

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

# Methods: 149

Sample # 171211

Statistical Summary

# Labs Reporting: 91

Grade 5-15-30

Issue Date : 01/31/2018

| Method Code | Analyte & Method  | # Tests Submitted | # Tests in Robust Calculations | Raw Mean | Raw SD | Assigned Value Robust Mean | IA at Analyte Value | Robust sd | Robust Uncertainty (U) | Robust % RSD | IA %RSD | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|-------------------|--------------------------------|----------|--------|----------------------------|---------------------|-----------|------------------------|--------------|---------|-----------------------|--------------|
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%)             | 12                | 12                             | 4.270    | 0.1068 | 4.270                      |                     | 0.1211    | 0.0437                 | 2.84%        |         | 0.0404                | 3.21%        |
| 001.99      | Ammoniacal Nitrogen, Other (%)                              | 21                | 21                             | 4.395    | 0.1598 | 4.383                      |                     | 0.1391    | 0.0379                 | 3.17%        |         | 0.0444                | 3.20%        |
| 002.20      | Nitrate Nitrogen, Jones Modified (%)                        | 1                 |                                | 4.445    |        |                            |                     |           |                        |              |         |                       |              |
| 002.99      | Nitrate Nitrogen, Other (%)                                 | 17                | 17                             | 0.7412   | 0.0969 | 0.7302                     |                     | 0.0826    | 0.0250                 | 11.32%       |         | 0.0410                | 4.19%        |
| 009.10      | Ammoniacal Plus Nitrate Nitrogen, Devarda (%)               | 4                 | 4                              | 5.118    | 0.0814 | 5.118                      |                     | 0.0814    | 0.0509                 | 1.59%        |         | 0.0725                | 3.13%        |
| 009.99      | Ammoniacal Plus Nitrate Nitrogen, Other (%)                 | 2                 | 2                              | 5.295    | 0.0636 |                            |                     |           |                        |              |         |                       |              |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)                 | 6                 | 6                              | 4.953    | 0.2272 | 4.968                      | 0.5114              | 0.2215    | 0.1130                 | 4.46%        | 5.15%   | 0.0536                | 3.14%        |
| 010.12      | Total Nitrogen, Salicylic (5%)                              | 2                 | 2                              | 5.173    | 0.0180 |                            |                     |           |                        |              |         |                       |              |
| 010.16      | Total Nitrogen, Raney (5%)                                  | 1                 |                                | 4.760    |        |                            |                     |           |                        |              |         |                       |              |
| 010.60      | Total Nitrogen, Combustion (5%)                             | 54                | 52                             | 5.161    | 0.1713 | 5.160                      | 0.5114              | 0.1335    | 0.0231                 | 2.59%        | 4.96%   | 0.0700                | 3.12%        |
| 010.99      | Total Nitrogen, Other (5%)                                  | 6                 | 6                              | 5.120    | 0.2614 | 5.120                      | 0.5114              | 0.2964    | 0.1512                 | 5.79%        | 4.99%   | 0.0430                | 3.13%        |
| 020.10      | Total Phosphorus as P2O5, Gravimetric Quinolinium ... (%)   | 4                 | 4                              | 15.69    | 0.1322 | 15.69                      |                     | 0.1322    | 0.0826                 | 0.84%        |         | 0.1450                | 2.64%        |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric Molyb... (%)   | 17                | 16                             | 15.72    | 0.6043 | 15.76                      |                     | 0.4983    | 0.1557                 | 3.16%        |         | 0.1087                | 2.64%        |
| 020.40      | Total Phosphorus as P2O5, Automated (%)                     | 2                 | 2                              | 15.36    | 0.1237 |                            |                     |           |                        |              |         |                       |              |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                           | 19                | 17                             | 15.60    | 0.6775 | 15.58                      |                     | 0.7381    | 0.2238                 | 4.74%        |         | 0.2275                | 2.65%        |
| 020.99      | Total Phosphorus as P2O5, Other (%)                         | 6                 | 5                              | 15.92    | 2.340  | 15.92                      |                     | 2.340     | 1.308                  | 14.70%       |         | 0.0720                | 2.64%        |
| 030.40      | Citrate Insoluble Phosphorus as P2O5, Automated, t... (%)   | 1                 |                                | 0.1700   |        |                            |                     |           |                        |              |         |                       |              |
| 040.20      | Indirect Available Phosphorus as P2O5, Spectrophot... (15%) | 2                 | 2                              | 15.78    | 0.3076 |                            |                     |           |                        |              |         |                       |              |
| 040.40      | Indirect Available Phosphorus as P2O5, Automated (15%)      | 1                 |                                | 15.11    |        |                            |                     |           |                        |              |         |                       |              |
| 040.99      | Indirect Available Phosphorus as P2O5, Other (15%)          | 1                 |                                | 15.32    |        |                            |                     |           |                        |              |         |                       |              |
| 041.10      | Direct Available Phosphorus as P2O5, Gravimetric Q... (15%) | 4                 | 4                              | 15.14    | 0.4647 | 15.14                      | 0.7000              | 0.4647    | 0.2904                 | 3.07%        | 2.31%   | 0.3624                | 2.66%        |
| 041.11      | Direct Available Phosphorus as P2O5, Gravimetric Q... (15%) | 2                 | 2                              | 15.20    | 0.2121 |                            |                     |           |                        |              |         |                       |              |
| 041.20      | Direct Available Phosphorus as P2O5, Spectrophotom... (15%) | 1                 |                                | 14.63    |        |                            |                     |           |                        |              |         |                       |              |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrophotom... (15%) | 5                 | 5                              | 15.08    | 0.4960 | 15.08                      | 0.7000              | 0.4960    | 0.2773                 | 3.29%        | 2.32%   | 0.1900                | 2.66%        |
| 041.40      | Direct Available Phosphorus as P2O5, Automated (15%)        | 1                 |                                | 15.82    |        |                            |                     |           |                        |              |         |                       |              |
| 041.50      | Direct Available Phosphorus as P2O5, ICP (15%)              | 2                 | 2                              | 15.13    | 0.2475 |                            |                     |           |                        |              |         |                       |              |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Citrate-... (15%) | 9                 | 9                              | 15.12    | 0.2059 | 15.12                      | 0.7000              | 0.2250    | 0.0937                 | 1.49%        | 2.31%   | 0.2163                | 2.66%        |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate-EDTA ... (15%) | 13                | 13                             | 15.09    | 0.3216 | 15.09                      | 0.7000              | 0.3647    | 0.1264                 | 2.42%        | 2.32%   | 0.1117                | 2.66%        |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)            | 11                | 11                             | 15.11    | 0.2449 | 15.11                      | 0.7000              | 0.1439    | 0.0542                 | 0.95%        | 2.32%   | 0.1173                | 2.66%        |
| 048.10      | Water Soluble Phosphorus as P2O5, Gravimetric Quin... (%)   | 1                 |                                | 12.91    |        |                            |                     |           |                        |              |         |                       |              |
| 048.20      | Water Soluble Phosphorus as P2O5, Spectrophotometr... (%)   | 2                 | 2                              | 12.81    | 0.3829 |                            |                     |           |                        |              |         |                       |              |

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|-------------|---|-------------------|--------------------------------|----------|--------|----------------------------|---------------------|-----------|------------------------|--------------|---------|-----------------------|--------------|
| 048.40      | Water Soluble Phosphorus as P2O5, Automated (%)             | 1                 |                                | 12.93    |        |                            |                     |           |                        |              |         |                       |              |
| 048.50      | Water Soluble Phosphorus as P2O5, ICP (%)                   | 1                 |                                | 13.17    |        |                            |                     |           |                        |              |         |                       |              |
| 048.99      | Water Soluble Phosphorus as P2O5, Other (%)                 | 2                 | 2                              | 12.87    | 0.0389 |                            |                     |           |                        |              |         |                       |              |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)                | 9                 | 9                              | 30.44    | 0.3551 | 30.44                      | 1.4022              | 0.4027    | 0.1678                 | 1.32%        | 2.30%   | 0.1660                | 2.39%        |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)                | 6                 | 5                              | 31.29    | 0.9145 | 31.29                      | 1.4022              | 0.9145    | 0.5112                 | 2.92%        | 2.24%   | 0.4920                | 2.38%        |
| 050.31      | Soluble Potassium as K2O, AA (Citrate) (30%)                | 1                 |                                | 23.25    |        |                            |                     |           |                        |              |         |                       |              |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)               | 8                 | 8                              | 30.34    | 0.7594 | 30.26                      | 1.4022              | 0.6669    | 0.2947                 | 2.20%        | 2.32%   | 0.7126                | 2.39%        |
| 050.51      | Soluble Potassium as K2O, ICP (Citrate) (30%)               | 3                 | 3                              | 25.77    | 8.520  | 25.77                      | 1.4022              | 8.520     | 6.149                  | 33.06%       | 2.72%   | 0.4067                | 2.45%        |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)          | 10                | 10                             | 30.84    | 0.7952 | 30.84                      | 1.4022              | 0.8899    | 0.3518                 | 2.89%        | 2.27%   | 0.3836                | 2.39%        |
| 050.60      | Soluble Potassium as K2O, Flame Photometric (Oxala... (30%) | 5                 | 5                              | 28.39    | 7.530  | 28.39                      | 1.4022              | 7.530     | 4.209                  | 26.52%       | 2.47%   | 0.0341                | 2.42%        |
| 050.61      | Soluble Potassium as K2O, Flame Photometric (Citra... (30%) | 2                 | 2                              | 30.94    | 0.0566 |                            |                     |           |                        |              |         |                       |              |
| 050.62      | Soluble Potassium as K2O, Flame Photometric (Citra... (30%) | 2                 | 2                              | 30.54    | 0.3168 |                            |                     |           |                        |              |         |                       |              |
| 050.99      | Soluble Potassium as K2O, Other (30%)                       | 36                | 35                             | 30.24    | 1.291  | 30.41                      | 1.4022              | 0.6747    | 0.1426                 | 2.22%        | 2.31%   | 0.3845                | 2.39%        |
| 060.00      | Water (Free), Vacuum Oven (%)                               | 2                 | 2                              | 0.6775   | 0.1096 |                            |                     |           |                        |              |         |                       |              |
| 060.30      | Water (Free), AFPC No. 2B (105°C oven for 2 hours,...       | 1                 |                                | 1.150    |        |                            |                     |           |                        |              |         |                       |              |
| 060.99      | Water (Free), Other (%)                                     | 5                 | 5                              | 1.214    | 0.5529 | 1.214                      |                     | 0.5529    | 0.3091                 | 45.54%       |         | 0.0612                | 3.88%        |
| 101.00      | Acid Soluble Calcium, AA, inorganic 965.09 (1%)             | 4                 | 4                              | 0.3687   | 0.0239 | 0.3687                     | 0.2192              | 0.0239    | 0.0150                 | 6.49%        | 29.73%  | 0.0168                | 4.65%        |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorganic ... (1%   | 16                | 15                             | 0.3922   | 0.1049 | 0.3700                     | 0.2192              | 0.0582    | 0.0188                 | 15.74%       | 29.63%  | 0.0131                | 4.65%        |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006.03A-C... (     | 5                 | 5                              | 0.3875   | 0.0486 | 0.3875                     | 0.2192              | 0.0486    | 0.0272                 | 12.55%       | 28.29%  | 0.0212                | 4.61%        |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006.03A-C... (     | 10                | 10                             | 0.3459   | 0.0453 | 0.3531                     | 0.2192              | 0.0238    | 0.0094                 | 6.75%        | 31.05%  | 0.0139                | 4.68%        |
| 101.70      | Acid Soluble Calcium, Titrimetric (1%)                      | 4                 | 4                              | 0.9382   | 0.2996 | 0.9382                     | 0.2192              | 0.2996    | 0.1872                 | 31.93%       | 11.68%  | 0.0800                | 4.04%        |
| 101.99      | Acid Soluble Calcium, Other (1%)                            | 6                 | 6                              | 0.5306   | 0.2836 | 0.4800                     | 0.2192              | 0.1950    | 0.0995                 | 40.62%       | 22.84%  | 0.0242                | 4.47%        |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 (1.2%)         | 8                 | 8                              | 1.260    | 0.2599 | 1.208                      | 0.2592              | 0.1543    | 0.0682                 | 12.77%       | 10.73%  | 0.0502                | 3.89%        |
| 121.30      | Acid Soluble Magnesium, ICP, test portion inorgani... (     | 18                | 18                             | 1.189    | 0.1019 | 1.186                      | 0.2592              | 0.1084    | 0.0319                 | 9.14%        | 10.93%  | 0.0280                | 3.90%        |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 2006.03A... (     | 6                 | 6                              | 1.196    | 0.1685 | 1.155                      | 0.2592              | 0.0837    | 0.0427                 | 7.25%        | 11.22%  | 0.0183                | 3.91%        |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 2006.03A... (     | 12                | 11                             | 1.167    | 0.0583 | 1.169                      | 0.2592              | 0.0635    | 0.0239                 | 5.43%        | 11.09%  | 0.0257                | 3.91%        |
| 121.70      | Acid Soluble Magnesium, Titrimetric (EDTA) (1.2%)           | 1                 |                                | 1.650    |        |                            |                     |           |                        |              |         |                       |              |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                        | 9                 | 9                              | 1.182    | 0.1401 | 1.198                      | 0.2592              | 0.0777    | 0.0324                 | 6.48%        | 10.82%  | 0.0291                | 3.89%        |
| 131.00      | Water Soluble Magnesium, AA (%)                             | 2                 | 2                              | 1.061    | 0.0906 |                            |                     |           |                        |              |         |                       |              |
| 131.30      | Water Soluble Magnesium, ICP (%)                            | 1                 |                                | 0.9850   |        |                            |                     |           |                        |              |         |                       |              |
| 131.70      | Water Soluble Magnesium, Titrimetric (EDTA) (%)             | 3                 | 3                              | 1.008    | 0.3840 | 1.008                      |                     | 0.3840    | 0.2771                 | 38.11%       |         | 0.0791                | 4.00%        |
| 143.00      | Elemental Sulfur, Gravimetric Sulfur - carbon disu... (%)   | 2                 | 2                              | 1.352    | 0.4634 |                            |                     |           |                        |              |         |                       |              |
| 143.99      | Elemental Sulfur, Other (%)                                 | 3                 | 3                              | 5.622    | 0.5777 | 5.622                      |                     | 0.5777    | 0.4169                 | 10.28%       |         | 0.1133                | 3.08%        |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulfur - ... (%)   | 6                 | 6                              | 4.189    | 0.1779 | 4.189                      |                     | 0.2017    | 0.1029                 | 4.82%        |         | 0.0862                | 3.22%        |
| 145.99      | Sulfate Sulfur, HCl soluble, Other (%)                      | 2                 | 2                              | 4.518    | 1.107  |                            |                     |           |                        |              |         |                       |              |
| 148.00      | Total Sulfur, Combustion (5%)                               | 5                 | 5                              | 5.940    | 0.2083 | 5.940                      | 0.4734              | 0.2083    | 0.1164                 | 3.51%        | 3.98%   | 0.1818                | 3.06%        |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elemental... (5%    | 10                | 9                              | 5.168    | 0.9430 | 5.168                      | 0.4734              | 1.069     | 0.4456                 | 20.69%       | 4.58%   | 0.1293                | 3.12%        |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03 modi... (5%   | 11                | 11                             | 5.275    | 1.018  | 5.275                      | 0.4734              | 1.154     | 0.4350                 | 21.88%       | 4.49%   | 0.0692                | 3.11%        |
| 148.99      | Total Sulfur, Other (5%)                                    | 12                | 12                             | 5.574    | 0.6341 | 5.616                      | 0.4734              | 0.6252    | 0.2256                 | 11.13%       | 4.21%   | 0.2017                | 3.08%        |
| 149.04      | Sulfur - HNO3 soluble, ICP (%)                              | 2                 | 2                              | 5.981    | 0.0333 |                            |                     |           |                        |              |         |                       |              |
| 151.30      | Acid Soluble Arsenic , ICP (ppm)                            | 7                 | 7                              | 154.2    | 36.09  | 157.3                      |                     | 33.63     | 15.89                  | 21.39%       |         | 3.651                 | 7.47%        |
| 151.32      | Acid Soluble Arsenic , ICP, 2006.03 (ppm)                   | 1                 |                                | 206.8    |        |                            |                     |           |                        |              |         |                       |              |

