

AFPC

2019-04

Sample

	AOAC Ref.	Method #	# of Labs.	Grand Median	Std Dev
AMMONIACAL NITROGEN					
Ammoniacal Nitrogen, MgO distillation	920.03	001.10	1	11.78	0.00
Ammoniacal Nitrogen, Other		001.99	11	11.82	0.06
Method Group 001.XX PCT			12	11.81	0.07
NITRATE NITROGEN					
Nitrate Nitrogen, Other		002.99	1	0.18	0.00
Method Group 002.XX PCT			1	0.18	0.00
AMMON & NITRATE N					
Ammon & Nitrate N, Other		009.99	2	11.80	0.03
Method Group 009.XX PCT			2	11.80	0.03
TOTAL NITROGEN					
Total Nitrogen, Modified Comprehensive	978.02	010.11	3	11.84	0.01
Total Nitrogen, Combustion	993.13	010.60	18	11.81	0.10
Total Nitrogen, Other		010.99	4	11.85	0.06
Method Group 010.XX PCT			25	11.84	0.10
TOTAL PHOSPHATE					
Total Phosphate, Spectrometric	978.02	020.20	19	40.48	0.18
Total Phosphate, ICP	970.03	020.40	1	40.37	0.00
Total Phosphate, Other	993.13	020.99	2	40.40	0.08
Method Group 020.XX PCT			22	40.47	0.27
INSOLUBLE PHOSPHATE					
Insoluble Phosphate, Spectrometric	963.03C(b)	030.20	11	0.45	0.22
Insoluble Phosphate, Alka. Quimociac	963.03C(c)	030.30	1	0.12	0.00
Insoluble Phosphate, Automated	978.01	030.40	3	0.32	0.04
Insoluble Phosphate, Other		030.99	1	0.28	0.00
Method Group 030.XX PCT			16	0.35	0.19
INDIRECT AVAILABLE PHOSPHATE					
Indirect Available Phosphate, Spectrometric	960.02	040.20	14	40.05	0.37
Indirect Available Phosphate, Other		040.99	1	40.41	0.00
Method Group 040.XX PCT			15	40.06	0.43
DIRECT AVAILABLE PHOSPHATE					
Direct Available Phosphate, Gravimetric Quimociac	960.03E	041.10	2	39.72	0.11
Direct Available Phosphate, Spectrometric	960.03D	041.20	1	39.08	0.00
Direct Available Phosphate, Automated	978.01	041.40	1	43.97	0.00
Direct Available Phosphate, ICP		041.50	2	40.35	0.66
Direct Available Phosphate, EDTA Extract	993.01	041.60	3	39.97	0.67
Direct Available Phosphate, Other		041.99	4	40.03	0.75
Method Group 041.XX PCT			13	39.87	0.70
WATER SOLUBLE PHOSPHATE					
Water Soluble Phosphate, Spectrometric	970.01	048.20	17	35.52	0.17
Water Soluble Phosphate, Other		048.99	2	35.48	0.04
Method Group 048.XX PCT			19	35.52	0.17
SOLUBLE POTASH AS K₂O					
Soluble Potash, ICP(Oxalate)		050.50	2	0.13	0.00
Soluble Potash, ICP(Citrate)		050.51	1	0.14	0.00
Soluble Potash, Flame Photometric(Citrate)	983.02B(b)	050.61	1	0.31	0.00
Soluble Potash, Other		050.99	8	0.14	0.01
Method Group 050.XX PCT			12	0.14	0.01
FREE WATER					
Free Water, Vacuum Oven	965.08B	060.00	13	0.78	0.15
Free Water, Vacuum Desiccate	965.08A	060.10	2	0.30	0.04
Free Water, Other		060.99	6	0.61	0.16
Method Group 060.XX PCT			21	0.70	0.22
ACID SOLUBLE CALCIUM AS CaO					

