble Calcium
Lab	%Ca	ICP
63	30.90	-0.519
63	30.89	-0.517
66	30.28	-0.028
38	30.25	0.000
Median	30.25	0.000
9	29.02	0.982
Std Dev	28.99	1.000
61	28.80	1.153
61	28.65	1.273

101.70		Acid Soluble Calcium
Lab	%Ca	Titrimetric
275	31.02	-1.340
Std Dev	31.01	-1.000
Median	30.98	0.000
Std Dev	30.95	1.000
275	30.94	1.340

101.99		Acid Soluble Calcium
Lab	%Ca	Other
14	31.08	-0.658
14	31.08	-0.658
Median	30.85	0.000
24	30.62	0.658
24	30.58	0.757

101.XX		Acid Soluble Calcium
Lab	%CaO	Total Method
14	31.08	-0.897
14	31.08	-0.897
275	31.02	-0.771
275	30.94	-0.627
63	30.90	-0.540
63	30.89	-0.535
24	30.62	0.000
Median	30.62	0.000
24	30.58	0.067
66	30.28	0.646
38	30.25	0.713
Std Dev	30.10	1.000
9	29.02	3.085
61	28.80	3.499
61	28.65	3.789

121.30		Acid Soluble Magnesium
Lab	%Mg	ICP
24	0.74	-1.096
Std Dev	0.73	-1.000
61	0.71	-0.365
9	0.70	-0.244
24	0.70	-0.244
61	0.69	0.000
Median	0.69	0.000
14	0.65	0.975
Std Dev	0.65	1.000
14	0.65	1.096
38	0.60	2.120
66	0.59	2.473

121.XX		Acid Soluble Magnesium
Lab	%Mg	Total Method
24	0.74	-1.096
Std Dev	0.73	-1.000
61	0.71	-0.365
9	0.70	-0.244
24	0.70	-0.244
61	0.69	0.000
Median	0.69	0.000
14	0.65	0.975
Std Dev	0.65	1.000

14	0.65	1.096
38	0.60	2.120
66	0.59	2.473

144.99		Sulfate Sulfur (S)
Lab	%S	Other
24	0.02	-1.340
Std Dev	0.02	-1.000
Median	0.02	0.000
Std Dev	0.01	1.000
24	0.01	1.340

144.XX		Sulfate Sulfur (S)
Lab	%S	Total Method
24	0.02	-1.340
Std Dev	0.02	-1.000
Median	0.02	0.000
Std Dev	0.01	1.000
24	0.01	1.340

151.99		Total Arsenic
Lab	%As	Other
24	1.88	-2.613
Std Dev	1.16	-1.000
275	0.72	0.000
Median	0.72	0.000
275	0.69	0.067

151.XX		Total Arsenic
Lab	%As	Total Method
24	1.88	-2.613
Std Dev	1.16	-1.000
275	0.72	0.000
Median	0.72	0.000
275	0.69	0.067

165.99		Acid Soluble Boron
Lab	PPM	Other
24	24.90	0.000
Median	24.90	0.000

165.XX, ppm		Acid Soluble Boron
Lab	PPM	Total Method
24	24.90	0.000

Median	24.90	0.000
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181.99		Total Cadmium
Lab	%Cd	Other
24	7.31	-0.225
275	7.26	0.000
Median	7.26	0.000
Std Dev	7.01	1.000
275	6.66	2.455

181.XX		Total Cadmium
Lab	PPM	Total Method
24	7.31	-0.225
275	7.26	0.000
Median	7.26	0.000
Std Dev	7.01	1.000
275	6.66	2.455

190.00		Aluminum
Lab	%Al	ICP
61	0.45	-1.340
Std Dev	0.45	-1.000
Median	0.44	0.000
Std Dev	0.43	1.000
61	0.43	1.340

190.99		Aluminum
Lab	%Al	Atomic Absorption
14	0.46	-0.670
14	0.46	-0.670
24	0.44	0.000
Median	0.44	0.000
24	0.42	0.670
Std Dev	0.41	1.000
9	0.37	2.345

190.XX		Aluminum
Lab	%Al	Total Method
14	0.46	-0.893
14	0.46	-0.893
61	0.45	-0.447
24	0.44	0.000
Median	0.44	0.000
61	0.43	0.447

24	0.42	0.893
Std Dev	0.42	1.000
9	0.37	3.127

191.30		Total Chromium
Lab	ICP	
38	102.00	0.000
Median	102.00	0.000

191.99		Total Chromium
Lab	PPM	Other
24	111.00	0.000
Median	111.00	0.000

191.XX		Total Chromium
Lab	PPM	Total Method
24	111.00	-1.340
Std Dev	109.86	-1.000
Median	106.50	0.000
Std Dev	103.14	1.000
38	102.00	1.340