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|-------------|---|-------------------|--------------------------------|----------|--------|----------------------------|---------------------|-----------|------------------------|--------------|---------|-----------------------|--------------|
| 151.33      | Acid Soluble Arsenic , ICP, 2006.03 modified w/9:3...       | 5                 | 5                              | 206.2    | 16.51  | 206.2                      |                     | 16.51     | 9.229                  | 8.01%        |         | 5.192                 | 7.17%        |
| 151.34      | Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm)           | 2                 | 2                              | 189.3    | 8.734  |                            |                     |           |                        |              |         |                       |              |
| 151.99      | Acid Soluble Arsenic , Other (ppm)                          | 2                 | 2                              | 134.0    | 34.72  |                            |                     |           |                        |              |         |                       |              |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)              | 11                | 10                             | 0.2283   | 0.0365 | 0.2348                     | 0.0400              | 0.0217    | 0.0086                 | 9.26%        | 8.53%   | 0.0113                | 4.97%        |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982.01 (0.3%)     | 11                | 11                             | 0.2494   | 0.0249 | 0.2485                     | 0.0400              | 0.0259    | 0.0098                 | 10.43%       | 8.06%   | 0.0073                | 4.93%        |
| 165.99      | Acid Soluble Boron , Other (0.3%)                           | 20                | 19                             | 0.2531   | 0.0455 | 0.2547                     | 0.0400              | 0.0318    | 0.0091                 | 12.51%       | 7.86%   | 0.0107                | 4.91%        |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)                | 11                | 10                             | 0.1398   | 0.0377 | 0.1378                     |                     | 0.0380    | 0.0150                 | 27.57%       |         | 0.0086                | 5.39%        |
| 171.99      | Water Soluble Boron , Other (%)                             | 2                 | 2                              | 0.2450   | 0.0141 |                            |                     |           |                        |              |         |                       |              |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                            | 10                | 9                              | 146.8    | 48.47  | 148.8                      |                     | 50.51     | 21.05                  | 33.95%       |         | 4.281                 | 7.53%        |
| 181.32      | Acid Soluble Cadmium , ICP, 2006.03 (ppm)                   | 1                 |                                | 176.9    |        |                            |                     |           |                        |              |         |                       |              |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified w/9:3..        | 5                 | 5                              | 173.0    | 19.53  | 173.0                      |                     | 19.53     | 10.92                  | 11.29%       |         | 5.319                 | 7.37%        |
| 181.34      | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)           | 2                 | 2                              | 167.8    | 15.14  |                            |                     |           |                        |              |         |                       |              |
| 181.99      | Acid Soluble Cadmium , Other (ppm)                          | 3                 | 3                              | 148.2    | 24.75  | 148.2                      |                     | 24.75     | 17.86                  | 16.71%       |         | 0.3700                | 7.54%        |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                           | 9                 | 9                              | 346.9    | 74.42  | 349.0                      |                     | 79.62     | 33.18                  | 22.82%       |         | 15.14                 | 6.63%        |
| 191.32      | Acid Soluble Chromium , ICP, 2006.03 (ppm)                  | 1                 |                                | 421.2    |        |                            |                     |           |                        |              |         |                       |              |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified w/9:...       | 5                 | 5                              | 415.3    | 28.54  | 415.3                      |                     | 28.54     | 15.96                  | 6.87%        |         | 5.936                 | 6.46%        |
| 191.34      | Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppn)          | 2                 | 2                              | 401.3    | 12.32  |                            |                     |           |                        |              |         |                       |              |
| 191.99      | Acid Soluble Chromium , Other (ppm)                         | 3                 | 3                              | 303.8    | 22.72  | 303.8                      |                     | 22.72     | 16.40                  | 7.48%        |         | 11.19                 | 6.77%        |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                             | 5                 | 5                              | 271.5    | 57.55  | 271.5                      |                     | 57.55     | 32.17                  | 21.20%       |         | 9.200                 | 6.88%        |
| 202.32      | Acid Soluble Cobalt , ICP, 2006.03 (ppm)                    | 2                 | 2                              | 297.8    | 20.93  |                            |                     |           |                        |              |         |                       |              |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w/9:3 ... (f    | 5                 | 5                              | 310.0    | 26.39  | 310.0                      |                     | 26.39     | 14.75                  | 8.51%        |         | 5.820                 | 6.75%        |
| 202.34      | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)            | 3                 | 3                              | 251.4    | 85.25  | 251.4                      |                     | 85.25     | 61.52                  | 33.91%       |         | 25.82                 | 6.96%        |
| 202.99      | Acid Soluble Cobalt , Other (ppm)                           | 4                 | 4                              | 278.9    | 35.43  | 278.9                      |                     | 35.43     | 22.15                  | 12.70%       |         | 9.350                 | 6.85%        |
| 221.00      | Acid Soluble Copper , AA, inorganic 965.09 (0.1%)           | 4                 | 4                              | 0.0351   | 0.0131 | 0.0351                     | 0.0076              | 0.0131    | 0.0082                 | 37.35%       | 10.89%  | 0.0018                | 6.62%        |
| 221.30      | Acid Soluble Copper , ICP, test portion inorganic ... (0.   | 17                | 16                             | 0.0261   | 0.0037 | 0.0263                     | 0.0076              | 0.0039    | 0.0012                 | 14.76%       | 14.55%  | 0.0010                | 6.92%        |
| 221.32      | Acid Soluble Copper , ICP, test portion 2006.03A-C... (     | 4                 | 4                              | 128.8    | 257.5  | 128.8                      | 0.0076              | 257.5     | 160.9                  | 199.96%      | 0.00%   | 7.500                 | 1.93%        |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.03A-C... (     | 8                 | 8                              | 0.0254   | 0.0021 | 0.0251                     | 0.0076              | 0.0011    | 0.0005                 | 4.21%        | 15.21%  | 0.0010                | 6.96%        |
| 221.99      | Acid Soluble Copper , Other (0.1%)                          | 8                 | 8                              | 0.0351   | 0.0265 | 0.0272                     | 0.0076              | 0.0039    | 0.0017                 | 14.44%       | 14.06%  | 0.0059                | 6.88%        |
| 241.00      | Acid Soluble Iron , AA, inorganic 965.09 (0.5%)             | 7                 | 7                              | 0.5078   | 0.0602 | 0.5078                     | 0.0600              | 0.0683    | 0.0322                 | 13.44%       | 5.91%   | 0.0149                | 4.43%        |
| 241.30      | Acid Soluble Iron , ICP, test portion inorganic 965... (0.! | 18                | 17                             | 0.5672   | 0.0409 | 0.5671                     | 0.0600              | 0.0452    | 0.0137                 | 7.97%        | 5.29%   | 0.0149                | 4.36%        |
| 241.32      | Acid Soluble Iron , ICP, test portion 2006.03A-C (0.5%      | 4                 | 4                              | 0.5701   | 0.1077 | 0.5701                     | 0.0600              | 0.1077    | 0.0673                 | 18.89%       | 5.26%   | 0.0161                | 4.35%        |
| 241.33      | Acid Soluble Iron , ICP, test portion 2006.03A-C, w... (C   | 12                | 11                             | 0.5585   | 0.0293 | 0.5583                     | 0.0600              | 0.0327    | 0.0123                 | 5.85%        | 5.37%   | 0.0097                | 4.37%        |
| 241.99      | Acid Soluble Iron , Other (0.5%)                            | 9                 | 9                              | 0.5202   | 0.0717 | 0.5260                     | 0.0600              | 0.0674    | 0.0281                 | 12.82%       | 5.70%   | 0.0236                | 4.41%        |
| 251.30      | Acid Soluble Lead , ICP (ppm)                               | 10                | 10                             | 753.4    | 205.3  | 757.4                      |                     | 223.9     | 88.51                  | 29.57%       |         | 33.03                 | 5.90%        |
| 251.32      | Acid Soluble Lead , ICP, 2006.03 (ppm)                      | 1                 |                                | 906.9    |        |                            |                     |           |                        |              |         |                       |              |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9:3 HN...       | 5                 | 5                              | 957.6    | 112.6  | 957.6                      |                     | 112.6     | 62.92                  | 11.75%       |         | 38.07                 | 5.69%        |
| 251.34      | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)              | 2                 | 2                              | 1,027    | 89.87  |                            |                     |           |                        |              |         |                       |              |
| 251.99      | Acid Soluble Lead , Other (ppm)                             | 3                 | 3                              | 760.8    | 206.9  | 760.8                      |                     | 206.9     | 149.3                  | 27.20%       |         | 6.107                 | 5.89%        |
| 261.12      | Acid Soluble Manganese , AA, inorganic 965.09 (0.3%         | 4                 | 4                              | 0.0272   | 0.0025 | 0.0272                     | 0.0076              | 0.0025    | 0.0016                 | 9.27%        | 14.03%  | 0.0040                | 6.88%        |
| 261.30      | Acid Soluble Manganese , ICP, test portion 972.02a...       | 9                 | 9                              | 0.0344   | 0.0285 | 0.0258                     | 0.0076              | 0.0044    | 0.0018                 | 17.19%       | 14.76%  | 0.0006                | 6.93%        |
| 261.31      | Acid Soluble Manganese , ICP, test portion 972.02b...       | 3                 | 3                              | 0.0269   | 0.0028 | 0.0269                     | 0.0076              | 0.0028    | 0.0020                 | 10.45%       | 14.18%  | 0.0013                | 6.89%        |
| 261.32      | Acid Soluble Manganese , ICP, test portion inorgan... (     | 5                 | 5                              | 32.75    | 73.09  | 32.75                      | 0.0076              | 73.09     | 40.86                  | 223.18%      | 0.01%   | 2.656                 | 2.37%        |