Acid Soluble Calcium, ICP	101.30	15	0.51	0.02
Method Group 101.XX PCT		15	0.51	0.03
ACID SOLUBLE MAGNESIUM AS MgO				
Acid Soluble Magnesium, ICP	121.30	14	0.94	0.03
Acid Soluble Magnesium, Other	121.99	1	0.97	0.00
Method Group 121.XX PCT		15	0.95	0.04
WATER SOLUBLE MAGNESIUM				
Water Soluble Magnesium, Other	131.99	1	0.06	0.00
Method Group 131.XX PCT		1	0.06	0.00
SULFATE SULFUR (S)				
Sulfur, Gravimetric	980.02(a) 144.01	6	5.30	0.06
Sulfur, Spectrometric	144.70	2	5.15	0.01
Sulfur, Other	144.99	15	5.27	0.18
Method Group 144.XX PCT		23	5.27	0.21
TOTAL SULFUR (S)				
Sulfur, Other	145.99	17	10.24	0.14
Method Group 145.XX PCT		17	10.24	0.17
TOTAL ARSENIC				
Total Arsenic, ICP	980.02(b) 151.02	8	14.0	4.1
Method Group 151.XX PPM		8	14.0	5.0
ACID SOLUBLE BORON				
Acid Soluble Boron, Other	165.99	2	36	6.6
Method Group 165.XX PPM		2	36	8.0
WATER SOLUBLE BORON				
Water Soluble Boron, Other	171.99	1	33	0.0
Method Group 171.XX PPM		1	33	0.0
TOTAL CADMIUM				
Total Cadmium, Atomic Absorbtion	181.00	1	3	0.0
Total Cadmium, ICP	181.30	8	2.6	0.8
Total Cadmium, Other	181.99	1	1.8	0.0
Method Group 181.XX PPM		10	2.6	0.9
ALUMINUM AS Al₂O₃				
ICP, %		15	1.33	0.04
Water Soluble Chlorine, Other, %	190.99	2	1.33	0.02
Method Group 190.XX PCT		17	1.33	0.05
TOTAL CHROMIUM				
Total Chromium, Atomic Absorbtion	191.00	1	67	0.0
Total Chromium, ICP	191.30	6	62	2.5
Total Chromium, Other	191.99	1	67	0.0
Method Group 191.XX PPM		8	64	4.7
ACID SOLUBLE COBALT				
Acid Soluble Cobalt, ICP	202.30	7	3	0.8
Acid Soluble Cobalt, Other	202.99	1	2	0.0
Method Group 202.XX PPM		8	3	0.9
ACID SOLUBLE COPPER				
Acid Soluble Copper, Other	221.99	1	0.9	0.0
Method Group 221.XX PPM		7	0.0	0.9
ACID SOLUBLE IRON AS Fe₂O₃				
Acid Soluble Iron, ICP	241.30	16	1.45	0.04
Acid Soluble Iron, Other	241.99	1	1.52	0.00
Method Group 241.XX PCT		17	1.46	0.05
TOTAL LEAD				
Total Lead, Atomic Absorbtion	251.00	1	4	0.0
Total Lead, ICP	251.30	8	2.5	3.7
Total Lead, Other	251.99	1	2.3	0.0
Method Group 251.XX PPM		10	2.5	1.4
ACID SOLUBLE MANGANESE				
Acid Soluble Manganese, ICP	972.02a 261.30	2	279	0.3
Acid Soluble Manganese, Other	261.99	5	280	9.7

Method Group 261.XX PPM		7	279	6.6
WATER SOLUBLE MANGANESE				
Water Soluble Manganese, Other	271.99	1	198	0
Method Group 271.XX PCT		1	198	0.0
TOTAL MERCURY				
Total Mercury, ICP	281.30	2	0.00	0.02
Total Mercury, Other	281.99	1	0	0.00
Method Group 281.XX PPM		3	0.04	0.02
TOTAL MOLYBDENUM				
Total Molybdenum, ICP	289.30	6	6	2.0
Total Molybdenum, Other	289.99	1	10	0.0
Method Group 289.XX PPM		7	7	2.7
TOTAL NICKEL				
Total Nickel, ICP	291.30	7	16.0	1.1
Total Nickel, icp	291.99	1	13.1	0.0
Method Group 291.XX PPM		8	15.8	1.9
TOTAL SELENIUM				
Total Selenium, ICP	301.30	4	0.2	1.1
Method Group 301.XX PPM		4	0.2	1.4
SODIUM AS Na₂O				
Sodium, Atomic Absorbtion	983.04 311.00	1	0.39	0.00
Sodium, Other	311.99	9	0.24	0.02
Method Group 311.XX PCT		10	0.24	0.02
ACID SOLUBLE ZINC				
Acid Soluble Zinc, ICP	321.30	18	1.0	0.0
Acid Soluble Zinc, Other	321.99	2	1.1	0.0
Method Group 321.XX %		20	1.00	0.03
FLUORIDE				
Volumetric	325.10	12	1.74	0.08
Distilled/Electrode	325.99	3	1.84	0.02
Method Group 325.XX PCT		15	1.75	0.13

001.10 Ammoniacal Nitrogen		
Lab	MgO distillation	
31	11.78	0.000
Median	11.78	0.000

001.99 Ammoniacal Nitrogen		
Lab	Other	
335	12.89	-19.207
79	11.90	-1.519
34	11.88	-1.161
Std Dev	11.87	-1.000
79	11.85	-0.536
113	11.84	-0.447
24	11.82	0.000
Median	11.82	0.000
23	11.81	0.179
23	11.80	0.357
24	11.78	0.625
Std Dev	11.76	1.000
330	11.67	2.591
38	11.61	3.752

001.XX Ammoniacal Nitrogen		
Lab	Total Method	
335	12.89	-20.135
79	11.90	-1.678
34	11.88	-1.305
Std Dev	11.86	-1.000
79	11.85	-0.653
113	11.84	-0.559
24	11.82	-0.093
Median	11.81	0.000
23	11.81	0.093
23	11.80	0.280
31	11.78	0.513
24	11.78	0.559
Std Dev	11.76	1.000
330	11.67	2.610
38	11.61	3.822

002.99 Nitrate Nitrogen		
Lab	Other	
335	0.18	0.000
Median	0.18	0.000

002.XX Nitrate Nitrogen		
Lab	Total Method	
335	0.18	0.000
Median	0.18	0.000

009.99 Ammon & Nitrate N		
Lab	Other	
32	11.84	-1.340
Std Dev	11.83	-1.000
Median	11.80	0.000
Std Dev	11.77	1.000
32	11.77	1.340

009.XX Ammon & Nitrate N		
Lab	Total Method	
32	11.84	-1.340
Std Dev	11.83	-1.000
Median	11.80	0.000
Std Dev	11.77	1.000
32	11.77	1.340