202.99		Acid Soluble Cobalt
Lab	Other	
24	1.24	0.000
Median	1.24	0.000

202.XX		Acid Soluble Cobalt
Lab	PPM	Total Method
24	1.24	0.000
Median	1.24	0.000

221.99		Acid Soluble Copper
Lab	Other	
24	7.86	0.000
Median	7.86	0.000

221.XX		Acid Soluble Copper
Lab	PPM	Total Method
24	7.86	0.000
Median	7.86	0.000

241.30		Acid Soluble Iron
Lab	%Fe	ICP

61	0.56	-0.609
61	0.54	0.000
Median	0.54	0.000
Std Dev	0.51	1.000
38	0.47	2.071

241.99		Acid Soluble Iron
Lab	%Fe	Other
66	0.57	-0.649
14	0.56	-0.141
24	0.56	-0.141
Median	0.56	0.000
14	0.56	0.141
Std Dev	0.54	1.000
24	0.53	1.552
9	0.52	2.116

241.XX		Acid Soluble Iron
Lab	%Fe	Total Method
66	0.57	-0.625
14	0.56	-0.223
24	0.56	-0.223
61	0.56	-0.223
14	0.56	0.000
Median	0.56	0.000
61	0.54	0.670
Std Dev	0.53	1.000
24	0.53	1.117
9	0.52	1.563
38	0.47	3.707

251.99		Total Lead
Lab	Other	
24	1.94	-2.680
Std Dev	1.35	-1.000
275	1.00	0.000
275	1.00	0.000
Median	1.00	0.000

251.XX		Total Lead
Lab	PPM	Total Method
24	1.94	-2.680
Std Dev	1.35	-1.000
275	1.00	0.000

275	1.00	0.000
Median	1.00	0.000

261.99		Acid Soluble Manganese
Lab	PPM	Other
24	34.50	0.000
Median	34.50	0.000

261.XX		Acid Soluble Manganese
Lab	PPM	Total Method
24	34.50	0.000
Median	34.50	0.000

281.99		Total Mercury
Lab	PPM	Other
24	<0.06	0.000
Median	0.00	0.000

281.XX		Total Mercury
Lab	PPM	Total Method
24	<0.06	0.000
Median	0.00	0.000

289.30		Total Molybdenum
Lab	PPM	ICP

289.99		Total Molybdenum
Lab	PPM	Other
24	6.68	-2.538
Std Dev	5.06	-1.000
275	4.00	0.000
Median	4.00	0.000
275	3.85	0.142

289.XX		Total Molybdenum
Lab	PPM	Total Method
24	6.68	-2.538
Std Dev	5.06	-1.000
275	4.00	0.000
Median	4.00	0.000
275	3.85	0.142

291.99		Total Nickel
Lab	PPM	Other

24	17.00	0.000
Median	17.00	0.000

291.XX		Total Nickel
Lab	PPM	Total Method
24	17.00	0.000
Median	17.00	0.000

301.99		Total Selenium
Lab	PPM	Other
24	1.12	0.000
Median	1.12	0.000

301.XX		Total Selenium
Lab	PPM	Total Method
24	1.12	0.000
Median	1.12	0.000

311.00		Sodium
Lab	%Mg	Atomic Absorbtion
61	6.00	-1.340
Std Dev	5.98	-1.000
Median	5.93	0.000
Std Dev	5.87	1.000
61	5.85	1.340

311.99		Sodium
Lab	%Mg	Other
24	5.99	-1.340
Std Dev	5.97	-1.000
Median	5.91	0.000
Std Dev	5.85	1.000
24	5.83	1.340

311.XX		Sodium
Lab	%Mg	Total Method
61	6.00	-0.769
24	5.99	-0.629
Median	5.92	0.000
61	5.85	0.629
24	5.83	0.816

321.30		Acid Soluble Zinc
Lab	PPM	ICP

38	231.00	0.000
Median	231.00	0.000

79	0.13	0.737
24	0.13	1.072

321.99 Acid Soluble Zinc		
Lab		Other
24	239.00	-2.680
Std Dev	214.55	-1.000
275	200.00	0.000
275	200.00	0.000
Median	200.00	0.000

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
24	239.00	-0.954
38	231.00	-0.629
Median	215.50	0.000
275	200.00	0.629
275	200.00	0.629

325.99 Fluoride		
Lab	%	Other
14	0.15	-2.144
14	0.15	-2.144
24	0.14	-0.938
61	0.14	-0.938
61	0.14	-0.268
Median	0.13	0.000
275	0.13	0.268
9	0.13	0.402
275	0.13	0.402
79	0.13	0.737
24	0.13	1.072

325.XX Fluoride		
Lab	%	Total Method
14	0.15	-2.144
14	0.15	-2.144
24	0.14	-0.938
61	0.14	-0.938
61	0.14	-0.268
Median	0.13	0.000
275	0.13	0.268
9	0.13	0.402
275	0.13	0.402