| Method Code | Analyte & Method   | # Tests Submitted | # Tests in Robust Calculations | Raw Mean | Raw SD | Assigned Value Robust Mean | IA at Analyte Value | Robust sd | Robust Uncertainty (U) | Robust % RSD | IA %RSD | Average Range (R-bar) | Horwitz %RSD |
|-------------|--|-------------------|--------------------------------|----------|--------|----------------------------|---------------------|-----------|------------------------|--------------|---------|-----------------------|--------------|
| 261.33      | Acid Soluble Manganese , ICP, test portion organic...      | 1                 |                                | 0.0263   |        |                            |                     |           |                        |              |         |                       |              |
| 261.34      | Acid Soluble Manganese , ICP, test portion 2006.03...      | 4                 | 4                              | 0.0253   | 0.0021 | 0.0253                     | 0.0076              | 0.0021    | 0.0013                 | 8.21%        | 15.07%  | 0.0006                | 6.96%        |
| 261.35      | Acid Soluble Manganese , ICP, test portion 2006.03...      | 8                 | 8                              | 0.0557   | 0.0887 | 0.0260                     | 0.0076              | 0.0047    | 0.0021                 | 18.09%       | 14.64%  | 0.0082                | 6.93%        |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                      | 8                 | 8                              | 0.0553   | 0.0868 | 0.0253                     | 0.0076              | 0.0035    | 0.0015                 | 13.75%       | 15.04%  | 0.0028                | 6.95%        |
| 271.00      | Water Soluble Manganese , AA (%)                           | 1                 |                                | 0.0140   |        |                            |                     |           |                        |              |         |                       |              |
| 271.30      | Water Soluble Manganese , ICP, Ext. 972.03 (%)             | 2                 | 2                              | 0.0133   | 0.0004 |                            |                     |           |                        |              |         |                       |              |
| 281.00      | Acid Soluble Mercury , AA (ppm)                            | 1                 |                                | 25.59    |        |                            |                     |           |                        |              |         |                       |              |
| 281.30      | Acid Soluble Mercury , ICP (ppm)                           | 4                 | 4                              | 15.94    | 16.90  | 15.94                      |                     | 16.90     | 10.56                  | 106.01%      |         | 0.9650                | 10.55%       |
| 281.99      | Acid Soluble Mercury , Other (ppm)                         | 2                 | 2                              | 18.95    | 14.38  |                            |                     |           |                        |              |         |                       |              |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                     | 10                | 10                             | 572.0    | 126.7  | 594.6                      | 186.3773            | 79.65     | 31.48                  | 13.40%       | 15.67%  | 24.50                 | 6.12%        |
| 289.32      | Acid Soluble Molybdenum , ICP, 2006.03 (100ppm)            | 2                 | 2                              | 613.8    | 30.79  |                            |                     |           |                        |              |         |                       |              |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modified w/..       | 8                 | 8                              | 653.5    | 86.68  | 653.5                      | 186.3773            | 98.30     | 43.44                  | 15.04%       | 14.26%  | 29.45                 | 6.03%        |
| 289.34      | Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (1          | 3                 | 3                              | 558.9    | 239.2  | 558.9                      | 186.3773            | 239.2     | 172.6                  | 42.80%       | 16.67%  | 65.66                 | 6.17%        |
| 289.99      | Acid Soluble Molybdenum , Other (100ppm)                   | 3                 | 3                              | 504.1    | 452.5  | 504.1                      | 186.3773            | 452.5     | 326.6                  | 89.77%       | 18.49%  | 6.331                 | 6.27%        |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                            | 7                 | 7                              | 20.64    | 5.070  | 20.64                      |                     | 5.749     | 2.716                  | 27.85%       |         | 0.6114                | 10.14%       |
| 291.32      | Acid Soluble Nickel , ICP, 2006.03 (ppm)                   | 1                 |                                | 23.68    |        |                            |                     |           |                        |              |         |                       |              |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w/9:3 ... (p   | 5                 | 5                              | 26.14    | 2.230  | 26.14                      |                     | 2.230     | 1.247                  | 8.53%        |         | 6.555                 | 9.79%        |
| 291.34      | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)           | 3                 | 3                              | 22.50    | 12.85  | 22.50                      |                     | 12.85     | 9.271                  | 57.10%       |         | 3.586                 | 10.01%       |
| 291.99      | Acid Soluble Nickel , Other (ppm)                          | 4                 | 4                              | 19.05    | 7.950  | 19.05                      |                     | 7.950     | 4.969                  | 41.72%       |         | 3.113                 | 10.27%       |
| 301.30      | Acid Soluble Selenium , ICP (ppm)                          | 3                 | 3                              | 207.4    | 148.8  | 207.4                      |                     | 148.8     | 107.4                  | 71.73%       |         | 10.75                 | 7.17%        |
| 301.32      | Acid Soluble Selenium , ICP, 2006.03 (ppm)                 | 1                 |                                | 381.3    |        |                            |                     |           |                        |              |         |                       |              |
| 301.33      | Acid Soluble Selenium , ICP, 2006.03 modified w/9:...      | 4                 | 4                              | 388.9    | 25.70  | 388.9                      |                     | 25.70     | 16.06                  | 6.61%        |         | 5.350                 | 6.52%        |
| 301.34      | Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)         | 2                 | 2                              | 347.3    | 36.36  |                            |                     |           |                        |              |         |                       |              |
| 301.99      | Acid Soluble Selenium , Other (ppm)                        | 4                 | 4                              | 250.6    | 109.6  | 250.6                      |                     | 109.6     | 68.51                  | 43.73%       |         | 3.925                 | 6.97%        |
| 311.32      | Sodium, ICP, 2006.03 test portion (%)                      | 2                 | 2                              | 0.6893   | 0.0004 |                            |                     |           |                        |              |         |                       |              |
| 311.33      | Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl test .        | 4                 | 4                              | 0.7350   | 0.0751 | 0.7350                     |                     | 0.0751    | 0.0470                 | 10.22%       |         | 0.0102                | 4.19%        |
| 311.99      | Sodium, Other (%)  | 3                 | 3                              | 0.7458   | 0.0413 | 0.7458                     |                     | 0.0413    | 0.0298                 | 5.53%        |         | 0.0303                | 4.18%        |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)            | 13                | 13                             | 1.187    | 0.0676 | 1.177                      | 0.1222              | 0.0525    | 0.0182                 | 4.46%        | 5.19%   | 0.0272                | 3.90%        |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorganic 96... (1.3 | 18                | 17                             | 1.163    | 0.0511 | 1.162                      | 0.1222              | 0.0546    | 0.0165                 | 4.69%        | 5.25%   | 0.0358                | 3.91%        |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03A-C ... (1.   | 5                 | 5                              | 1.152    | 0.1235 | 1.152                      | 0.1222              | 0.1235    | 0.0690                 | 10.72%       | 5.30%   | 0.0116                | 3.92%        |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03A-C, ... (1.  | 13                | 13                             | 1.168    | 0.0958 | 1.181                      | 0.1222              | 0.0718    | 0.0249                 | 6.08%        | 5.17%   | 0.0785                | 3.90%        |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                           | 9                 | 9                              | 1.185    | 0.2020 | 1.168                      | 0.1222              | 0.1209    | 0.0504                 | 10.35%       | 5.23%   | 0.0462                | 3.91%        |
| 325.00      | Water Soluble Zinc , AA (%)                                | 5                 | 5                              | 0.4798   | 0.1382 | 0.4798                     |                     | 0.1382    | 0.0773                 | 28.80%       |         | 0.0284                | 4.47%        |
| 325.30      | Water Soluble Zinc , ICP (%)                               | 2                 | 2                              | 0.8650   | 0.6152 |                            |                     |           |                        |              |         |                       |              |



# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

### Method Proficiency For All Labs (Lab Values)

Sample # 171211

Grade 5-15-30

### Method Precision Report

Issue Date : 01/31/2018

| Method Code | Analyte & Method   | # Tests Submitted | # Tests Used in Precision Calcs | Mean   | SD     | Between Labs sL | Within Labs sr | Reproducibility SR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr |
|-------------|--|-------------------|---------------------------------|--------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|-------|
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%)                            | 12                | 12                              | 4.270  | 0.1068 | 0.1036          | 0.0371         | 0.1100             | 2.43%             | 0.87%            | 2.58%                | 2.966 |
| 001.99      | Ammoniacal Nitrogen, Other (%)   | 21                | 20                              | 4.372  | 0.1233 | 0.1200          | 0.0400         | 0.1265             | 2.74%             | 0.91%            | 2.89%                | 3.163 |
| 002.99      | Nitrate Nitrogen, Other (%)  | 17                | 15                              | 0.7136 | 0.0598 | 0.0543          | 0.0354         | 0.0649             | 7.61%             | 4.96%            | 9.09%                | 1.831 |
| 010.60      | Total Nitrogen, Combustion (5%)  | 54                | 49                              | 5.159  | 0.1206 | 0.1122          | 0.0625         | 0.1284             | 2.17%             | 1.21%            | 2.49%                | 2.055 |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%)            | 17                | 14                              | 15.87  | 0.4382 | 0.4343          | 0.0823         | 0.4421             | 2.74%             | 0.52%            | 2.79%                | 5.370 |
| 020.50      | Total Phosphorus as P2O5, ICP (%)  | 19                | 16                              | 15.67  | 0.6322 | 0.6185          | 0.1855         | 0.6457             | 3.95%             | 1.18%            | 4.12%                | 3.481 |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (15%)          | 9                 | 9                               | 15.12  | 0.2059 | 0.1598          | 0.1836         | 0.2434             | 1.06%             | 1.21%            | 1.61%                | 1.326 |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (15%)               | 13                | 13                              | 15.09  | 0.3216 | 0.3129          | 0.1050         | 0.3301             | 2.07%             | 0.70%            | 2.19%                | 3.143 |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)                           | 11                | 11                              | 15.11  | 0.2449 | 0.2343          | 0.1008         | 0.2550             | 1.55%             | 0.67%            | 1.69%                | 2.529 |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)                               | 9                 | 9                               | 30.44  | 0.3551 | 0.3336          | 0.1723         | 0.3755             | 1.10%             | 0.57%            | 1.23%                | 2.179 |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)                         | 10                | 10                              | 30.84  | 0.7952 | 0.7660          | 0.3020         | 0.8234             | 2.48%             | 0.98%            | 2.67%                | 2.727 |
| 050.99      | Soluble Potassium as K2O, Other (30%)                                      | 36                | 33                              | 30.50  | 0.7090 | 0.6545          | 0.3855         | 0.7596             | 2.15%             | 1.26%            | 2.49%                | 1.970 |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorganic 965.09 (1%)              | 16                | 14                              | 0.3731 | 0.0771 | 0.0767          | 0.0115         | 0.0775             | 20.55%            | 3.08%            | 20.78%               | 6.755 |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006.03A-C, w/dual acid (1%)       | 10                | 9                               | 0.3587 | 0.0215 | 0.0205          | 0.0091         | 0.0225             | 5.73%             | 2.54%            | 6.27%                | 2.465 |
| 121.30      | Acid Soluble Magnesium, ICP, test portion inorganic 965.09 (1.2%)          | 18                | 18                              | 1.189  | 0.1019 | 0.1006          | 0.0232         | 0.1032             | 8.46%             | 1.95%            | 8.68%                | 4.451 |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 2006.03A-C, w/dual acid (1.2%)   | 12                | 11                              | 1.167  | 0.0583 | 0.0560          | 0.0229         | 0.0605             | 4.80%             | 1.96%            | 5.18%                | 2.638 |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elemental (5%)                     | 10                | 9                               | 5.168  | 0.9430 | 0.9401          | 0.1049         | 0.9459             | 18.19%            | 2.03%            | 18.30%               | 9.021 |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03 modified w/9:3 HNO3:HCl (5%) | 11                | 11                              | 5.275  | 1.018  | 1.016           | 0.0714         | 1.019              | 19.27%            | 1.35%            | 19.32%               | 14.28 |
| 148.99      | Total Sulfur, Other (5%)   | 12                | 12                              | 5.574  | 0.6341 | 0.6200          | 0.1881         | 0.6480             | 11.12%            | 3.38%            | 11.63%               | 3.444 |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)                             | 11                | 9                               | 0.2387 | 0.0170 | 0.0153          | 0.0105         | 0.0186             | 6.41%             | 4.41%            | 7.78%                | 1.764 |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982.01 (0.3%)                    | 11                | 10                              | 0.2514 | 0.0253 | 0.0250          | 0.0056         | 0.0256             | 9.94%             | 2.23%            | 10.19%               | 4.574 |
| 165.99      | Acid Soluble Boron , Other (0.3%)  | 20                | 17                              | 0.2543 | 0.0254 | 0.0242          | 0.0111         | 0.0266             | 9.51%             | 4.36%            | 10.46%               | 2.400 |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)                               | 11                | 10                              | 0.1398 | 0.0377 | 0.0373          | 0.0070         | 0.0380             | 26.71%            | 5.00%            | 27.18%               | 5.433 |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)   | 10                | 9                               | 146.8  | 48.47  | 48.39           | 3.744          | 48.54              | 32.96%            | 2.55%            | 33.06%               | 12.96 |
| 191.30      | Acid Soluble Chromium , ICP (ppm)  | 9                 | 9                               | 346.9  | 74.42  | 73.77           | 13.89          | 75.07              | 21.27%            | 4.00%            | 21.64%               | 5.406 |
| 221.30      | Acid Soluble Copper , ICP, test portion inorganic 965.09 (0.1%)            | 17                | 15                              | 0.0262 | 0.0038 | 0.0037          | 0.0009         | 0.0038             | 14.32%            | 3.27%            | 14.69%               | 4.496 |
| 241.30      | Acid Soluble Iron, ICP, test portion inorganic 965.09 (0.5%)               | 18                | 16                              | 0.5660 | 0.0419 | 0.0412          | 0.0108         | 0.0426             | 7.29%             | 1.91%            | 7.53%                | 3.943 |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A-C, w/dual acid (0.5%)        | 12                | 11                              | 0.5585 | 0.0293 | 0.0287          | 0.0081         | 0.0298             | 5.14%             | 1.46%            | 5.34%                | 3.669 |
| 241.99      | Acid Soluble Iron, Other (0.5%)  | 9                 | 9                               | 0.5202 | 0.0717 | 0.0700          | 0.0219         | 0.0734             | 13.46%            | 4.21%            | 14.10%               | 3.354 |
| 251.30      | Acid Soluble Lead , ICP (ppm)  | 10                | 9                               | 731.5  | 205.0  | 204.4           | 21.54          | 205.6              | 27.95%            | 2.94%            | 28.10%               | 9.546 |

| Method Code | Analyte & Method  | # Tests Submitted | # Tests Used in Precision Calcs | Mean   | SD     | Between Labs sL | Within Labs sr | Reproducibility sR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr |
|-------------|---|-------------------|---------------------------------|--------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|-------|
| 261.30      | Acid Soluble Manganese , ICP, test portion 972.02a (0.3%)               | 9                 | 8                               | 0.0250 | 0.0032 | 0.0032          | 0.0006         | 0.0033             | 12.77%            | 2.56%            | 13.02%               | 5.091 |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                                  | 10                | 9                               | 607.8  | 59.73  | 57.42           | 23.28          | 61.95              | 9.45%             | 3.83%            | 10.19%               | 2.662 |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modified w/9:3 HNO3:HCl (100ppm) | 8                 | 8                               | 653.5  | 86.68  | 84.70           | 26.07          | 88.62              | 12.96%            | 3.99%            | 13.56%               | 3.399 |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)                         | 13                | 13                              | 1.187  | 0.0676 | 0.0655          | 0.0237         | 0.0697             | 5.52%             | 1.99%            | 5.87%                | 2.943 |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorganic 965.09 (1.3%)           | 18                | 16                              | 1.164  | 0.0528 | 0.0509          | 0.0198         | 0.0546             | 4.37%             | 1.70%            | 4.69%                | 2.764 |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03A-C, w/dual acid (1.3%)    | 13                | 12                              | 1.190  | 0.0569 | 0.0369          | 0.0611         | 0.0714             | 3.11%             | 5.14%            | 6.00%                | 1.169 |
| 321.99      | Acid Soluble Zinc , Other (1.3%)  | 9                 | 8                               | 1.130  | 0.1243 | 0.1200          | 0.0456         | 0.1284             | 10.62%            | 4.03%            | 11.36%               | 2.817 |

Notes: Precision data calculated when 8 or more Tests included.