010.11 Total Nitrogen		
Lab	Modified Comprehensive	
219	11.87	-2.297
Std Dev	11.85	-1.000
43	11.84	0.000
Median	11.84	0.000
43	11.84	0.383

010.60 Total Nitrogen		
Lab	Combustion	
63	12.05	-2.441
14	11.99	-1.780
31	11.97	-1.627
14	11.93	-1.170
Std Dev	11.91	-1.000
39	11.88	-0.702
47	11.88	-0.661
219	11.86	-0.509
140	11.83	-0.203
103	11.83	-0.153
Median	11.81	0.000
66	11.80	0.153

79	11.78	0.305
79	11.76	0.509
38	11.75	0.610
61	11.75	0.661
61	11.74	0.763
Std Dev	11.71	1.000
29	11.71	1.017
137	11.58	2.339
110	10.83	9.967

010.99 Total Nitrogen		
Lab	Other	
330	12.00	-2.725
Std Dev	11.91	-1.000
113	11.86	-0.182
Median	11.85	0.000
32	11.84	0.182
Std Dev	11.79	1.000
32	11.77	1.544

010.XX Total Nitrogen		
Lab	Total Method	
63	12.05	-2.505
330	12.00	-1.923
14	11.99	-1.748
31	11.97	-1.573
14	11.93	-1.049
Std Dev	11.92	-1.000
39	11.88	-0.513
47	11.88	-0.466
219	11.87	-0.408
113	11.86	-0.291
219	11.86	-0.291
32	11.84	-0.058
43	11.84	-0.058
43	11.84	0.000
Median	11.84	0.000
140	11.83	0.058
103	11.83	0.117
66	11.80	0.466
79	11.78	0.641
32	11.77	0.816
79	11.76	0.874
38	11.75	0.990

Std Dev	11.75	1.000
61	11.75	1.049
61	11.74	1.165
29	11.71	1.457
137	11.58	2.971
110	10.83	11.710

020.20 Total Phosphate		
Lab	Spectrometric	
14	46.60	-33.818
140	40.83	-1.906
24	40.78	-1.658
79	40.77	-1.575
24	40.68	-1.105
79	40.68	-1.105
34	40.68	-1.078
Std Dev	40.66	-1.000
38	40.61	-0.718
14	40.53	-0.249
23	40.48	0.000
Median	40.48	0.000
23	40.47	0.083
61	40.46	0.111
32	40.44	0.221
61	40.44	0.221
43	40.44	0.249
43	40.36	0.663
Std Dev	40.30	1.000
32	40.30	1.022
31	40.29	1.036
335	40.18	1.685

020.40 Total Phosphate		
Lab	Automated	
137	40.37	0.000
Median	40.37	0.000

020.99 Total Phosphate		
Lab	Other	
113	40.51	-1.340
Std Dev	40.48	-1.000
Median	40.40	0.000
Std Dev	40.32	1.000
330	40.29	1.340

020.XX Total Phosphate		
Lab	Total Method	
14	46.60	-28.071
140	40.83	-1.615
24	40.78	-1.409
79	40.77	-1.340
Std Dev	40.69	-1.000
24	40.68	-0.951
79	40.68	-0.951
34	40.68	-0.928
38	40.61	-0.630
14	40.53	-0.241
113	40.51	-0.172
23	40.48	-0.034
Median	40.47	0.000
23	40.47	0.034
61	40.46	0.057
32	40.44	0.149
61	40.44	0.149
43	40.44	0.172
137	40.37	0.470
43	40.36	0.515
32	40.30	0.813
31	40.29	0.825
330	40.29	0.836
Std Dev	40.25	1.000
335	40.18	1.363

030.20 Insoluble Phosphate		
Lab	Spectrometric	
43	0.77	-1.466
43	0.70	-1.134
Std Dev	0.67	-1.000
61	0.60	-0.687
61	0.55	-0.458
23	0.46	-0.023
23	0.45	0.000
Median	0.45	0.000
140	0.43	0.092
24	0.30	0.710
24	0.27	0.825
Std Dev	0.23	1.000
79	0.21	1.099

79	0.20	1.145
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030.30 Insoluble Phosphate		
Lab	Alka. Quimociac	
31	0.12	0.000
Median	0.12	0.000

030.40 Insoluble Phosphate		
Lab	Automated	
32	0.38	-1.462
Std Dev	0.36	-1.000
32	0.32	0.000
Median	0.32	0.000
Std Dev	0.28	1.000
34	0.27	1.218

030.99 Insoluble Phosphate		
Lab	Other	
113	0.28	0.000
Median	0.28	0.000

030.XX Insoluble Phosphate		
Lab	Total Method	
43	0.77	-2.696
43	0.70	-2.231
61	0.60	-1.605
61	0.55	-1.284
Std Dev	0.51	-1.000
23	0.46	-0.674
23	0.45	-0.642
140	0.43	-0.514
32	0.38	-0.193
Median	0.35	0.000
32	0.32	0.193
24	0.30	0.353
113	0.28	0.449
24	0.27	0.514
34	0.27	0.514
79	0.21	0.899
79	0.20	0.963
Std Dev	0.19	1.000
31	0.12	1.476

040.20 Indirect Available Phosphate		
Lab	Spectrometric	
79	40.56	-1.381
24	40.49	-1.191
79	40.48	-1.178
Std Dev	40.41	-1.000
24	40.41	-0.988
140	40.40	-0.947
31	40.17	-0.345
32	40.06	-0.041
Median	40.05	0.000
23	40.03	0.041
23	40.01	0.095
32	39.98	0.189
61	39.89	0.420
61	39.86	0.501
43	39.74	0.826
Std Dev	39.68	1.000
43	39.59	1.232

