

AFPC
2018-08 **Grade** Feed Phosphate(DF Rock)

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, Other		001.99	1		0.00
Method Group 001.XX PCT			1	0.00	0.00
TOTAL NITROGEN					
Total Nitrogen, Combustion	993.13	010.60	2	8.94	6.60
Total Nitrogen, Other		010.99	1		0.00
Method Group 010.XX PCT			3	0.10	8.08
TOTAL P					
Total P, Spectrometric	978.02	020.20	8	18.50	0.08
Total P, ICP	970.03	020.40	4	18.16	0.89
Total P, Other	993.13	020.99	3	18.30	9.77
Method Group 020.XX PCT			15	18.50	0.19
INSOLUBLE P					
Insoluble P, Spectrometric	963.03C(b)	030.20	2	10.63	0.04
Method Group 030.XX PCT			2	10.63	0.05
INDIRECT AVAILABLE P					
Indirect Available P, Spectrometric	960.02	040.20	2	7.85	0.05
Method Group 040.XX PCT			2	7.85	0.06
DIRECT AVAILABLE P					
Direct Available P, ICP		041.50	1	18.25	0.00
Method Group 041.XX PCT			1	18.25	0.00
WATER SOLUBLE P					
Water Soluble P, Spectrometric	970.01	048.20	3	0.18	0.01
Method Group 048.XX PCT			3	0.18	0.02
SOLUBLE POTASH AS K					
Soluble Potash, Other		050.99	5	0.11	0.01
Method Group 050.XX PCT			5	0.11	0.02
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	4	0.07	0.02
Free Water, Vacuum Desiccate	965.08A	060.10	2	0.02	0.01
Free Water, Other		060.99	4	0.08	0.04
Method Group 060.XX PCT			10	0.06	0.05
ACID SOLUBLE CALCIUM AS Ca					
Acid Soluble Calcium, ICP		101.30	7	30.22	0.72
Acid Soluble Calcium, Other		101.99	3	30.38	0.08
Method Group 101.XX PCT			10	30.32	0.24
ACID SOLUBLE MAGNESIUM AS Mg					
Acid Soluble Magnesium, ICP		121.30	7	0.73	0.04
Acid Soluble Magnesium, Other		121.99	1	0.60	0.00
Method Group 121.XX PCT			8	0.72	0.05
SULFATE SULFUR (S)					
Sulfur, Other		144.99	3	0.01	0.02
Method Group 144.XX PCT			3	0.01	0.03
TOTAL SULFUR (S)					
Sulfur, Other		145.99	2	2.30	0.52
Method Group 145.XX PCT			2	2.30	0.64
TOTAL ARSENIC					

Total Arsenic, Other	151.99	2	25.13	10.4	
Method Group 151.XX PPM		2	25.13	12.7	
ACID SOLUBLE BORON					
Acid Soluble Boron, Other	165.99	1	5.95	0.0	
Method Group 165.XX PPM		1	5.95	0.0	
TOTAL CADMIUM					
Total Cadmium, Other	181.99	4	0.47	0.08	
Method Group 181.XX PPM		4	0.47	0.10	
ALUMINUM AS Al					
ICP, %		3	0.51	0.03	
Other	190.99	2	140.75	3.17	
Method Group 190.XX PCT		5	0.53	123.63	
TOTAL CHROMIUM					
Total Chromium, Other	191.99	2	1.61	0.0	
Method Group 191.XX PPM		2	1.61	0.0	
ACID SOLUBLE COBALT					
Acid Soluble Cobalt, Other	202.99	1	8.67	0.0	
Method Group 202.XX PPM		1	8.67	0.0	
ACID SOLUBLE COPPER					
Acid Soluble Copper, Other	221.99	4	0.00	0.1	
Method Group 221.XX PPM		4	0.56	0.1	
ACID SOLUBLE IRON AS Fe					
Acid Soluble Iron, ICP	241.30	4	0.50	0.05	
Acid Soluble Iron, Other	241.99	2	0.71	0.25	
Method Group 241.XX PCT		6	0.50	0.07	
TOTAL LEAD					
Total Lead, Other	251.99	2	35.85	3.2	
Method Group 251.XX PPM		2	35.85	4.0	
WATER SOLUBLE MANGANESE					
Water Soluble Manganese, Other	271.99	2	0.02	0	
Method Group 271.XX PCT		2	0.02	0.0	
TOTAL MERCURY					
Total Mercury, Other	281.99	2	5.79	0.62	
Method Group 281.XX PPM		2	5.79	0.75	
TOTAL MOLYBDENUM					
Total Molybdenum, Other	289.99	2	23.50	1.0	
Method Group 289.XX PPM		2	23.50	1.2	
TOTAL NICKEL					
Total Nickel, Other	291.99	2	7.70	4.0	
Method Group 291.XX PPM		2	7.70	4.8	
TOTAL SELENIUM					
Total Selenium, Other	301.99	4	5.49	0.3	
Method Group 301.XX PPM		4	5.49	0.4	
SODIUM AS Na					
Sodium, Atomic Absorbtion	983.04	311.00	1	5.41	0.00
Sodium, Other		311.99	4	51.45	74.24
Method Group 311.XX PCT			5	5.90	82.85
ACID SOLUBLE ZINC					
Acid Soluble Zinc, Other	321.99	5	0.08	0.0	
Method Group 321.XX PPM		5	0.08	0.0	
FLUORIDE					
Volumetric	325.10	3	0.09	0.00	
Distilled/Electrode	325.99	2	0.09	0.00	