# magruder fertilizer

## check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

# Methods: 149

Sample # 171211

Lab Values

# Labs Reporting: 91

Grade 5-15-30

Issue Date : 01/31/2018

| Method Code | Analyte Name and Method (Units)                 | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0309     | 4.115    | 0.0100 | 4.270         | 0.1211 | 0.0404 | 12      | -1.28               | 2%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0231     | 4.120    | 0.0200 | 4.270         | 0.1211 | 0.0404 | 12      | -1.24               | 2%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0444     | 4.190    | 0.0200 | 4.270         | 0.1211 | 0.0404 | 12      | -0.66               | 1%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0177     | 4.198    | 0.0245 | 4.270         | 0.1211 | 0.0404 | 12      | -0.59               | 1%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0117     | 4.250    | 0.1000 | 4.270         | 0.1211 | 0.0404 | 12      | -0.16               | 0%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0451     | 4.265    | 0.0700 | 4.270         | 0.1211 | 0.0404 | 12      | -0.04               | 0%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0486     | 4.285    | 0.0300 | 4.270         | 0.1211 | 0.0404 | 12      | 0.12                | 0%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0531     | 4.290    | 0.0200 | 4.270         | 0.1211 | 0.0404 | 12      | 0.17                | 0%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0536     | 4.290    | 0.0200 | 4.270         | 0.1211 | 0.0404 | 12      | 0.17                | 0%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0535     | 4.350    | 0.1000 | 4.270         | 0.1211 | 0.0404 | 12      | 0.66                | 1%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0169     | 4.435    | 0.0700 | 4.270         | 0.1211 | 0.0404 | 12      | 1.36                | 2%             | 0    |
| 001.10      | Ammoniacal Nitrogen, Magnesium Oxide Method (%) | 0405     | 4.450    | 0.0000 | 4.270         | 0.1211 | 0.0404 | 12      | 1.49                | 2%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0394     | 4.133    | 0.0400 | 4.383         | 0.1391 | 0.0444 | 21      | -1.80               | 3%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0368     | 4.170    | 0.0600 | 4.383         | 0.1391 | 0.0444 | 21      | -1.53               | 2%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0519     | 4.270    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | -0.81               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0532     | 4.275    | 0.0100 | 4.383         | 0.1391 | 0.0444 | 21      | -0.78               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0536     | 4.295    | 0.0300 | 4.383         | 0.1391 | 0.0444 | 21      | -0.63               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0531     | 4.300    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | -0.60               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0533     | 4.320    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | -0.45               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0537     | 4.336    | 0.0930 | 4.383         | 0.1391 | 0.0444 | 21      | -0.34               | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0513     | 4.350    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | -0.24               | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0535     | 4.350    | 0.1000 | 4.383         | 0.1391 | 0.0444 | 21      | -0.24               | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0539     | 4.350    | 0.0800 | 4.383         | 0.1391 | 0.0444 | 21      | -0.24               | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0027     | 4.360    | 0.0000 | 4.383         | 0.1391 | 0.0444 | 21      | -0.17               | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0371     | 4.385    | 0.0300 | 4.383         | 0.1391 | 0.0444 | 21      | 0.01                | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0538     | 4.425    | 0.0500 | 4.383         | 0.1391 | 0.0444 | 21      | 0.30                | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0540     | 4.425    | 0.0500 | 4.383         | 0.1391 | 0.0444 | 21      | 0.30                | 0%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0096     | 4.490    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | 0.77                | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0255     | 4.510    | 0.1000 | 4.383         | 0.1391 | 0.0444 | 21      | 0.91                | 1%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0522     | 4.530    | 0.0200 | 4.383         | 0.1391 | 0.0444 | 21      | 1.06                | 2%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0510     | 4.542    | 0.0003 | 4.383         | 0.1391 | 0.0444 | 21      | 1.14                | 2%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0506     | 4.620    | 0.1200 | 4.383         | 0.1391 | 0.0444 | 21      | 1.70                | 3%             | 0    |
| 001.99      | Ammoniacal Nitrogen, Other (%)                  | 0501     | 4.855    | 0.0500 | 4.383         | 0.1391 | 0.0444 | 21      | 3.39                | 5%             | 0    |

| Method Code | Analyte Name and Method (Units)               | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 002.20      | Nitrate Nitrogen, Jones Modified (%)          | 0029     | 4.445    | 0.0120 |               |        |        | 1       |                     |                | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0394     | 0.6090   | 0.0180 | 0.7302        | 0.0826 | 0.0410 | 17      | -1.47               | 8%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0027     | 0.6350   | 0.0100 | 0.7302        | 0.0826 | 0.0410 | 17      | -1.15               | 7%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0029     | 0.6450   | 0.0100 | 0.7302        | 0.0826 | 0.0410 | 17      | -1.03               | 6%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0538     | 0.6800   | 0.0400 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.61               | 3%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0231     | 0.6800   | 0.0000 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.61               | 3%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0501     | 0.7000   | 0.0000 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.37               | 2%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0533     | 0.7100   | 0.0400 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.24               | 1%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0539     | 0.7150   | 0.0100 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.18               | 1%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0486     | 0.7200   | 0.0000 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.12               | 1%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0540     | 0.7200   | 0.0400 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.12               | 1%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0532     | 0.7250   | 0.0300 | 0.7302        | 0.0826 | 0.0410 | 17      | -0.06               | 0%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0536     | 0.7750   | 0.1500 | 0.7302        | 0.0826 | 0.0410 | 17      | 0.54                | 3%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0535     | 0.7750   | 0.0500 | 0.7302        | 0.0826 | 0.0410 | 17      | 0.54                | 3%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0531     | 0.7950   | 0.0100 | 0.7302        | 0.0826 | 0.0410 | 17      | 0.78                | 4%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0537     | 0.8207   | 0.0789 | 0.7302        | 0.0826 | 0.0410 | 17      | 1.10                | 6%             | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0506     | 0.9050   | 0.1700 | 0.7302        | 0.0826 | 0.0410 | 17      | 2.12                | 12%            | 0    |
| 002.99      | Nitrate Nitrogen, Other (%)                   | 0513     | 0.9900   | 0.0400 | 0.7302        | 0.0826 | 0.0410 | 17      | 3.14                | 18%            | 0    |
| 009.10      | Ammoniacal Plus Nitrate Nitrogen, Devarda (%) | 0444     | 5.030    | 0.0000 | 5.118         | 0.0814 | 0.0725 | 4       | -1.08               | 1%             | 0    |
| 009.10      | Ammoniacal Plus Nitrate Nitrogen, Devarda (%) | 0169     | 5.075    | 0.0500 | 5.118         | 0.0814 | 0.0725 | 4       | -0.53               | 0%             | 0    |
| 009.10      | Ammoniacal Plus Nitrate Nitrogen, Devarda (%) | 0537     | 5.156    | 0.0141 | 5.118         | 0.0814 | 0.0725 | 4       | 0.47                | 0%             | 0    |
| 009.10      | Ammoniacal Plus Nitrate Nitrogen, Devarda (%) | 0397     | 5.212    | 0.2260 | 5.118         | 0.0814 | 0.0725 | 4       | 1.15                | 1%             | 0    |
| 009.99      | Ammoniacal Plus Nitrate Nitrogen, Other (%)   | 0518     | 5.250    | 0.1000 |               |        |        | 2       |                     |                | 0    |
| 009.99      | Ammoniacal Plus Nitrate Nitrogen, Other (%)   | 0513     | 5.340    | 0.0200 |               |        |        | 2       |                     |                | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0114     | 4.545*   | 0.0500 | 4.968         | 0.2215 | 0.0536 | 6       | -1.70               | 4%             | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0309     | 4.835    | 0.0700 | 4.968         | 0.2215 | 0.0536 | 6       | -0.54               | 1%             | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0105     | 5.025    | 0.0900 | 4.968         | 0.2215 | 0.0536 | 6       | 0.23                | 1%             | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0531     | 5.060    | 0.0200 | 4.968         | 0.2215 | 0.0536 | 6       | 0.37                | 1%             | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0510     | 5.109    | 0.0015 | 4.968         | 0.2215 | 0.0536 | 6       | 0.57                | 1%             | 0    |
| 010.11      | Total Nitrogen, Modified Comprehensive (5%)   | 0540     | 5.145    | 0.0900 | 4.968         | 0.2215 | 0.0536 | 6       | 0.71                | 2%             | 0    |
| 010.12      | Total Nitrogen, Salicylic (5%)                | 0534     | 5.160    | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 010.12      | Total Nitrogen, Salicylic (5%)                | 0397     | 5.186    | 0.1970 |               |        |        | 2       |                     |                | 0    |
| 010.16      | Total Nitrogen, Raney (5%)                    | 0300     | 4.760    | 0.0400 |               |        |        | 1       |                     |                | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0541     | 4.485*   | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | -5.05               | 7%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0041     | 4.940    | 0.0600 | 5.160         | 0.1335 | 0.0700 | 52      | -1.65               | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0055     | 4.945    | 0.1100 | 5.160         | 0.1335 | 0.0700 | 52      | -1.61               | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0390     | 4.985    | 0.0900 | 5.160         | 0.1335 | 0.0700 | 52      | -1.31               | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0034     | 4.995    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | -1.23               | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0072     | 5.005    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | -1.16               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0521     | 5.010    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | -1.12               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0292     | 5.025    | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | -1.01               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0307     | 5.035    | 0.1700 | 5.160         | 0.1335 | 0.0700 | 52      | -0.93               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%)               | 0423     | 5.040    | 0.1200 | 5.160         | 0.1335 | 0.0700 | 52      | -0.90               | 1%             | 0    |



| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---------------------------------|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |                                 |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 010.60      | Total Nitrogen, Combustion (5%) | 0523     | 5.050    | 0.1000 | 5.160         | 0.1335 | 0.0700 | 52      | -0.82               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0368     | 5.083    | 0.0660 | 5.160         | 0.1335 | 0.0700 | 52      | -0.57               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0234     | 5.085    | 0.0700 | 5.160         | 0.1335 | 0.0700 | 52      | -0.56               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0451     | 5.089    | 0.0490 | 5.160         | 0.1335 | 0.0700 | 52      | -0.53               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0483     | 5.095    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | -0.48               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0105     | 5.100    | 0.0600 | 5.160         | 0.1335 | 0.0700 | 52      | -0.45               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0501     | 5.100    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | -0.45               | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0324     | 5.110    | 0.0200 | 5.160         | 0.1335 | 0.0700 | 52      | -0.37               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0043     | 5.115    | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | -0.33               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0472     | 5.115    | 0.0700 | 5.160         | 0.1335 | 0.0700 | 52      | -0.33               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0037     | 5.118    | 0.0220 | 5.160         | 0.1335 | 0.0700 | 52      | -0.31               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0377     | 5.130    | 0.1600 | 5.160         | 0.1335 | 0.0700 | 52      | -0.22               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0389     | 5.130    | 0.1000 | 5.160         | 0.1335 | 0.0700 | 52      | -0.22               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0073     | 5.145    | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | -0.11               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0136     | 5.145    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | -0.11               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0007     | 5.150    | 0.1000 | 5.160         | 0.1335 | 0.0700 | 52      | -0.07               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0027     | 5.150    | 0.1000 | 5.160         | 0.1335 | 0.0700 | 52      | -0.07               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0527     | 5.155    | 0.0030 | 5.160         | 0.1335 | 0.0700 | 52      | -0.04               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0356     | 5.155    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | -0.03               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0291     | 5.155    | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | -0.03               | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0177     | 5.167    | 0.1010 | 5.160         | 0.1335 | 0.0700 | 52      | 0.05                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0360     | 5.170    | 0.0200 | 5.160         | 0.1335 | 0.0700 | 52      | 0.08                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0231     | 5.175    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | 0.11                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0486     | 5.180    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | 0.15                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0086     | 5.190    | 0.0757 | 5.160         | 0.1335 | 0.0700 | 52      | 0.23                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0035     | 5.200    | 0.0800 | 5.160         | 0.1335 | 0.0700 | 52      | 0.30                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0040     | 5.200    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | 0.30                | 0%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0405     | 5.220    | 0.0800 | 5.160         | 0.1335 | 0.0700 | 52      | 0.45                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0157     | 5.235    | 0.0100 | 5.160         | 0.1335 | 0.0700 | 52      | 0.56                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0482     | 5.260    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | 0.75                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0025     | 5.279    | 0.2250 | 5.160         | 0.1335 | 0.0700 | 52      | 0.89                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0494     | 5.290    | 0.0400 | 5.160         | 0.1335 | 0.0700 | 52      | 0.98                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0444     | 5.295    | 0.0300 | 5.160         | 0.1335 | 0.0700 | 52      | 1.01                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0443     | 5.300    | 0.0000 | 5.160         | 0.1335 | 0.0700 | 52      | 1.05                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0325     | 5.300    | 0.2000 | 5.160         | 0.1335 | 0.0700 | 52      | 1.05                | 1%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0096     | 5.340    | 0.0200 | 5.160         | 0.1335 | 0.0700 | 52      | 1.35                | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0102     | 5.355    | 0.2100 | 5.160         | 0.1335 | 0.0700 | 52      | 1.46                | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0354     | 5.385    | 0.0520 | 5.160         | 0.1335 | 0.0700 | 52      | 1.69                | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0402     | 5.395    | 0.0700 | 5.160         | 0.1335 | 0.0700 | 52      | 1.76                | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0029     | 5.410    | 0.4260 | 5.160         | 0.1335 | 0.0700 | 52      | 1.87                | 2%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0260     | 5.493    | 0.2205 | 5.160         | 0.1335 | 0.0700 | 52      | 2.50                | 3%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0106     | 5.690    | 0.0800 | 5.160         | 0.1335 | 0.0700 | 52      | 3.97                | 5%             | 0    |
| 010.60      | Total Nitrogen, Combustion (5%) | 0516     | 5.595    | 0.6500 | 5.160         | 0.1335 | 0.0700 | 52      | 3.26                | 4%             | 1    |