040.99 Indirect Available Phosphate		
Lab	Other	
34	40.41	0.000
Median	40.41	0.000

040.XX Indirect Available Phosphate		
Lab	Total Method	
79	40.56	-1.396
24	40.49	-1.199
79	40.48	-1.185
Std Dev	40.41	-1.000
24	40.41	-0.987
34	40.41	-0.973
140	40.40	-0.945
31	40.17	-0.317
32	40.06	0.000
Median	40.06	0.000
23	40.03	0.085
23	40.01	0.141
32	39.98	0.240
61	39.89	0.480
61	39.86	0.564
43	39.74	0.903
Std Dev	39.71	1.000

43	39.59	1.326
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041.10 Direct Available Phosphate		
Lab	Gravimetric Quimociac	
219	39.87	-1.340
Std Dev	39.83	-1.000
Median	39.72	0.000
Std Dev	39.61	1.000
47	39.58	1.340

041.20 Direct Available Phosphate		
Lab	Spectrometric	
38	39.08	0.000
Median	39.08	0.000

041.40 Direct Available Phosphate		
Lab	Automated	
39	43.97	0.000
Median	43.97	0.000

041.50 Direct Available Phosphate		
Lab	ICP	
63	41.23	-1.340
Std Dev	41.01	-1.000
Median	40.35	0.000
Std Dev	39.68	1.000
66	39.46	1.340

041.60 Direct Available Phosphate		
Lab	EDTA Extract	
29	40.06	-0.142
219	39.97	0.000
Median	39.97	0.000
Std Dev	39.30	1.000
103	38.27	2.538

041.99 Direct Available Phosphate		
Lab	Other	
79	40.46	-0.567
113	40.23	-0.265
Median	40.03	0.000
137	39.84	0.265
Std Dev	39.29	1.000
335	37.65	3.203

041.XX Direct Available Phosphate		
Lab	Total Method	
39	43.97	-7.145
63	41.23	-2.375
79	40.46	-1.027
Std Dev	40.44	-1.000
113	40.23	-0.635
29	40.06	-0.339
219	39.97	-0.174
219	39.87	0.000
Median	39.87	0.000
137	39.84	0.052
47	39.58	0.505
66	39.46	0.705
Std Dev	39.29	1.000
38	39.08	1.366
103	38.27	2.776
335	37.65	3.863

048.20 Water Soluble Phosphate		
Lab	Spectrometric	
14	35.93	-2.442
14	35.90	-2.263
140	35.84	-1.936
61	35.78	-1.548
Std Dev	35.68	-1.000
330	35.66	-0.834
79	35.59	-0.447
24	35.55	-0.179
61	35.54	-0.119
79	35.52	0.000
Median	35.52	0.000
23	35.45	0.387
32	35.45	0.387
24	35.44	0.476
23	35.43	0.506
43	35.43	0.506
43	35.40	0.685
32	35.38	0.834
Std Dev	35.35	1.000
31	35.30	1.295

048.99 Water Soluble Phosphate		
Lab	Other	
113	35.53	-1.340
Std Dev	35.52	-1.000
Median	35.48	0.000
Std Dev	35.45	1.000
34	35.44	1.340

048.XX Water Soluble Phosphate		
Lab	Total Method	
14	35.93	-2.892
14	35.90	-2.680
140	35.84	-2.292
61	35.78	-1.834
Std Dev	35.66	-1.000
330	35.66	-0.987
79	35.59	-0.529
24	35.55	-0.212
61	35.54	-0.141
113	35.53	-0.106
79	35.52	0.000
Median	35.52	0.000
23	35.45	0.458
32	35.45	0.458
24	35.44	0.564
34	35.44	0.564
23	35.43	0.599
43	35.43	0.599
43	35.40	0.811
32	35.38	0.987
Std Dev	35.37	1.000
31	35.30	1.534

050.50 %K ₂ O Soluble Potash		
Lab	ICP(Oxalate)	
23	0.13	0.000
23	0.13	0.000
Median	0.13	0.000

050.51 %K ₂ O Soluble Potash		
Lab	ICP(Citrate)	
137	0.14	0.000
Median	0.14	0.000

050.61 Soluble Potash		
Lab	Flame Photometric(Citrate)	
29	0.31	0.000
Median	0.31	0.000

050.99 Soluble Potash		
Lab	%K ₂ O	Other
330	0.55	-48.755
Std Dev	0.14	-1.000
24	0.14	-0.587
24	0.14	-0.587
61	0.14	-0.587
Median	0.14	0.000
31	0.13	0.587
61	0.13	0.587
Std Dev	0.13	1.000
43	0.12	1.248
43	0.12	1.291

050.XX Soluble Potash		
Lab	%K ₂ O	Total Method
330	0.55	-55.610
29	0.31	-23.986
Std Dev	0.14	-1.000
24	0.14	-0.670
24	0.14	-0.670
61	0.14	-0.670
137	0.14	-0.670
Median	0.14	0.000
23	0.13	0.670
23	0.13	0.670
31	0.13	0.670
61	0.13	0.670
Std Dev	0.13	1.000
43	0.12	1.424
43	0.12	1.472