Method Group 325.XX PCT	5	0.09	0.00
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001.99	Ammoniacal Nitrogen	
Lab	Other	
330	0.00	0.000
Median	0.00	0.000

001.XX	Ammoniacal Nitrogen	
Lab	Total Method	
330	0.00	0.000
Median	0.00	0.000

010.60	Total Nitrogen	
Lab	Combustion	
110	17.78	-1.340
Std Dev	15.53	-1.000
Median	8.94	0.000
Std Dev	2.34	1.000
80	0.10	1.340

010.99	Total Nitrogen	
Lab	Other	
330	0.00	0.000
Median	0.00	0.000

010.XX	Total Nitrogen	
Lab	Total Method	
110	17.78	-2.665
Std Dev	6.73	-1.000
80	0.10	0.000
Median	0.10	0.000
330	0.00	0.015

020.20	Total Phosphate	
Lab	Spectrometric	
14	18.64	-1.723
14	18.61	-1.404
Std Dev	18.58	-1.000
61	18.56	-0.702
140	18.51	-0.064
Median	18.50	0.000
24	18.50	0.064
79	18.47	0.447
24	18.46	0.510
61	18.45	0.638

020.40	Total Phosphate	
Lab	Automated	
66	19.23	-1.199
Std Dev	19.05	-1.000
31	18.56	-0.443
Median	18.16	0.000
77	17.77	0.443
Std Dev	17.28	1.000
47	16.83	1.504

020.99	Total Phosphate	
Lab	Other	
237	42.26	-2.452
Std Dev	28.07	-1.000
330	18.30	0.000
Median	18.30	0.000
103	16.07	0.228

020.XX	Total Phosphate	
Lab	Total Method	
237	42.26	-151.611
66	19.23	-4.658
Std Dev	18.65	-1.000
14	18.64	-0.893
14	18.61	-0.734
31	18.56	-0.383
61	18.56	-0.383
140	18.51	-0.064
24	18.50	0.000
Median	18.50	0.000
79	18.47	0.191
24	18.46	0.223
61	18.45	0.287
Std Dev	18.34	1.000
330	18.30	1.276
77	17.77	4.626
47	16.83	10.624
103	16.07	15.506

030.20	Insoluble Phosphate	
Lab	Spectrometric	
24	10.68	-1.340
Std Dev	10.66	-1.000
Median	10.63	0.000

Std Dev	10.59	1.000
24	10.58	1.340

030.XX	Insoluble Phosphate	
Lab	Total Method	
24	10.68	-1.340
Std Dev	10.66	-1.000
Median	10.63	0.000
Std Dev	10.59	1.000
24	10.58	1.340

040.20	Indirect Available Phosphate	
Lab	Spectrometric	
24	7.92	-1.340
Std Dev	7.90	-1.000
Median	7.85	0.000
Std Dev	7.80	1.000
24	7.79	1.340

040.XX	Indirect Available Phosphate	
Lab	Total Method	
24	7.92	-1.340
Std Dev	7.90	-1.000
Median	7.85	0.000
Std Dev	7.80	1.000
24	7.79	1.340

041.50	Direct Available Phosphate	
Lab	ICP	
80	18.25	0.000
Median	18.25	0.000

041.XX	Direct Available Phosphate	
Lab	Total Method	
80	18.25	0.000
Median	18.25	0.000

048.20	Water Soluble Phosphate	
Lab	Spectrometric	
330	0.21	-1.675
Std Dev	0.19	-1.000
24	0.18	0.000
Median	0.18	0.000
Std Dev	0.17	1.000