| Method Code | Analyte Name and Method (Units)                      | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |  |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 010.60      | Total Nitrogen, Combustion (5%)                      | 0255     | 5.812    | 1.165  | 5.160         | 0.1335 | 0.0700 | 52      | 4.88                | 6%             | 1    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0522     | 4.780    | 0.0200 | 5.120         | 0.2964 | 0.0430 | 6       | -1.02               | 3%             | 0    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0519     | 4.945    | 0.0100 | 5.120         | 0.2964 | 0.0430 | 6       | -0.53               | 2%             | 0    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0508     | 5.080    | 0.0400 | 5.120         | 0.2964 | 0.0430 | 6       | -0.12               | 0%             | 0    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0493     | 5.100    | 0.1000 | 5.120         | 0.2964 | 0.0430 | 6       | -0.06               | 0%             | 0    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0476     | 5.291    | 0.0381 | 5.120         | 0.2964 | 0.0430 | 6       | 0.51                | 2%             | 0    |
| 010.99      | Total Nitrogen, Other (5%)                           | 0506     | 5.525    | 0.0500 | 5.120         | 0.2964 | 0.0430 | 6       | 1.22                | 4%             | 0    |
| 020.10      | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0157     | 15.50    | 0.2000 | 15.69         | 0.1322 | 0.1450 | 4       | -1.44               | 1%             | 0    |
| 020.10      | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0493     | 15.70    | 0.1000 | 15.69         | 0.1322 | 0.1450 | 4       | 0.08                | 0%             | 0    |
| 020.10      | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0114     | 15.78    | 0.2300 | 15.69         | 0.1322 | 0.1450 | 4       | 0.64                | 0%             | 0    |
| 020.10      | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0444     | 15.79    | 0.0500 | 15.69         | 0.1322 | 0.1450 | 4       | 0.72                | 0%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0476     | 14.14    | 0.0688 | 15.76         | 0.4983 | 0.1087 | 16      | -3.24               | 5%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0027     | 15.29    | 0.3900 | 15.76         | 0.4983 | 0.1087 | 16      | -0.95               | 2%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0534     | 15.39    | 0.0100 | 15.76         | 0.4983 | 0.1087 | 16      | -0.75               | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0371     | 15.50    | 0.2000 | 15.76         | 0.4983 | 0.1087 | 16      | -0.52               | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0394     | 15.51    | 0.0160 | 15.76         | 0.4983 | 0.1087 | 16      | -0.49               | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0356     | 15.54    | 0.0900 | 15.76         | 0.4983 | 0.1087 | 16      | -0.45               | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0510     | 15.54    | 0.0146 | 15.76         | 0.4983 | 0.1087 | 16      | -0.44               | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0169     | 15.66    | 0.1000 | 15.76         | 0.4983 | 0.1087 | 16      | -0.20               | 0%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0405     | 15.68    | 0.0900 | 15.76         | 0.4983 | 0.1087 | 16      | -0.17               | 0%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0231     | 15.68    | 0.0600 | 15.76         | 0.4983 | 0.1087 | 16      | -0.16               | 0%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0324     | 15.80    | 0.2000 | 15.76         | 0.4983 | 0.1087 | 16      | 0.08                | 0%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0292     | 15.93    | 0.0300 | 15.76         | 0.4983 | 0.1087 | 16      | 0.34                | 1%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0300     | 16.32    | 0.1900 | 15.76         | 0.4983 | 0.1087 | 16      | 1.12                | 2%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0506     | 16.35    | 0.1000 | 15.76         | 0.4983 | 0.1087 | 16      | 1.19                | 2%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0541     | 16.45    | 0.1800 | 15.76         | 0.4983 | 0.1087 | 16      | 1.39                | 2%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0309     | 16.81    | 0.0000 | 15.76         | 0.4983 | 0.1087 | 16      | 2.11                | 3%             | 0    |
| 020.20      | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0516     | 16.90    | 1.350  | 15.76         | 0.4983 | 0.1087 | 16      | 2.28                | 4%             | 1    |
| 020.40      | Total Phosphorus as P2O5, Automated (%)              | 0096     | 15.27    | 0.2600 |               |        |        | 2       |                     |                | 0    |
| 020.40      | Total Phosphorus as P2O5, Automated (%)              | 0035     | 15.45    | 0.1500 |               |        |        | 2       |                     |                | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0255     | 14.47    | 0.8770 | 15.58         | 0.7381 | 0.2275 | 17      | -1.51               | 4%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0501     | 15.05    | 0.1000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.72               | 2%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0368     | 15.07    | 0.1112 | 15.58         | 0.7381 | 0.2275 | 17      | -0.70               | 2%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0521     | 15.11    | 0.0000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.64               | 2%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0472     | 15.12    | 0.1000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.63               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0423     | 15.27    | 0.1700 | 15.58         | 0.7381 | 0.2275 | 17      | -0.43               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0444     | 15.28    | 0.2200 | 15.58         | 0.7381 | 0.2275 | 17      | -0.41               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0389     | 15.29    | 0.2000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.40               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0482     | 15.35    | 0.5000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.32               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0433     | 15.42    | 0.0700 | 15.58         | 0.7381 | 0.2275 | 17      | -0.23               | 1%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0523     | 15.55    | 0.1000 | 15.58         | 0.7381 | 0.2275 | 17      | -0.05               | 0%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0157     | 15.70    | 0.2000 | 15.58         | 0.7381 | 0.2275 | 17      | 0.16                | 0%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                    | 0234     | 15.91    | 0.1200 | 15.58         | 0.7381 | 0.2275 | 17      | 0.44                | 1%             | 0    |

| Method Code | Analyte Name and Method (Units)                        | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |  |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0451     | 16.47    | 0.0000 | 15.58         | 0.7381 | 0.2275 | 17      | 1.20                | 3%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0527     | 16.50    | 0.0800 | 15.58         | 0.7381 | 0.2275 | 17      | 1.24                | 3%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0390     | 16.76    | 0.7400 | 15.58         | 0.7381 | 0.2275 | 17      | 1.59                | 4%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0402     | 16.86    | 0.2800 | 15.58         | 0.7381 | 0.2275 | 17      | 1.73                | 4%             | 0    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0483     | 15.26    | 2.100  | 15.58         | 0.7381 | 0.2275 | 17      | -0.44               | 1%             | 1    |
| 020.50      | Total Phosphorus as P2O5, ICP (%)                      | 0291     | 31.97    | 0.0100 | 15.58         | 0.7381 | 0.2275 | 17      | 22.19               | 53%            | 2    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0455     | 12.60    | 0.0100 | 15.92         | 2.340  | 0.0720 | 5       | -1.24               | 10%            | 0    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0519     | 15.14    | 0.0200 | 15.92         | 2.340  | 0.0720 | 5       | -0.29               | 2%             | 0    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0513     | 15.54    | 0.0900 | 15.92         | 2.340  | 0.0720 | 5       | -0.14               | 1%             | 0    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0443     | 18.09    | 0.0000 | 15.92         | 2.340  | 0.0720 | 5       | 0.81                | 7%             | 0    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0307     | 18.24    | 0.2400 | 15.92         | 2.340  | 0.0720 | 5       | 0.87                | 7%             | 0    |
| 020.99      | Total Phosphorus as P2O5, Other (%)                    | 0515     | 15.76    | 0.9421 | 15.92         | 2.340  | 0.0720 | 5       | -0.06               | 1%             | 1    |
| 030.40      | Citrate Insoluble Phosphorus as P2O5, Automat... (%)   | 0096     | 0.1700   | 0.0800 |               |        |        | 1       |                     |                | 0    |
| 040.20      | Indirect Available Phosphorus as P2O5, Spectr... (15%) | 0405     | 15.56    | 0.0800 |               |        |        | 2       |                     |                | 0    |
| 040.20      | Indirect Available Phosphorus as P2O5, Spectr... (15%) | 0300     | 16.00    | 0.0500 |               |        |        | 2       |                     |                | 0    |
| 040.40      | Indirect Available Phosphorus as P2O5, Automa... (15%) | 0096     | 15.11    | 0.3500 |               |        |        | 1       |                     |                | 0    |
| 040.99      | Indirect Available Phosphorus as P2O5, Other (15%)     | 0394     | 15.32    | 0.0050 |               |        |        | 1       |                     |                | 0    |
| 041.10      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0009     | 14.50    | 1.000  | 15.14         | 0.4647 | 0.3624 | 4       | -1.39               | 2%             | 0    |
| 041.10      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0055     | 15.18    | 0.0200 | 15.14         | 0.4647 | 0.3624 | 4       | 0.08                | 0%             | 0    |
| 041.10      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0177     | 15.30    | 0.4295 | 15.14         | 0.4647 | 0.3624 | 4       | 0.33                | 1%             | 0    |
| 041.10      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0102     | 15.60    | 0.0000 | 15.14         | 0.4647 | 0.3624 | 4       | 0.98                | 2%             | 0    |
| 041.11      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0513     | 15.05    | 0.0600 |               |        |        | 2       |                     |                | 0    |
| 041.11      | Direct Available Phosphorus as P2O5, Gravimet... (15%) | 0117     | 15.35    | 0.1000 |               |        |        | 2       |                     |                | 0    |
| 041.20      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0027     | 14.63    | 0.4900 |               |        |        | 1       |                     |                | 0    |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0106     | 14.63    | 0.5900 | 15.08         | 0.4960 | 0.1900 | 5       | -0.91               | 1%             | 0    |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0394     | 14.76    | 0.1600 | 15.08         | 0.4960 | 0.1900 | 5       | -0.64               | 1%             | 0    |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0522     | 15.04    | 0.0400 | 15.08         | 0.4960 | 0.1900 | 5       | -0.07               | 0%             | 0    |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0535     | 15.05    | 0.1000 | 15.08         | 0.4960 | 0.1900 | 5       | -0.05               | 0%             | 0    |
| 041.21      | Direct Available Phosphorus as P2O5, Spectrop... (15%) | 0544     | 15.90    | 0.0600 | 15.08         | 0.4960 | 0.1900 | 5       | 1.66                | 3%             | 0    |
| 041.40      | Direct Available Phosphorus as P2O5, Automate... (15%) | 0095     | 15.82    | 0.2900 |               |        |        | 1       |                     |                | 0    |
| 041.50      | Direct Available Phosphorus as P2O5, ICP (15%)         | 0325     | 14.95    | 0.3000 |               |        |        | 2       |                     |                | 0    |
| 041.50      | Direct Available Phosphorus as P2O5, ICP (15%)         | 0007     | 15.30    | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0368     | 14.75    | 0.0449 | 15.12         | 0.2250 | 0.2163 | 9       | -1.53               | 1%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0423     | 14.93    | 0.1500 | 15.12         | 0.2250 | 0.2163 | 9       | -0.81               | 1%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0072     | 14.94    | 0.2000 | 15.12         | 0.2250 | 0.2163 | 9       | -0.75               | 1%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0037     | 15.10    | 0.3020 | 15.12         | 0.2250 | 0.2163 | 9       | -0.09               | 0%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0025     | 15.20    | 0.3900 | 15.12         | 0.2250 | 0.2163 | 9       | 0.30                | 0%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0377     | 15.22    | 0.1600 | 15.12         | 0.2250 | 0.2163 | 9       | 0.40                | 0%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0117     | 15.26    | 0.0600 | 15.12         | 0.2250 | 0.2163 | 9       | 0.56                | 0%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0360     | 15.33    | 0.1400 | 15.12         | 0.2250 | 0.2163 | 9       | 0.85                | 1%             | 0    |
| 041.51      | Direct Available Phosphorus as P2O5, ICP, Cit... (15%) | 0040     | 15.35    | 0.5000 | 15.12         | 0.2250 | 0.2163 | 9       | 0.93                | 1%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate-... (15%) | 0029     | 14.59    | 0.2200 | 15.09         | 0.3647 | 0.1117 | 13      | -1.37               | 2%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate-... (15%) | 0472     | 14.61    | 0.0800 | 15.09         | 0.3647 | 0.1117 | 13      | -1.32               | 2%             | 0    |