060.00 Free Water		
Lab	Vacuum Oven	
34	0.90	-0.859
24	0.88	-0.687
32	0.86	-0.584
24	0.85	-0.515
23	0.84	-0.412

23	0.84	-0.412
32	0.78	0.000
Median	0.78	0.000
31	0.70	0.515
79	0.70	0.550
140	0.66	0.825
43	0.63	0.996
Std Dev	0.63	1.000
79	0.62	1.065
43	0.57	1.443

060.10 Free Water		
Lab	Vacuum Desiccate	
61	0.36	-1.340
Std Dev	0.35	-1.000
Median	0.30	0.000
Std Dev	0.26	1.000
61	0.25	1.340

060.99 Free Water		
Lab	Other	
113	0.87	-1.614
330	0.79	-1.113
Std Dev	0.77	-1.000
14	0.64	-0.141
Median	0.61	0.000
14	0.59	0.141
275	0.52	0.580
Std Dev	0.45	1.000
275	0.45	1.019

060.XX Free Water		
Lab	Total Method	
34	0.90	-1.121
Std Dev	0.88	-1.000
24	0.88	-0.984
113	0.87	-0.957
32	0.86	-0.902
24	0.85	-0.848
23	0.84	-0.766
23	0.84	-0.766
330	0.79	-0.520
32	0.78	-0.438
31	0.70	-0.027

79	0.70	0.000
Median	0.70	0.000
140	0.66	0.219
14	0.64	0.328
43	0.63	0.356
79	0.62	0.410
14	0.59	0.574
43	0.57	0.711
275	0.52	0.957
Std Dev	0.51	1.000
275	0.45	1.340
61	0.36	1.832
61	0.25	2.461

101.30 Acid Soluble Calcium		
Lab	%CaO	ICP
330	0.59	-3.898
Std Dev	0.53	-1.000
32	0.53	-0.975
24	0.52	-0.487
61	0.52	-0.487
23	0.52	-0.244
23	0.51	0.000
24	0.51	0.000
34	0.51	0.000
61	0.51	0.000
Median	0.51	0.000
31	0.49	0.853
14	0.49	0.975
32	0.49	0.975
Std Dev	0.49	1.000
43	0.47	1.765
43	0.47	1.987
14	0.23	13.644

101.XX Acid Soluble Calcium		
Lab	%CaO	Total Method
330	0.59	-3.898
Std Dev	0.53	-1.000
32	0.53	-0.975
24	0.52	-0.487
61	0.52	-0.487
23	0.52	-0.244
23	0.51	0.000

24	0.51	0.000
34	0.51	0.000
61	0.51	0.000
Median	0.51	0.000
31	0.49	0.853
14	0.49	0.975
32	0.49	0.975
Std Dev	0.49	1.000
43	0.47	1.765
43	0.47	1.987
14	0.23	13.644

121.30 Acid Soluble Magnesium		
Lab	%MgO	ICP
34	0.99	-1.600
61	0.98	-1.120
Std Dev	0.97	-1.000
24	0.97	-0.960
32	0.96	-0.640
61	0.96	-0.640
23	0.96	-0.480
23	0.95	-0.320
Median	0.94	0.000
32	0.93	0.320
24	0.93	0.480
14	0.92	0.640
31	0.92	0.720
Std Dev	0.91	1.000
14	0.91	1.120
43	0.84	3.360
43	0.83	3.680

121.99 Acid Soluble Magnesium		
Lab	%MgO	Other
330	0.97	0.000
Median	0.97	0.000

121.XX Acid Soluble Magnesium		
Lab	%MgO	Total Method
34	0.99	-1.159
Std Dev	0.98	-1.000
61	0.98	-0.724
24	0.97	-0.579
330	0.97	-0.579

32	0.96	-0.290
61	0.96	-0.290
23	0.96	-0.145
23	0.95	0.000
Median	0.95	0.000
32	0.93	0.579
24	0.93	0.724
14	0.92	0.869
31	0.92	0.942
Std Dev	0.92	1.000
14	0.91	1.304
43	0.84	3.332
43	0.83	3.622

144.01 Sulfate Sulfur (S)		
Lab		Gravimetric
47	10.38	-83.657
Std Dev	5.36	-1.000
113	5.34	-0.618
79	5.33	-0.454
Median	5.30	0.000
140	5.28	0.454
103	5.25	0.866
Std Dev	5.24	1.000
79	5.15	2.515

144.70 Sulfur		
Lab		Spectrometric
43	5.16	-1.340
Std Dev	5.16	-1.000
Median	5.15	0.000
Std Dev	5.14	1.000
43	5.14	1.340

144.99 Sulfate Sulfur (S)		
Lab		Other
61	7.01	-9.615
38	5.82	-3.039
Std Dev	5.45	-1.000
24	5.41	-0.774
275	5.41	-0.774
23	5.40	-0.691
23	5.39	-0.635
34	5.33	-0.332

24	5.27	0.000
Median	5.27	0.000
275	5.24	0.166
14	5.24	0.193
32	5.19	0.442
14	5.13	0.774
32	5.13	0.801
31	5.12	0.843
Std Dev	5.09	1.000
330	2.06	17.716