24	0.17	1.005
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048.XX	Water Soluble Phosphate	
Lab	Total Method	
330	0.21	-1.675
Std Dev	0.19	-1.000
24	0.18	0.000
Median	0.18	0.000
Std Dev	0.17	1.000
24	0.17	1.005

050.99	Soluble Potash	
Lab	%K	Other
24	0.13	-1.005
Std Dev	0.12	-1.000
24	0.12	-0.670
14	0.11	0.000
Median	0.11	0.000
14	0.10	0.670
80	0.10	0.670

050.XX	Soluble Potash	
Lab	%K	Total Method
24	0.13	-1.005
Std Dev	0.12	-1.000
24	0.12	-0.670
14	0.11	0.000
Median	0.11	0.000
14	0.10	0.670
80	0.10	0.670

060.00	Free Water	
Lab	Vacuum Oven	
14	0.11	-1.748
Std Dev	0.09	-1.000
79	0.08	-0.350
Median	0.07	0.000
14	0.06	0.350
Std Dev	0.05	1.000
140	0.04	1.515

060.10	Free Water	
Lab	Vacuum Desiccator	
61	0.03	-1.340

Std Dev	0.03	-1.000
Median	0.02	0.000
Std Dev	0.00	1.000
61	0.00	1.340

060.99		Free Water
Lab		Other
47	0.18	-2.323
Std Dev	0.12	-1.000
330	0.10	-0.417
Median	0.08	0.000
24	0.07	0.417
24	0.06	0.536

060.XX		Free Water
Lab		Total Method
47	0.18	-2.999
14	0.11	-1.085
Std Dev	0.10	-1.000
330	0.10	-0.957
79	0.08	-0.319
24	0.07	-0.064
Median	0.06	0.000
24	0.06	0.064
14	0.06	0.064
140	0.04	0.702
61	0.03	0.830
Std Dev	0.02	1.000
61	0.00	1.570

101.30		Acid Soluble Calcium	
Lab	%Ca		ICP
14	30.74		-0.726
14	30.68		-0.642
61	30.35		-0.188
66	30.22		0.000
Median	30.22		0.000
31	30.21		0.007
Std Dev	29.50		1.000
47	28.90		1.843
330	25.03		7.244

101.99		Acid Soluble Calcium	
Lab	%Ca		Other
24	30.51		-1.620
Std Dev	30.46		-1.000
140	30.38		0.000
Median	30.38		0.000
Std Dev	30.30		1.000
24	30.30		1.060

101.XX		Acid Soluble Calcium	
Lab	%Ca		Total Method
14	30.74		-2.076
14	30.68		-1.774
Std Dev	30.52		-1.000
24	30.51		-0.944
140	30.38		-0.289
61	30.35		-0.138
Median	30.32		0.000
24	30.30		0.138
66	30.22		0.541
31	30.21		0.566
Std Dev	30.12		1.000
47	28.90		7.184
330	25.03		26.662

121.30		Acid Soluble Magnesium	
Lab	%Mg		ICP
24	0.79		-1.458
24	0.78		-1.121
Std Dev	0.77		-1.000
61	0.75		-0.561
31	0.73		0.000
Median	0.73		0.000
14	0.71		0.449
14	0.70		0.549
66	0.68		0.908

121.99		Acid Soluble Magnesium	
Lab	%Mg		Other
330	0.60		0.000
Median	0.60		0.000

121.XX		Acid Soluble Magnesium	
Lab	%Mg		Total Method
24	0.79		-1.682
24	0.78		-1.346

Std Dev	0.76	-1.000
61	0.75	-0.785
31	0.73	-0.224
Median	0.72	0.000
14	0.71	0.224
14	0.70	0.325
66	0.68	0.684
Std Dev	0.67	1.000
330	0.60	2.512

144.99		Sulfate Sulfur (S)	
Lab			Other
330	0.07		-2.477
Std Dev	0.03		-1.000
24	0.01		0.000
Median	0.01		0.000
24	0.00		0.203

144.XX		Sulfate Sulfur (S)	
Lab			Total Method
330	0.07		-2.477
Std Dev	0.03		-1.000
24	0.01		0.000
Median	0.01		0.000
24	0.00		0.203

145.99		Total Sulfur (S)	
Lab			Other
330	3.00		-1.340
Std Dev	2.82		-1.000
Median	2.30		0.000
Std Dev	1.77		1.000
24	1.60		1.340