| Method Code | Analyte Name and Method (Units)                       | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0397     | 14.67    | 0.1700 | 15.09         | 0.3647 | 0.1117 | 13      | -1.17               | 1%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0177     | 14.99    | 0.0415 | 15.09         | 0.3647 | 0.1117 | 13      | -0.27               | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0055     | 15.00    | 0.3400 | 15.09         | 0.3647 | 0.1117 | 13      | -0.25               | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0231     | 15.12    | 0.0100 | 15.09         | 0.3647 | 0.1117 | 13      | 0.07                | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0073     | 15.13    | 0.1500 | 15.09         | 0.3647 | 0.1117 | 13      | 0.09                | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0034     | 15.14    | 0.0080 | 15.09         | 0.3647 | 0.1117 | 13      | 0.14                | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0043     | 15.15    | 0.0100 | 15.09         | 0.3647 | 0.1117 | 13      | 0.15                | 0%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0136     | 15.32    | 0.1600 | 15.09         | 0.3647 | 0.1117 | 13      | 0.63                | 1%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0354     | 15.42    | 0.0470 | 15.09         | 0.3647 | 0.1117 | 13      | 0.90                | 1%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0072     | 15.49    | 0.1850 | 15.09         | 0.3647 | 0.1117 | 13      | 1.09                | 1%             | 0    |
| 041.60      | Direct Available Phosphorus as P2O5, Citrate... (15%) | 0486     | 15.58    | 0.0300 | 15.09         | 0.3647 | 0.1117 | 13      | 1.33                | 2%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0519     | 14.57    | 0.0400 | 15.11         | 0.1439 | 0.1173 | 11      | -3.51               | 2%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0536     | 15.01    | 0.1600 | 15.11         | 0.1439 | 0.1173 | 11      | -0.65               | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0533     | 15.05    | 0.0300 | 15.11         | 0.1439 | 0.1173 | 11      | -0.42               | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0535     | 15.05    | 0.1000 | 15.11         | 0.1439 | 0.1173 | 11      | -0.39               | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0538     | 15.06    | 0.0400 | 15.11         | 0.1439 | 0.1173 | 11      | -0.32               | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0531     | 15.06    | 0.0200 | 15.11         | 0.1439 | 0.1173 | 11      | -0.32               | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0532     | 15.12    | 0.1400 | 15.11         | 0.1439 | 0.1173 | 11      | 0.07                | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0539     | 15.12    | 0.1400 | 15.11         | 0.1439 | 0.1173 | 11      | 0.07                | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0518     | 15.25    | 0.3000 | 15.11         | 0.1439 | 0.1173 | 11      | 0.91                | 0%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0537     | 15.27    | 0.1200 | 15.11         | 0.1439 | 0.1173 | 11      | 1.04                | 1%             | 0    |
| 041.99      | Direct Available Phosphorus as P2O5, Other (15%)      | 0540     | 15.60    | 0.2000 | 15.11         | 0.1439 | 0.1173 | 11      | 3.19                | 2%             | 0    |
| 048.10      | Water Soluble Phosphorus as P2O5, Gravimetric... (%)  | 0444     | 12.91    | 0.4600 |               |        |        | 1       |                     |                | 0    |
| 048.20      | Water Soluble Phosphorus as P2O5, Spectrophot... (%)  | 0529     | 12.54    | 0.0300 |               |        |        | 2       |                     |                | 0    |
| 048.20      | Water Soluble Phosphorus as P2O5, Spectrophot... (%)  | 0394     | 13.08    | 0.1450 |               |        |        | 2       |                     |                | 0    |
| 048.40      | Water Soluble Phosphorus as P2O5, Automated (%)       | 0096     | 12.93    | 0.0000 |               |        |        | 1       |                     |                | 0    |
| 048.50      | Water Soluble Phosphorus as P2O5, ICP (%)             | 0444     | 13.17    | 0.0800 |               |        |        | 1       |                     |                | 0    |
| 048.99      | Water Soluble Phosphorus as P2O5, Other (%)           | 0519     | 12.84    | 0.0200 |               |        |        | 2       |                     |                | 0    |
| 048.99      | Water Soluble Phosphorus as P2O5, Other (%)           | 0513     | 12.90    | 0.0300 |               |        |        | 2       |                     |                | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0544     | 29.93    | 0.1000 | 30.44         | 0.4027 | 0.1660 | 9       | -1.17               | 1%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0055     | 30.17    | 0.0200 | 30.44         | 0.4027 | 0.1660 | 9       | -0.62               | 0%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0072     | 30.19    | 0.1940 | 30.44         | 0.4027 | 0.1660 | 9       | -0.58               | 0%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0522     | 30.27    | 0.0500 | 30.44         | 0.4027 | 0.1660 | 9       | -0.40               | 0%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0114     | 30.36    | 0.4200 | 30.44         | 0.4027 | 0.1660 | 9       | -0.19               | 0%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0494     | 30.43    | 0.5400 | 30.44         | 0.4027 | 0.1660 | 9       | -0.03               | 0%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0102     | 30.80    | 0.0000 | 30.44         | 0.4027 | 0.1660 | 9       | 0.82                | 1%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0405     | 30.90    | 0.0600 | 30.44         | 0.4027 | 0.1660 | 9       | 1.05                | 1%             | 0    |
| 050.00      | Soluble Potassium as K2O, STPB Oxalate (30%)          | 0231     | 30.93    | 0.1100 | 30.44         | 0.4027 | 0.1660 | 9       | 1.11                | 1%             | 0    |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0040     | 30.20    | 0.6000 | 31.29         | 0.9145 | 0.4920 | 5       | -1.04               | 2%             | 0    |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0356     | 30.55    | 0.1200 | 31.29         | 0.9145 | 0.4920 | 5       | -0.71               | 1%             | 0    |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0309     | 31.35    | 1.150  | 31.29         | 0.9145 | 0.4920 | 5       | 0.05                | 0%             | 0    |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0157     | 32.10    | 0.4000 | 31.29         | 0.9145 | 0.4920 | 5       | 0.77                | 1%             | 0    |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0073     | 32.27    | 0.1900 | 31.29         | 0.9145 | 0.4920 | 5       | 0.93                | 2%             | 0    |



| Method Code | Analyte Name and Method (Units)                       | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 050.30      | Soluble Potassium as K2O, AA (Oxalate) (30%)          | 0428     | 28.05*   | 3.781  | 31.29         | 0.9145 | 0.4920 | 5       | -3.10               | 5%             | 1    |
| 050.31      | Soluble Potassium as K2O, AA (Citrate) (30%)          | 0472     | 23.25*   | 2.100  |               |        |        | 1       |                     |                | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0157     | 29.70    | 2.400  | 30.26         | 0.6669 | 0.7126 | 8       | -0.77               | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0106     | 29.79    | 0.4300 | 30.26         | 0.6669 | 0.7126 | 8       | -0.65               | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0444     | 29.80    | 0.9600 | 30.26         | 0.6669 | 0.7126 | 8       | -0.63               | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0390     | 29.91    | 0.6300 | 30.26         | 0.6669 | 0.7126 | 8       | -0.49               | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0324     | 30.10    | 1.000  | 30.26         | 0.6669 | 0.7126 | 8       | -0.22               | 0%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0292     | 30.72    | 0.0000 | 30.26         | 0.6669 | 0.7126 | 8       | 0.63                | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0055     | 30.82    | 0.2100 | 30.26         | 0.6669 | 0.7126 | 8       | 0.76                | 1%             | 0    |
| 050.50      | Soluble Potassium as K2O, ICP (Oxalate) (30%)         | 0397     | 31.89    | 0.0710 | 30.26         | 0.6669 | 0.7126 | 8       | 2.24                | 3%             | 0    |
| 050.51      | Soluble Potassium as K2O, ICP (Citrate) (30%)         | 0291     | 15.94*   | 0.0100 | 25.77         | 8.520  | 0.4067 | 3       | -1.15               | 19%            | 0    |
| 050.51      | Soluble Potassium as K2O, ICP (Citrate) (30%)         | 0483     | 30.48    | 1.210  | 25.77         | 8.520  | 0.4067 | 3       | 0.55                | 9%             | 0    |
| 050.51      | Soluble Potassium as K2O, ICP (Citrate) (30%)         | 0007     | 30.90    | 0.0000 | 25.77         | 8.520  | 0.4067 | 3       | 0.60                | 10%            | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0072     | 29.46    | 0.7500 | 30.84         | 0.8899 | 0.3836 | 10      | -1.45               | 2%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0486     | 29.83    | 0.1500 | 30.84         | 0.8899 | 0.3836 | 10      | -1.07               | 2%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0043     | 30.35    | 0.4000 | 30.84         | 0.8899 | 0.3836 | 10      | -0.52               | 1%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0423     | 30.75    | 0.4000 | 30.84         | 0.8899 | 0.3836 | 10      | -0.10               | 0%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0037     | 30.97    | 0.4100 | 30.84         | 0.8899 | 0.3836 | 10      | 0.13                | 0%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0360     | 31.03    | 0.1700 | 30.84         | 0.8899 | 0.3836 | 10      | 0.19                | 0%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0354     | 31.07    | 0.3360 | 30.84         | 0.8899 | 0.3836 | 10      | 0.24                | 0%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0025     | 31.19    | 0.3700 | 30.84         | 0.8899 | 0.3836 | 10      | 0.36                | 1%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0117     | 31.66    | 0.6600 | 30.84         | 0.8899 | 0.3836 | 10      | 0.85                | 1%             | 0    |
| 050.52      | Soluble Potassium as K2O, ICP (Citrate-EDTA) (30%)    | 0377     | 32.11    | 0.1900 | 30.84         | 0.8899 | 0.3836 | 10      | 1.32                | 2%             | 0    |
| 050.60      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0443     | 15.74*   | 0.0000 | 28.39         | 7.530  | 0.0341 | 5       | -1.68               | 22%            | 0    |
| 050.60      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0455     | 29.07*   | 0.0600 | 28.39         | 7.530  | 0.0341 | 5       | 0.09                | 1%             | 0    |
| 050.60      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0510     | 30.47    | 0.0407 | 28.39         | 7.530  | 0.0341 | 5       | 0.28                | 4%             | 0    |
| 050.60      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0169     | 30.79    | 0.0700 | 28.39         | 7.530  | 0.0341 | 5       | 0.32                | 4%             | 0    |
| 050.60      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0526     | 35.89    | 0.0000 | 28.39         | 7.530  | 0.0341 | 5       | 1.00                | 13%            | 0    |
| 050.61      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0535     | 30.90    | 0.2000 |               |        |        | 2       |                     |                | 0    |
| 050.61      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0035     | 30.98    | 0.5600 |               |        |        | 2       |                     |                | 0    |
| 050.62      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0095     | 30.32    | 1.450  |               |        |        | 2       |                     |                | 0    |
| 050.62      | Soluble Potassium as K2O, Flame Photometric ... (30%) | 0034     | 30.76    | 0.1220 |               |        |        | 2       |                     |                | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0389     | 24.97*   | 0.0200 | 30.41         | 0.6747 | 0.3845 | 35      | -8.07               | 9%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0541     | 27.00*   | 0.0000 | 30.41         | 0.6747 | 0.3845 | 35      | -5.06               | 6%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0255     | 28.77*   | 1.238  | 30.41         | 0.6747 | 0.3845 | 35      | -2.43               | 3%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0482     | 29.50    | 0.8000 | 30.41         | 0.6747 | 0.3845 | 35      | -1.35               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0300     | 29.71    | 0.3900 | 30.41         | 0.6747 | 0.3845 | 35      | -1.05               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0521     | 29.84    | 0.0000 | 30.41         | 0.6747 | 0.3845 | 35      | -0.84               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0027     | 29.86    | 0.5300 | 30.41         | 0.6747 | 0.3845 | 35      | -0.83               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0523     | 30.00    | 0.4000 | 30.41         | 0.6747 | 0.3845 | 35      | -0.61               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0537     | 30.03    | 1.010  | 30.41         | 0.6747 | 0.3845 | 35      | -0.57               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0519     | 30.06    | 0.0700 | 30.41         | 0.6747 | 0.3845 | 35      | -0.53               | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0533     | 30.12    | 0.0100 | 30.41         | 0.6747 | 0.3845 | 35      | -0.44               | 0%             | 0    |

| Method Code | Analyte Name and Method (Units)                       | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0493     | 30.15    | 0.1000 | 30.41         | 0.6747 | 0.3845 | 35      | -0.39               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0539     | 30.15    | 0.0600 | 30.41         | 0.6747 | 0.3845 | 35      | -0.39               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0536     | 30.22    | 0.1900 | 30.41         | 0.6747 | 0.3845 | 35      | -0.29               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0096     | 30.24    | 0.1800 | 30.41         | 0.6747 | 0.3845 | 35      | -0.25               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0518     | 30.29    | 0.3700 | 30.41         | 0.6747 | 0.3845 | 35      | -0.19               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0368     | 30.30    | 0.4738 | 30.41         | 0.6747 | 0.3845 | 35      | -0.16               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0538     | 30.35    | 0.1000 | 30.41         | 0.6747 | 0.3845 | 35      | -0.09               | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0532     | 30.42    | 0.2100 | 30.41         | 0.6747 | 0.3845 | 35      | 0.00                | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0540     | 30.43    | 0.7400 | 30.41         | 0.6747 | 0.3845 | 35      | 0.03                | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0433     | 30.44    | 0.0000 | 30.41         | 0.6747 | 0.3845 | 35      | 0.04                | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0394     | 30.47    | 0.2760 | 30.41         | 0.6747 | 0.3845 | 35      | 0.09                | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0325     | 30.70    | 1.200  | 30.41         | 0.6747 | 0.3845 | 35      | 0.43                | 0%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0402     | 30.72    | 0.0800 | 30.41         | 0.6747 | 0.3845 | 35      | 0.46                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0476     | 30.75    | 0.3909 | 30.41         | 0.6747 | 0.3845 | 35      | 0.50                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0531     | 30.85    | 0.1000 | 30.41         | 0.6747 | 0.3845 | 35      | 0.65                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0371     | 30.90    | 0.4000 | 30.41         | 0.6747 | 0.3845 | 35      | 0.72                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0535     | 30.90    | 0.2000 | 30.41         | 0.6747 | 0.3845 | 35      | 0.72                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0307     | 30.96    | 0.8300 | 30.41         | 0.6747 | 0.3845 | 35      | 0.80                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0506     | 31.15    | 0.9000 | 30.41         | 0.6747 | 0.3845 | 35      | 1.09                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0444     | 31.18    | 0.3600 | 30.41         | 0.6747 | 0.3845 | 35      | 1.14                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0527     | 31.29    | 0.1300 | 30.41         | 0.6747 | 0.3845 | 35      | 1.29                | 1%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0234     | 31.45    | 0.1900 | 30.41         | 0.6747 | 0.3845 | 35      | 1.53                | 2%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0177     | 31.90    | 0.3895 | 30.41         | 0.6747 | 0.3845 | 35      | 2.21                | 2%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0451     | 32.53    | 1.120  | 30.41         | 0.6747 | 0.3845 | 35      | 3.14                | 3%             | 0    |
| 050.99      | Soluble Potassium as K2O, Other (30%)                 | 0516     | 30.19    | 4.729  | 30.41         | 0.6747 | 0.3845 | 35      | -0.33               | 0%             | 1    |
| 060.00      | Water (Free), Vacuum Oven (%)                         | 0007     | 0.6000   | 0.0600 |               |        |        | 2       |                     |                | 0    |
| 060.00      | Water (Free), Vacuum Oven (%)                         | 0096     | 0.7550   | 0.1300 |               |        |        | 2       |                     |                | 0    |
| 060.30      | Water (Free), AFPC No. 2B (105°C oven for 2 h... (%)  | 0055     | 1.150    | 0.3000 |               |        |        | 1       |                     |                | 0    |
| 060.99      | Water (Free), Other (%)                               | 0055     | 0.6400   | 0.2800 | 1.214         | 0.5529 | 0.0612 | 5       | -1.04               | 24%            | 0    |
| 060.99      | Water (Free), Other (%)                               | 0513     | 0.9350   | 0.0100 | 1.214         | 0.5529 | 0.0612 | 5       | -0.50               | 11%            | 0    |
| 060.99      | Water (Free), Other (%)                               | 0518     | 1.075    | 0.0100 | 1.214         | 0.5529 | 0.0612 | 5       | -0.25               | 6%             | 0    |
| 060.99      | Water (Free), Other (%)                               | 0510     | 1.321    | 0.0062 | 1.214         | 0.5529 | 0.0612 | 5       | 0.19                | 4%             | 0    |
| 060.99      | Water (Free), Other (%)                               | 0009     | 2.100    | 0.0000 | 1.214         | 0.5529 | 0.0612 | 5       | 1.60                | 36%            | 0    |
| 101.00      | Acid Soluble Calcium, AA, inorganic 965.09 (1%)       | 0040     | 0.3450   | 0.0100 | 0.3687        | 0.0239 | 0.0168 | 4       | -0.99               | 3%             | 0    |
| 101.00      | Acid Soluble Calcium, AA, inorganic 965.09 (1%)       | 0029     | 0.3598   | 0.0205 | 0.3687        | 0.0239 | 0.0168 | 4       | -0.37               | 1%             | 0    |
| 101.00      | Acid Soluble Calcium, AA, inorganic 965.09 (1%)       | 0485     | 0.3685   | 0.0237 | 0.3687        | 0.0239 | 0.0168 | 4       | -0.01               | 0%             | 0    |
| 101.00      | Acid Soluble Calcium, AA, inorganic 965.09 (1%)       | 0157     | 0.4015   | 0.0130 | 0.3687        | 0.0239 | 0.0168 | 4       | 1.37                | 4%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0472     | 0.2700   | 0.0400 | 0.3700        | 0.0582 | 0.0131 | 15      | -1.72               | 14%            | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0354     | 0.3110   | 0.0300 | 0.3700        | 0.0582 | 0.0131 | 15      | -1.01               | 8%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0035     | 0.3270   | 0.0040 | 0.3700        | 0.0582 | 0.0131 | 15      | -0.74               | 6%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0255     | 0.3360   | 0.0140 | 0.3700        | 0.0582 | 0.0131 | 15      | -0.58               | 5%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0482     | 0.3450   | 0.0100 | 0.3700        | 0.0582 | 0.0131 | 15      | -0.43               | 3%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%) | 0360     | 0.3535   | 0.0070 | 0.3700        | 0.0582 | 0.0131 | 15      | -0.28               | 2%             | 0    |