144.XX Sulfate Sulfur (S)		
Lab		Total Method
47	10.38	-29.109
61	7.01	-9.922
38	5.82	-3.136
Std Dev	5.45	-1.000
24	5.41	-0.798
275	5.41	-0.798
23	5.40	-0.713
23	5.39	-0.656
113	5.34	-0.399
34	5.33	-0.342
79	5.33	-0.342
140	5.28	-0.029
24	5.27	0.000
Median	5.27	0.000
103	5.25	0.114
275	5.24	0.171
14	5.24	0.200
32	5.19	0.456
43	5.16	0.627
79	5.15	0.684
43	5.14	0.770
14	5.13	0.798
32	5.13	0.827
31	5.12	0.870
Std Dev	5.09	1.000
330	2.06	18.281

145.99 Total Sulfur (S)		
Lab		Other
137	10.65	-2.892
Std Dev	10.38	-1.000

275	10.33	-0.670
24	10.29	-0.388
43	10.29	-0.388
34	10.28	-0.317
32	10.27	-0.247
43	10.26	-0.176
32	10.25	-0.106
23	10.24	0.000
23	10.24	0.000
Median	10.24	0.000
39	10.17	0.434
24	10.13	0.776
Std Dev	10.09	1.000
113	10.09	1.023
275	10.09	1.023
140	10.08	1.128
103	10.02	1.552
219	9.61	4.408

151.30	Total Arsenic
Lab	ICP

31	154.75	-34.508
61	18.50	-1.115
Std Dev	18.03	-1.000
330	14.50	-0.135
43	14.00	-0.012
Median	13.95	0.000
43	13.90	0.012
140	10.06	0.953
335	9.95	0.980
Std Dev	9.87	1.000
24	9.63	1.059

151.XX	Total Arsenic	
Lab	Total Method	
31	154.75	-34.508
61	18.50	-1.115
Std Dev	18.03	-1.000
330	14.50	-0.135
43	14.00	-0.012
Median	13.95	0.000
43	13.90	0.012
140	10.06	0.953
335	9.95	0.980
Std Dev	9.87	1.000
24	9.63	1.059

165.99	Acid Soluble Boron	
Lab	PPM	Other
24	44.90	-1.340
Std Dev	42.67	-1.000
Median	36.12	0.000
Std Dev	29.56	1.000
330	27.33	1.340

165.XX, ppm	Acid Soluble Boron	
Lab	PPM	Total Method
24	44.90	-1.340
Std Dev	42.67	-1.000
Median	36.12	0.000
Std Dev	29.56	1.000
330	27.33	1.340

171.99	Water Soluble Boron	
Lab	PPM	Other

330	32.96	0.000
Median	32.96	0.000

171.XX	Water Soluble Boron	
Lab	PPM	Total Method
330	32.96	0.000
Median	32.96	0.000

181.00	Total Cadmium	
Lab	Atomic Absorption	
330	2.85	0.000
Median	2.85	0.000

181.30	Total Cadmium	
Lab	PPM	ICP
43	3.47	-1.032
43	3.47	-1.032
Std Dev	3.44	-1.000
275	2.92	-0.382
335	2.61	-0.009
Median	2.60	0.000
275	2.59	0.009
61	2.10	0.589
Std Dev	1.75	1.000
61	1.40	1.417
31	1.33	1.506

181.99	Total Cadmium	
Lab	Other	
24	1.85	0.000
Median	1.85	0.000

181.XX	Total Cadmium	
Lab	PPM	Total Method
43	3.47	-1.177
43	3.47	-1.177
Std Dev	3.34	-1.000
275	2.92	-0.435
330	2.85	-0.340
335	2.61	-0.010
Median	2.60	0.000
275	2.59	0.010
61	2.10	0.671
Std Dev	1.86	1.000

24	1.85	1.015
61	1.40	1.615
31	1.33	1.716

190.00	Aluminum	
Lab	%Al ₂ O ₃	ICP
14	1.38	-1.474
14	1.38	-1.474
24	1.38	-1.474
275	1.37	-1.206
Std Dev	1.36	-1.000
23	1.34	-0.268
23	1.33	-0.134
34	1.33	-0.134
24	1.33	0.000
Median	1.33	0.000
32	1.32	0.268
43	1.32	0.268
43	1.31	0.536
61	1.30	0.670
275	1.30	0.670
Std Dev	1.29	1.000
32	1.28	1.206
61	1.28	1.340

190.99	Aluminum	
Lab	%Al ₂ O ₃	Atomic Absorption
330	1.36	-1.340
Std Dev	1.35	-1.000
Median	1.33	0.000
Std Dev	1.31	1.000
31	1.30	1.340

190.XX	Aluminum	
Lab	%Al ₂ O ₃	Total Method
14	1.38	-1.340
14	1.38	-1.340
24	1.38	-1.340
275	1.37	-1.096
Std Dev	1.37	-1.000
330	1.36	-0.731
23	1.34	-0.244
23	1.33	-0.122
34	1.33	-0.122

24	1.33	0.000
Median	1.33	0.000
32	1.32	0.244
43	1.32	0.244
43	1.31	0.487
61	1.30	0.609
275	1.30	0.609
31	1.30	0.609
Std Dev	1.28	1.000
32	1.28	1.096
61	1.28	1.218

191.00	Total Chromium	
Lab	Atomic Absorbtion	
330	67.00	0.000
Median	67.00	0.000

191.30	Total Chromium	
Lab	ICP	
335	74.10	-4.821
31	65.73	-1.414
Std Dev	64.71	-1.000
61	62.50	-0.102
Median	62.25	0.000
43	62.00	0.102
43	61.50	0.305
61	60.50	0.712