145.XX		Total Sulfur (S)	
Lab			Total Method
330	3.00		-1.340
Std Dev	2.82		-1.000
Median	2.30		0.000
Std Dev	1.77		1.000
24	1.60		1.340

151.99		Total Arsenic	
Lab			Other
31	0.75		-0.785
31	0.73		-0.224
Median	0.72		0.000
14	0.71		0.224
14	0.70		0.325
66	0.68		0.684
Std Dev	0.67		1.000
330	0.60		2.512

330	39.07		-1.340
Std Dev	35.53		-1.000
Median	25.13		0.000
Std Dev	14.74		1.000
24	11.20		1.340

151.XX		Total Arsenic	
Lab			Total Method
330	39.07		-1.340
Std Dev	35.53		-1.000
Median	25.13		0.000
Std Dev	14.74		1.000
24	11.20		1.340

165.99		Acid Soluble Boron	
Lab	PPM		Other
330	5.95		0.000
Median	5.95		0.000

165.XX, ppm		Acid Soluble Boron	
Lab	PPM		Total Method
330	5.95		0.000
Median	5.95		0.000

171.99		Water Soluble Boron	
Lab	PPM		Other
24	3.13		-1.340
Std Dev	2.99		-1.000
Median	2.59		0.000
Std Dev	2.19		1.000
330	2.06		1.340

171.XX		Water Soluble Boron	
Lab	PPM		Total Method
24	3.13		-1.340
Std Dev	2.99		-1.000
Median	2.59		0.000
Std Dev	2.19		1.000
330	2.06		1.340

181.99		Total Cadmium	
Lab			Other
31	0.48		-0.152
24	0.47		-0.030

Median	0.47	0.000
24	0.47	0.030
Std Dev	0.39	1.000
330	0.05	5.027

181.XX Total Cadmium		
Lab	PPM	Total Method
31	0.48	-0.152
24	0.47	-0.030
Median	0.47	0.000
24	0.47	0.030
Std Dev	0.39	1.000
330	0.05	5.027

190.00 Aluminum		
Lab	%Al	ICP
14	0.53	-0.499
14	0.51	0.000
Median	0.51	0.000
Std Dev	0.48	1.000
61	0.44	2.181

190.99 Aluminum		
Lab	%Al	Atomic Absorption
24	145.00	-1.340
Std Dev	143.92	-1.000
Median	140.75	0.000
Std Dev	137.58	1.000
330	136.50	1.340

190.XX Aluminum		
Lab	%Al	Total Method
24	145.00	-1.424
330	136.50	-1.340
Std Dev	102.01	-1.000
14	0.53	0.000
Median	0.53	0.000
14	0.51	0.000
61	0.44	0.001

191.99 Total Chromium		
Lab	PPM	Other
24	1.63	-1.340
Std Dev	1.62	-1.000

Median	1.61	0.000
Std Dev	1.60	1.000
330	1.60	1.340

191.XX Total Chromium		
Lab	PPM	Total Method
24	1.63	-1.340
Std Dev	1.62	-1.000
Median	1.61	0.000
Std Dev	1.60	1.000
330	1.60	1.340

202.99 Acid Soluble Cobalt		
Lab		Other
24	8.67	0.000
Median	8.67	0.000

202.XX Acid Soluble Cobalt		
Lab	PPM	Total Method
24	8.67	0.000
Median	8.67	0.000

221.00 Acid Soluble Copper		
Lab		Atomic Absorption

221.99 Acid Soluble Copper		
Lab		Other
24	0.59	-0.301
24	0.59	-0.301
Median	0.56	0.000
31	0.54	0.301
Std Dev	0.47	1.000
330	0.27	3.254

221.XX Acid Soluble Copper		
Lab	PPM	Total Method
24	0.59	-0.301
24	0.59	-0.301
Median	0.56	0.000
31	0.54	0.301
Std Dev	0.47	1.000
330	0.27	3.254

241.30 Acid Soluble Iron		
Lab	%Fe	ICP
14	0.55	-1.087
Std Dev	0.54	-1.000
14	0.53	-0.604
Median	0.50	0.000
61	0.47	0.604
66	0.47	0.649

241.99 Acid Soluble Iron		
Lab	%Fe	Other
24	1.05	-1.340
Std Dev	0.96	-1.000
Median	0.71	0.000
Std Dev	0.46	1.000
330	0.37	1.340