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|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0096     | 0.3600   | 0.0000 | 0.3700        | 0.0582 | 0.0131 | 15      | -0.17               | 1%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0444     | 0.3700   | 0.0000 | 0.3700        | 0.0582 | 0.0131 | 15      | 0.00                | 0%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0451     | 0.3710   | 0.0180 | 0.3700        | 0.0582 | 0.0131 | 15      | 0.02                | 0%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0433     | 0.3715   | 0.0070 | 0.3700        | 0.0582 | 0.0131 | 15      | 0.03                | 0%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0157     | 0.3775   | 0.0210 | 0.3700        | 0.0582 | 0.0131 | 15      | 0.13                | 1%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0102     | 0.3797   | 0.0029 | 0.3700        | 0.0582 | 0.0131 | 15      | 0.17                | 1%             | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0136     | 0.4500   | 0.0000 | 0.3700        | 0.0582 | 0.0131 | 15      | 1.37                | 11%            | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0483     | 0.6010   | 0.0020 | 0.3700        | 0.0582 | 0.0131 | 15      | 3.97                | 31%            | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0231     | 0.6600   | 0.0400 | 0.3700        | 0.0582 | 0.0131 | 15      | 4.98                | 39%            | 0    |
| 101.30      | Acid Soluble Calcium, ICP, test portion inorg... (1%)   | 0324     | 0.4825   | 0.1230 | 0.3700        | 0.0582 | 0.0131 | 15      | 1.93                | 15%            | 1    |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0521     | 0.3380   | 0.0000 | 0.3875        | 0.0486 | 0.0212 | 5       | -1.02               | 6%             | 0    |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0300     | 0.3640   | 0.0071 | 0.3875        | 0.0486 | 0.0212 | 5       | -0.48               | 3%             | 0    |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0541     | 0.3800   | 0.0600 | 0.3875        | 0.0486 | 0.0212 | 5       | -0.15               | 1%             | 0    |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0423     | 0.3880   | 0.0040 | 0.3875        | 0.0486 | 0.0212 | 5       | 0.01                | 0%             | 0    |
| 101.32      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0394     | 0.4675   | 0.0350 | 0.3875        | 0.0486 | 0.0212 | 5       | 1.65                | 10%            | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0106     | 0.2308   | 0.0391 | 0.3531        | 0.0238 | 0.0139 | 10      | -4.77               | 17%            | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0086     | 0.3312   | 0.0069 | 0.3531        | 0.0238 | 0.0139 | 10      | -0.85               | 3%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0177     | 0.3443   | 0.0117 | 0.3531        | 0.0238 | 0.0139 | 10      | -0.34               | 1%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0072     | 0.3460   | 0.0200 | 0.3531        | 0.0238 | 0.0139 | 10      | -0.28               | 1%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0117     | 0.3513   | 0.0030 | 0.3531        | 0.0238 | 0.0139 | 10      | -0.07               | 0%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0397     | 0.3543   | 0.0058 | 0.3531        | 0.0238 | 0.0139 | 10      | 0.05                | 0%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0055     | 0.3550   | 0.0100 | 0.3531        | 0.0238 | 0.0139 | 10      | 0.08                | 0%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0034     | 0.3620   | 0.0080 | 0.3531        | 0.0238 | 0.0139 | 10      | 0.35                | 1%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0527     | 0.3805   | 0.0090 | 0.3531        | 0.0238 | 0.0139 | 10      | 1.07                | 4%             | 0    |
| 101.33      | Acid Soluble Calcium, ICP, test portion 2006... (1%)    | 0037     | 0.4035   | 0.0250 | 0.3531        | 0.0238 | 0.0139 | 10      | 1.97                | 7%             | 0    |
| 101.70      | Acid Soluble Calcium, Titrimetric (1%)                  | 0529     | 0.5000   | 0.0000 | 0.9382        | 0.2996 | 0.0800 | 4       | -1.46               | 23%            | 0    |
| 101.70      | Acid Soluble Calcium, Titrimetric (1%)                  | 0476     | 1.008    | 0.2393 | 0.9382        | 0.2996 | 0.0800 | 4       | 0.23                | 4%             | 0    |
| 101.70      | Acid Soluble Calcium, Titrimetric (1%)                  | 0510     | 1.075    | 0.0007 | 0.9382        | 0.2996 | 0.0800 | 4       | 0.46                | 7%             | 0    |
| 101.70      | Acid Soluble Calcium, Titrimetric (1%)                  | 0544     | 1.170    | 0.0800 | 0.9382        | 0.2996 | 0.0800 | 4       | 0.77                | 12%            | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0389     | 0.3450   | 0.0100 | 0.4800        | 0.1950 | 0.0242 | 6       | -0.62               | 14%            | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0368     | 0.3480   | 0.0538 | 0.4800        | 0.1950 | 0.0242 | 6       | -0.60               | 14%            | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0027     | 0.3785   | 0.0430 | 0.4800        | 0.1950 | 0.0242 | 6       | -0.46               | 11%            | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0390     | 0.4362   | 0.0363 | 0.4800        | 0.1950 | 0.0242 | 6       | -0.20               | 5%             | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0523     | 0.6000   | 0.0000 | 0.4800        | 0.1950 | 0.0242 | 6       | 0.55                | 12%            | 0    |
| 101.99      | Acid Soluble Calcium, Other (1%)                        | 0519     | 1.076    | 0.0020 | 0.4800        | 0.1950 | 0.0242 | 6       | 2.72                | 62%            | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0513     | 1.025    | 0.0300 | 1.208         | 0.1543 | 0.0502 | 8       | -1.09               | 8%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0157     | 1.085    | 0.0100 | 1.208         | 0.1543 | 0.0502 | 8       | -0.73               | 5%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0516     | 1.160    | 0.0746 | 1.208         | 0.1543 | 0.0502 | 8       | -0.28               | 2%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0485     | 1.193    | 0.1280 | 1.208         | 0.1543 | 0.0502 | 8       | -0.09               | 1%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0029     | 1.199    | 0.0790 | 1.208         | 0.1543 | 0.0502 | 8       | -0.06               | 0%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0534     | 1.200    | 0.0400 | 1.208         | 0.1543 | 0.0502 | 8       | -0.05               | 0%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0169     | 1.365    | 0.0300 | 1.208         | 0.1543 | 0.0502 | 8       | 0.93                | 6%             | 0    |
| 121.00      | Acid Soluble Magnesium, AA, inorganic 965.09 ... (1.2%) | 0309     | 1.855    | 0.0100 | 1.208         | 0.1543 | 0.0502 | 8       | 3.83                | 27%            | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0291     | 1.025    | 0.0100 | 1.186         | 0.1084 | 0.0280 | 18      | -1.49               | 7%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0255     | 1.059    | 0.0640 | 1.186         | 0.1084 | 0.0280 | 18      | -1.17               | 5%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0324     | 1.090    | 0.0200 | 1.186         | 0.1084 | 0.0280 | 18      | -0.89               | 4%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0035     | 1.105    | 0.0300 | 1.186         | 0.1084 | 0.0280 | 18      | -0.75               | 3%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0360     | 1.110    | 0.0200 | 1.186         | 0.1084 | 0.0280 | 18      | -0.70               | 3%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0096     | 1.145    | 0.0300 | 1.186         | 0.1084 | 0.0280 | 18      | -0.38               | 2%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0482     | 1.145    | 0.0300 | 1.186         | 0.1084 | 0.0280 | 18      | -0.38               | 2%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0157     | 1.165    | 0.0100 | 1.186         | 0.1084 | 0.0280 | 18      | -0.20               | 1%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0231     | 1.175    | 0.0300 | 1.186         | 0.1084 | 0.0280 | 18      | -0.10               | 0%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0444     | 1.180    | 0.0200 | 1.186         | 0.1084 | 0.0280 | 18      | -0.06               | 0%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0354     | 1.198    | 0.0190 | 1.186         | 0.1084 | 0.0280 | 18      | 0.10                | 0%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0234     | 1.200    | 0.0600 | 1.186         | 0.1084 | 0.0280 | 18      | 0.13                | 1%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0371     | 1.200    | 0.0000 | 1.186         | 0.1084 | 0.0280 | 18      | 0.13                | 1%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0102     | 1.233    | 0.0412 | 1.186         | 0.1084 | 0.0280 | 18      | 0.43                | 2%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0483     | 1.305    | 0.0500 | 1.186         | 0.1084 | 0.0280 | 18      | 1.10                | 5%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0390     | 1.331    | 0.0410 | 1.186         | 0.1084 | 0.0280 | 18      | 1.33                | 6%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0433     | 1.339    | 0.0180 | 1.186         | 0.1084 | 0.0280 | 18      | 1.41                | 6%             | 0    |
| 121.30      | Acid Soluble Magnesium, ICP, test portion ino... (1.2%) | 0472     | 1.405    | 0.0100 | 1.186         | 0.1084 | 0.0280 | 18      | 2.02                | 9%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0394     | 1.065    | 0.0100 | 1.155         | 0.0837 | 0.0183 | 6       | -0.95               | 4%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0521     | 1.113    | 0.0000 | 1.155         | 0.0837 | 0.0183 | 6       | -0.44               | 2%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0300     | 1.140    | 0.0200 | 1.155         | 0.0837 | 0.0183 | 6       | -0.16               | 1%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0423     | 1.140    | 0.0200 | 1.155         | 0.0837 | 0.0183 | 6       | -0.16               | 1%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0072     | 1.190    | 0.0000 | 1.155         | 0.0837 | 0.0183 | 6       | 0.38                | 2%             | 0    |
| 121.32      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0541     | 1.530    | 0.0600 | 1.155         | 0.0837 | 0.0183 | 6       | 4.00                | 16%            | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0106     | 1.060    | 0.0130 | 1.169         | 0.0635 | 0.0257 | 11      | -1.71               | 5%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0486     | 1.090    | 0.0200 | 1.169         | 0.0635 | 0.0257 | 11      | -1.24               | 3%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0086     | 1.120    | 0.0014 | 1.169         | 0.0635 | 0.0257 | 11      | -0.77               | 2%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0117     | 1.155    | 0.0040 | 1.169         | 0.0635 | 0.0257 | 11      | -0.22               | 1%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0034     | 1.162    | 0.0170 | 1.169         | 0.0635 | 0.0257 | 11      | -0.11               | 0%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0397     | 1.162    | 0.0293 | 1.169         | 0.0635 | 0.0257 | 11      | -0.11               | 0%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0177     | 1.203    | 0.0564 | 1.169         | 0.0635 | 0.0257 | 11      | 0.54                | 1%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0037     | 1.205    | 0.0240 | 1.169         | 0.0635 | 0.0257 | 11      | 0.57                | 2%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0527     | 1.221    | 0.0280 | 1.169         | 0.0635 | 0.0257 | 11      | 0.82                | 2%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0055     | 1.230    | 0.0200 | 1.169         | 0.0635 | 0.0257 | 11      | 0.97                | 3%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0136     | 1.235    | 0.0700 | 1.169         | 0.0635 | 0.0257 | 11      | 1.05                | 3%             | 0    |
| 121.33      | Acid Soluble Magnesium, ICP, test portion 200... (1.2%) | 0515     | 1.268    | 0.1345 | 1.169         | 0.0635 | 0.0257 | 11      | 1.57                | 4%             | 1    |
| 121.70      | Acid Soluble Magnesium, Titrimetric (EDTA) (1.2%)       | 0529     | 1.650    | 0.1000 |               |        |        | 1       |                     |                | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0476     | 0.8615*  | 0.0230 | 1.198         | 0.0777 | 0.0291 | 9       | -4.00               | 14%            | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0523     | 1.150    | 0.1000 | 1.198         | 0.0777 | 0.0291 | 9       | -0.57               | 2%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0506     | 1.160    | 0.0200 | 1.198         | 0.0777 | 0.0291 | 9       | -0.45               | 2%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0389     | 1.185    | 0.0100 | 1.198         | 0.0777 | 0.0291 | 9       | -0.16               | 1%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0368     | 1.191    | 0.0404 | 1.198         | 0.0777 | 0.0291 | 9       | -0.09               | 0%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                    | 0501     | 1.200    | 0.0000 | 1.198         | 0.0777 | 0.0291 | 9       | 0.02                | 0%             | 0    |