191.99	Total Chromium	
Lab	PPM	Other
24	67.35	0.000
Median	67.35	0.000

191.XX	Total Chromium	
Lab	PPM	Total Method
335	74.10	-2.568
Std Dev	68.00	-1.000
24	67.35	-0.832
330	67.00	-0.742
31	65.73	-0.415
Median	64.11	0.000
61	62.50	0.415
43	62.00	0.543
43	61.50	0.672

61	60.50	0.929
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202.30	Acid Soluble Cobalt	
Lab	PPM	ICP
335		

202.99	Acid Soluble Cobalt	
Lab	Other	
24	2.26	0.000
Median	2.26	0.000

202.XX	Acid Soluble Cobalt	
Lab	PPM	Total Method
335	3.06	-0.432
330	3.05	-0.425
43	3.00	-0.354
43	3.00	-0.354
Median	2.75	0.000
61	2.50	0.354
24	2.26	0.701
Std Dev	2.04	1.000
61	1.50	1.770
31	0.00	3.894

221.00	Acid Soluble Copper	
Lab	Atomic Absorption	
330	0.00	0.000
Median	0.00	0.000

221.30	Acid Soluble Copper	
Lab	PPM	ICP
43	2.00	-1.340
43	2.00	-1.340
Std Dev	1.49	-1.000
31	0.00	0.000
61	0.00	0.000
61	0.00	0.000
Median	0.00	0.000

221.99	Acid Soluble Copper	
Lab	Other	
24	0.00	0.000
Median	0.00	0.000

221.XX	Acid Soluble Copper	
Lab	PPM	Total Method
43	2.00	-2.680
43	2.00	-2.680
Std Dev	0.75	-1.000
24	0.00	0.000
31	0.00	0.000
61	0.00	0.000
61	0.00	0.000
330	0.00	0.000
Median	0.00	0.000

241.30	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	ICP
14	1.68	-5.543
24	1.51	-1.279
Std Dev	1.49	-1.000
34	1.48	-0.670
23	1.48	-0.548
32	1.48	-0.548
23	1.47	-0.426
275	1.47	-0.426
61	1.46	-0.061
Median	1.45	0.000
24	1.45	0.061
32	1.45	0.183
43	1.43	0.670
14	1.42	0.792
61	1.42	0.792
31	1.42	0.853
43	1.42	0.914
Std Dev	1.41	1.000
275	1.41	1.035

241.99	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Other
330	1.52	0.000
Median	1.52	0.000

241.XX	Acid Soluble Iron	
Lab	%Fe ₂ O ₃	Total Method
14	1.68	-5.482
330	1.52	-1.584
24	1.51	-1.218

Std Dev	1.50	-1.000
34	1.48	-0.609
23	1.48	-0.487
32	1.48	-0.487
23	1.47	-0.365
275	1.47	-0.365
61	1.46	0.000
Median	1.46	0.000
24	1.45	0.122
32	1.45	0.244
43	1.43	0.731
14	1.42	0.853
61	1.42	0.853
31	1.42	0.914
43	1.42	0.975
Std Dev	1.41	1.000
275	1.41	1.096

251.00	Total Lead	
Lab	Atomic Absorbtion	
330	4.15	0.000
Median	4.15	0.000

251.30	Total Lead	
Lab	PPM	ICP
31	31.93	-7.870
335	18.27	-4.218
Std Dev	6.24	-1.000
275	2.89	-0.104
275	2.70	-0.053
Median	2.50	0.000
43	2.30	0.053
43	2.30	0.053
61	0.00	0.669
61	0.00	0.669

251.99	Total Lead	
Lab	Other	
24	2.31	0.000
Median	2.31	0.000

251.XX	Total Lead	
Lab	PPM	Total Method
31	31.93	-25.683

335	18.27	-13.762
330	4.15	-1.436
Std Dev	3.65	-1.000
275	2.89	-0.336
275	2.70	-0.170
Median	2.51	0.000
24	2.31	0.170
43	2.30	0.179
43	2.30	0.179
Std Dev	1.36	1.000
61	0.00	2.187
61	0.00	2.187

261.30 Acid Soluble Manganese		
Lab	ICP	
31	279.35	-1.340
Std Dev	279.24	-1.000
Median	278.93	0.000
Std Dev	278.61	1.000
330	278.50	1.340

261.99 Acid Soluble Manganese		
Lab	PPM	Other
43	290.50	-1.082
43	290.00	-1.031
Std Dev	289.70	-1.000
61	280.00	0.000
Median	280.00	0.000
24	277.00	0.309
61	271.50	0.876

261.XX Acid Soluble Manganese		
Lab	PPM	Total Method
43	290.50	-2.061
43	290.00	-1.968
Std Dev	284.76	-1.000
61	280.00	-0.120
31	279.35	0.000
Median	279.35	0.000
330	278.50	0.157
24	277.00	0.434
Std Dev	273.94	1.000
61	271.50	1.451

271.99 Water Soluble Manganese		
Lab	Other	
330	197.50	0.000
Median	197.50	0.000

271.XX Water Soluble Manganese		
Lab	PPM	Total Method
330	197.50	0.000
Median	197.50	0.000

281.30 Total Mercury		
Lab	PPM	ICP
335	0.05	-1.340
Std Dev	0.04	-1.000
Median	0.03	0.000
Std Dev	0.01	1.000
24	0.00	1.340