241.XX Acid Soluble Iron		
Lab	%Fe	Total Method
24	1.05	-10.045
Std Dev	0.55	-1.000
14	0.55	-0.908
14	0.53	-0.505
Median	0.50	0.000
61	0.47	0.505
66	0.47	0.542
Std Dev	0.44	1.000
330	0.37	2.339

251.99 Total Lead		
Lab		Other
24	40.20	-1.340
Std Dev	39.10	-1.000
Median	35.85	0.000
Std Dev	32.60	1.000
330	31.50	1.340

251.XX Total Lead		
Lab	PPM	Total Method
24	40.20	-1.340
Std Dev	39.10	-1.000
Median	35.85	0.000
Std Dev	32.60	1.000
330	31.50	1.340

271.99 Water Soluble Manganese		
Lab		Other
330	0.02	-1.340
Std Dev	0.02	-1.000
Median	0.02	0.000
Std Dev	0.02	1.000
24	0.02	1.340

271.XX Water Soluble Manganese		
Lab	PPM	Total Method
330	0.02	-1.340
Std Dev	0.02	-1.000
Median	0.02	0.000
Std Dev	0.02	1.000
24	0.02	1.340

281.99 Total Mercury		
Lab	PPM	Other
24	6.62	-1.340
Std Dev	6.41	-1.000
Median	5.79	0.000
Std Dev	5.17	1.000
330	4.96	1.340

281.XX Total Mercury		
Lab	PPM	Total Method
24	6.62	-1.340
Std Dev	6.41	-1.000
Median	5.79	0.000
Std Dev	5.17	1.000
330	4.96	1.340

289.30 Total Molybdenum		
Lab	PPM	ICP
Median		
289.99 Total Molybdenum		
Lab	PPM	Other
330	24.80	-1.340
Std Dev	24.47	-1.000
Median	23.50	0.000
Std Dev	22.53	1.000
24	22.20	1.340

289.XX Total Molybdenum		
Lab	PPM	Total Method
330	24.80	-1.340
Std Dev	24.47	-1.000
Median	23.50	0.000
Std Dev	22.53	1.000
24	22.20	1.340

291.99 Total Nickel		
Lab	PPM	Other
330	13.00	-1.340
Std Dev	11.65	-1.000
Median	7.70	0.000
Std Dev	3.74	1.000
24	2.40	1.340

291.XX Total Nickel		
Lab	PPM	Total Method
330	13.00	-1.340
Std Dev	11.65	-1.000
Median	7.70	0.000
Std Dev	3.74	1.000
24	2.40	1.340

301.99 Total Selenium		
Lab	PPM	Other
31	5.78	-0.972
24	5.51	-0.059
Median	5.49	0.000
24	5.48	0.059
Std Dev	5.20	1.000
330	4.30	4.033

301.XX Total Selenium		
Lab	PPM	Total Mthod
31	5.78	-0.972
24	5.51	-0.059
Median	5.49	0.000
24	5.48	0.059
Std Dev	5.20	1.000
330	4.30	4.033

311.00 Sodium		
Lab	%K	Atomic Absorbtion
61	5.41	0.000
Median	5.41	0.000

61	5.41	0.000
Median	5.41	0.000

311.99 Sodium		
Lab	%K	Other
24	130.50	-1.065
Std Dev	125.69	-1.000
330	97.00	-0.614
Median	51.45	0.000
14	5.90	0.614
14	5.87	0.614

311.XX Sodium		
Lab	%K	Total Method
24	130.50	-1.832
330	97.00	-1.340
Std Dev	73.91	-1.000
14	5.90	0.000
Median	5.90	0.000
14	5.87	0.000
61	5.41	0.007

321.99 Acid Soluble Zinc		
Lab		Other
79	0.09	0.024
24	0.08	0.000
24	0.08	0.000
31	0.08	0.000
Median	0.08	0.000
330	0.03	0.024

321.XX Acid Soluble Zinc		
Lab	PPM	Total Method
79	0.09	0.024
24	0.08	0.000
24	0.08	0.000
31	0.08	0.000
Median	0.08	0.000
330	0.03	0.024

325.10 Fluoride		
Lab	%	Electrode
14	0.09	-1.340
14	0.09	0.000

Median	0.09	0.000
140	0.08	1.340

325.99 Fluoride		
Lab	%	Other
61	0.09	0.000
61	0.09	0.000
Median	0.09	0.000

325.XX Fluoride		
Lab	%	Total Method
14	0.09	0.000
61	0.09	0.000
61	0.09	0.000
Median	0.09	0.000
14	0.09	1.340
140	0.08	2.680