281.99 Total Mercury		
Lab	PPM	Other
330	0.04	0.000
Median	0.04	0.000

281.XX Total Mercury		
Lab	PPM	Total Method
335	0.05	-0.536
330	0.04	0.000
Median	0.04	0.000
Std Dev	0.02	1.000
24	0.00	2.144

289.30 Total Molybdenum		
Lab	PPM	ICP
43		

289.99 Total Molybdenum		
Lab	PPM	Other
24	10.00	0.000
Median	10.00	0.000

289.XX Total Molybdenum		
Lab	PPM	Total Method
24	10.00	-1.583
Std Dev	8.71	-1.000
43	8.45	-0.882

43	8.40	-0.859
330	6.50	0.000
Median	6.50	0.000
31	5.93	0.260
61	5.00	0.678
61	4.50	0.905

291.30 Total Nickel		
Lab	ICP	
330		

291.99 Total Nickel		
Lab	PPM	Other
24	13.05	0.000
Median	13.05	0.000

291.XX Total Nickel		
Lab	PPM	Total Method
330	19.50	-2.393

Std Dev	17.32	-1.000
335	16.95	-0.766
43	16.00	-0.160
43	16.00	-0.160
Median	15.75	0.000
61	15.50	0.160
61	14.50	0.798
Std Dev	14.18	1.000
24	13.05	1.723
31	11.15	2.935

301.30 Total Selenium		
Lab	PPM	ICP
330	5.50	-4.616
Std Dev	1.36	-1.000
24	0.32	-0.095
Median	0.21	0.000
61	0.10	0.095
335	0.01	0.174

301.XX Total Selenium		
Lab	PPM	Total Method
330	5.50	-4.616
Std Dev	1.36	-1.000
24	0.32	-0.095
Median	0.21	0.000

61	0.10	0.095
335	0.01	0.174

311.00 Sodium		
Lab	%Na ₂ O	Atomic Absorbtion
330	0.39	0.000
Median	0.39	0.000

311.99 Sodium		
Lab	%Na ₂ O	Other
24	0.26	-0.804
23	0.25	-0.268
24	0.25	-0.268
23	0.24	0.000
31	0.24	0.000
Median	0.24	0.000
61	0.23	0.536
Std Dev	0.22	1.000
61	0.22	1.072
43	0.22	1.303
43	0.22	1.329

311.XX Sodium		
Lab	%Na ₂ O	Total Method
330	0.39	-8.933
Std Dev	0.26	-1.000
24	0.26	-0.893
23	0.25	-0.298
24	0.25	-0.298
23	0.24	0.000
31	0.24	0.000
Median	0.24	0.000
61	0.23	0.596
Std Dev	0.22	1.000
61	0.22	1.191
43	0.22	1.448
43	0.22	1.476

321.30 Acid Soluble Zinc		
Lab	PPM	ICP
24	1.07	-3.073
66	1.06	-2.634
32	1.04	-1.756
24	1.03	-1.097

Std Dev	1.02	-1.000
32	1.02	-0.878
23	1.01	-0.219
137	1.01	-0.219
23	1.00	0.000
34	1.00	0.000
140	1.00	0.000
Median	1.00	0.000
275	1.00	0.044
47	0.99	0.439
275	0.99	0.439
31	0.98	0.689
Std Dev	0.98	1.000
61	0.94	2.845
61	0.92	3.499
43	0.88	5.224
43	0.88	5.378

321.99		
Lab	Acid Soluble Zinc	Other
330	1.08	-1.340
Std Dev	1.08	-1.000
Median	1.06	0.000
Std Dev	1.04	1.000
38	1.03	1.340

321.XX		
Lab	PPM	Acid Soluble Zinc Total Method
330	1.08	-2.952
24	1.07	-2.490
66	1.06	-2.134
32	1.04	-1.423
38	1.03	-1.067
Std Dev	1.03	-1.000
24	1.03	-0.889
32	1.02	-0.711
23	1.01	-0.178
137	1.01	-0.178
23	1.00	0.000
34	1.00	0.000
140	1.00	0.000
Median	1.00	0.000
275	1.00	0.036
47	0.99	0.356

275	0.99	0.356
31	0.98	0.558
Std Dev	0.97	1.000
61	0.94	2.305
61	0.92	2.835
43	0.88	4.233
43	0.88	4.357

325.10		
Lab	%	Fluoride Electrode
79	2.05	-3.603
79	1.91	-1.936
31	1.78	-0.447
23	1.77	-0.328
24	1.75	-0.089
23	1.75	-0.030
Median	1.74	0.000
34	1.74	0.030
24	1.68	0.804
14	1.67	0.864
32	1.63	1.340
14	1.61	1.578
32	1.59	1.876

325.99		
Lab	%	Fluoride Other
61	1.86	-0.825
61	1.84	0.000
Median	1.84	0.000
330	1.79	1.855

325.XX		
Lab	%	Fluoride Total Method
79	2.05	-2.824
79	1.91	-1.484
61	1.86	-1.005
61	1.84	-0.814
330	1.79	-0.383
31	1.78	-0.287
23	1.77	-0.191
24	1.75	0.000
Median	1.75	0.000
23	1.75	0.048
34	1.74	0.096

24	1.68	0.718
14	1.67	0.766
32	1.63	1.149
14	1.61	1.340
32	1.59	1.579