| Method Code | Analyte Name and Method (Units)                       | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                  | 0027     | 1.227    | 0.0170 | 1.198         | 0.0777 | 0.0291 | 9       | 0.34                | 1%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                  | 0519     | 1.275    | 0.0500 | 1.198         | 0.0777 | 0.0291 | 9       | 0.91                | 3%             | 0    |
| 121.99      | Acid Soluble Magnesium, Other (1.2%)                  | 0515     | 1.387    | 0.0014 | 1.198         | 0.0777 | 0.0291 | 9       | 2.24                | 8%             | 0    |
| 131.00      | Water Soluble Magnesium, AA (%)                       | 0029     | 0.9970   | 0.0661 |               |        |        | 2       |                     |                | 0    |
| 131.00      | Water Soluble Magnesium, AA (%)                       | 0309     | 1.125    | 0.0100 |               |        |        | 2       |                     |                | 0    |
| 131.30      | Water Soluble Magnesium, ICP (%)                      | 0444     | 0.9850   | 0.0300 |               |        |        | 1       |                     |                | 0    |
| 131.70      | Water Soluble Magnesium, Titrimetric (EDTA) (%)       | 0476     | 0.5654   | 0.0366 | 1.008         | 0.3840 | 0.0791 | 3       | -1.15               | 22%            | 0    |
| 131.70      | Water Soluble Magnesium, Titrimetric (EDTA) (%)       | 0518     | 1.200    | 0.2000 | 1.008         | 0.3840 | 0.0791 | 3       | 0.50                | 10%            | 0    |
| 131.70      | Water Soluble Magnesium, Titrimetric (EDTA) (%)       | 0510     | 1.257    | 0.0007 | 1.008         | 0.3840 | 0.0791 | 3       | 0.65                | 12%            | 0    |
| 143.00      | Elemental Sulfur, Gravimetric Sulfur - carbon... (%)  | 0405     | 1.025    | 0.1302 |               |        |        | 2       |                     |                | 0    |
| 143.00      | Elemental Sulfur, Gravimetric Sulfur - carbon... (%)  | 0106     | 1.680    | 0.4800 |               |        |        | 2       |                     |                | 0    |
| 143.99      | Elemental Sulfur, Other (%)                           | 0255     | 4.991    | 0.3300 | 5.622         | 0.5777 | 0.1133 | 3       | -1.09               | 6%             | 0    |
| 143.99      | Elemental Sulfur, Other (%)                           | 0472     | 5.750    | 0.0000 | 5.622         | 0.5777 | 0.1133 | 3       | 0.22                | 1%             | 0    |
| 143.99      | Elemental Sulfur, Other (%)                           | 0389     | 6.125    | 0.0100 | 5.622         | 0.5777 | 0.1133 | 3       | 0.87                | 4%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0106     | 4.050    | 0.0400 | 4.189         | 0.2017 | 0.0862 | 6       | -0.61               | 2%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0405     | 4.065    | 0.0100 | 4.189         | 0.2017 | 0.0862 | 6       | -0.55               | 1%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0522     | 4.075    | 0.0100 | 4.189         | 0.2017 | 0.0862 | 6       | -0.50               | 1%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0444     | 4.125    | 0.2100 | 4.189         | 0.2017 | 0.0862 | 6       | -0.28               | 1%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0397     | 4.336    | 0.0072 | 4.189         | 0.2017 | 0.0862 | 6       | 0.65                | 2%             | 0    |
| 145.00      | Sulfate Sulfur, HCl soluble, Gravimetric Sulf... (%)  | 0027     | 4.480    | 0.2400 | 4.189         | 0.2017 | 0.0862 | 6       | 1.29                | 3%             | 0    |
| 145.99      | Sulfate Sulfur, HCl soluble, Other (%)                | 0444     | 3.735    | 0.1700 |               |        |        | 2       |                     |                | 0    |
| 145.99      | Sulfate Sulfur, HCl soluble, Other (%)                | 0518     | 5.300    | 0.2000 |               |        |        | 2       |                     |                | 0    |
| 148.00      | Total Sulfur, Combustion (5%)                         | 0451     | 5.674    | 0.0240 | 5.940         | 0.2083 | 0.1818 | 5       | -1.28               | 2%             | 0    |
| 148.00      | Total Sulfur, Combustion (5%)                         | 0136     | 5.820    | 0.0800 | 5.940         | 0.2083 | 0.1818 | 5       | -0.58               | 1%             | 0    |
| 148.00      | Total Sulfur, Combustion (5%)                         | 0157     | 5.915    | 0.2500 | 5.940         | 0.2083 | 0.1818 | 5       | -0.12               | 0%             | 0    |
| 148.00      | Total Sulfur, Combustion (5%)                         | 0025     | 6.110    | 0.2530 | 5.940         | 0.2083 | 0.1818 | 5       | 0.81                | 1%             | 0    |
| 148.00      | Total Sulfur, Combustion (5%)                         | 0029     | 6.183    | 0.3020 | 5.940         | 0.2083 | 0.1818 | 5       | 1.17                | 2%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0513     | 4.095*   | 0.0900 | 5.168         | 1.069  | 0.1293 | 9       | -0.93               | 10%            | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0476     | 4.103*   | 0.0641 | 5.168         | 1.069  | 0.1293 | 9       | -0.92               | 10%            | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0324     | 4.265*   | 0.2900 | 5.168         | 1.069  | 0.1293 | 9       | -0.78               | 9%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0444     | 4.525*   | 0.1500 | 5.168         | 1.069  | 0.1293 | 9       | -0.56               | 6%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0405     | 5.090    | 0.1400 | 5.168         | 1.069  | 0.1293 | 9       | -0.07               | 1%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0055     | 5.985    | 0.0700 | 5.168         | 1.069  | 0.1293 | 9       | 0.71                | 8%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0534     | 6.055    | 0.1100 | 5.168         | 1.069  | 0.1293 | 9       | 0.77                | 9%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0040     | 6.100    | 0.2000 | 5.168         | 1.069  | 0.1293 | 9       | 0.80                | 9%             | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0157     | 6.295    | 0.0500 | 5.168         | 1.069  | 0.1293 | 9       | 0.97                | 11%            | 0    |
| 148.01      | Total Sulfur, Gravimetric - sulfate and elem... (5%)  | 0114     | 4.660*   | 0.7800 | 5.168         | 1.069  | 0.1293 | 9       | -0.44               | 5%             | 1    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0541     | 3.695*   | 0.0100 | 5.275         | 1.154  | 0.0692 | 11      | -1.28               | 15%            | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0394     | 3.775*   | 0.0700 | 5.275         | 1.154  | 0.0692 | 11      | -1.22               | 14%            | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0444     | 3.990*   | 0.0200 | 5.275         | 1.154  | 0.0692 | 11      | -1.04               | 12%            | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0515     | 4.937*   | 0.2278 | 5.275         | 1.154  | 0.0692 | 11      | -0.27               | 3%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0486     | 5.400    | 0.0000 | 5.275         | 1.154  | 0.0692 | 11      | 0.10                | 1%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0102     | 5.548    | 0.0532 | 5.275         | 1.154  | 0.0692 | 11      | 0.22                | 3%             | 0    |

| Method Code | Analyte Name and Method (Units)                       | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0117     | 6.016    | 0.0040 | 5.275         | 1.154  | 0.0692 | 11      | 0.60                | 7%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0037     | 6.093    | 0.0590 | 5.275         | 1.154  | 0.0692 | 11      | 0.66                | 8%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0483     | 6.110    | 0.1800 | 5.275         | 1.154  | 0.0692 | 11      | 0.68                | 8%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0177     | 6.138    | 0.0109 | 5.275         | 1.154  | 0.0692 | 11      | 0.70                | 8%             | 0    |
| 148.07      | Total Sulfur, ICP, test portion as in 2006.03... (5%) | 0527     | 6.322    | 0.1260 | 5.275         | 1.154  | 0.0692 | 11      | 0.85                | 10%            | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0096     | 4.370*   | 0.1400 | 5.616         | 0.6252 | 0.2017 | 12      | -1.99               | 11%            | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0354     | 4.473*   | 0.0580 | 5.616         | 0.6252 | 0.2017 | 12      | -1.83               | 10%            | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0519     | 5.080    | 0.0400 | 5.616         | 0.6252 | 0.2017 | 12      | -0.86               | 5%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0501     | 5.450    | 0.5000 | 5.616         | 0.6252 | 0.2017 | 12      | -0.27               | 1%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0433     | 5.509    | 0.0210 | 5.616         | 0.6252 | 0.2017 | 12      | -0.17               | 1%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0368     | 5.840    | 0.5299 | 5.616         | 0.6252 | 0.2017 | 12      | 0.36                | 2%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0086     | 5.858    | 0.0632 | 5.616         | 0.6252 | 0.2017 | 12      | 0.39                | 2%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0523     | 5.915    | 0.2700 | 5.616         | 0.6252 | 0.2017 | 12      | 0.48                | 3%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0300     | 5.929    | 0.0380 | 5.616         | 0.6252 | 0.2017 | 12      | 0.50                | 3%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0506     | 5.990    | 0.1600 | 5.616         | 0.6252 | 0.2017 | 12      | 0.60                | 3%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0482     | 6.065    | 0.3700 | 5.616         | 0.6252 | 0.2017 | 12      | 0.72                | 4%             | 0    |
| 148.99      | Total Sulfur, Other (5%)                              | 0072     | 6.405    | 0.2300 | 5.616         | 0.6252 | 0.2017 | 12      | 1.26                | 7%             | 0    |
| 149.04      | Sulfur - HNO3 soluble, ICP (%)                        | 0521     | 5.958    | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 149.04      | Sulfur - HNO3 soluble, ICP (%)                        | 0423     | 6.005    | 0.0300 |               |        |        | 2       |                     |                | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0501     | 85.50    | 9.000  | 157.3         | 33.63  | 3.651  | 7       | -1.93               | 23%            | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0523     | 141.0    | 0.2000 | 157.3         | 33.63  | 3.651  | 7       | -0.44               | 5%             | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0444     | 147.0    | 2.000  | 157.3         | 33.63  | 3.651  | 7       | -0.28               | 3%             | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0541     | 155.0    | 0.0000 | 157.3         | 33.63  | 3.651  | 7       | -0.06               | 1%             | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0255     | 171.9    | 2.256  | 157.3         | 33.63  | 3.651  | 7       | 0.39                | 5%             | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0096     | 184.1    | 5.500  | 157.3         | 33.63  | 3.651  | 7       | 0.72                | 9%             | 0    |
| 151.30      | Acid Soluble Arsenic, ICP (ppm)                       | 0394     | 195.0    | 6.600  | 157.3         | 33.63  | 3.651  | 7       | 1.01                | 12%            | 0    |
| 151.32      | Acid Soluble Arsenic, ICP, 2006.03 (ppm)              | 0300     | 206.8    | 4.300  |               |        |        | 1       |                     |                | 0    |
| 151.33      | Acid Soluble Arsenic, ICP, 2006.03 modified ... (ppm) | 0515     | 186.0    | 1.287  | 206.2         | 16.51  | 5.192  | 5       | -1.22               | 5%             | 0    |
| 151.33      | Acid Soluble Arsenic, ICP, 2006.03 modified ... (ppm) | 0086     | 196.2    | 1.810  | 206.2         | 16.51  | 5.192  | 5       | -0.61               | 2%             | 0    |
| 151.33      | Acid Soluble Arsenic, ICP, 2006.03 modified ... (ppm) | 0117     | 207.4    | 5.200  | 206.2         | 16.51  | 5.192  | 5       | 0.07                | 0%             | 0    |
| 151.33      | Acid Soluble Arsenic, ICP, 2006.03 modified ... (ppm) | 0527     | 211.9    | 6.585  | 206.2         | 16.51  | 5.192  | 5       | 0.34                | 1%             | 0    |
| 151.33      | Acid Soluble Arsenic, ICP, 2006.03 modified ... (ppm) | 0037     | 229.6    | 11.08  | 206.2         | 16.51  | 5.192  | 5       | 1.42                | 6%             | 0    |
| 151.34      | Acid Soluble Arsenic, ICP, EPA 3050B/6010C (ppm)      | 0515     | 183.1    | 3.509  |               |        |        | 2       |                     |                | 0    |
| 151.34      | Acid Soluble Arsenic, ICP, EPA 3050B/6010C (ppm)      | 0368     | 195.5    | 41.00  |               |        |        | 2       |                     |                | 0    |
| 151.99      | Acid Soluble Arsenic, Other (ppm)                     | 0519     | 109.4    | 1.000  |               |        |        | 2       |                     |                | 0    |
| 151.99      | Acid Soluble Arsenic, Other (ppm)                     | 0476     | 158.5    | 1.280  |               |        |        | 2       |                     |                | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0531     | 0.1350*  | 0.0100 | 0.2348        | 0.0217 | 0.0113 | 10      | -4.27               | 21%            | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0169     | 0.2119   | 0.0247 | 0.2348        | 0.0217 | 0.0113 | 10      | -0.98               | 5%             | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0029     | 0.2255   | 0.0130 | 0.2348        | 0.0217 | 0.0113 | 10      | -0.40               | 2%             | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0397     | 0.2288   | 0.0010 | 0.2348        | 0.0217 | 0.0113 | 10      | -0.26               | 1%             | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0535     | 0.2350   | 0.0100 | 0.2348        | 0.0217 | 0.0113 | 10      | 0.01                | 0%             | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0539     | 0.2350   | 0.0100 | 0.2348        | 0.0217 | 0.0113 | 10      | 0.01                | 0%             | 0    |
| 165.00      | Acid Soluble Boron, Spectrophotometric (0.3%)         | 0055     | 0.2420   | 0.0040 | 0.2348        | 0.0217 | 0.0113 | 10      | 0.31                | 2%             | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)          | 0540     | 0.2450   | 0.0100 | 0.2348        | 0.0217 | 0.0113 | 10      | 0.44                | 2%             | 0    |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)          | 0309     | 0.2550   | 0.0300 | 0.2348        | 0.0217 | 0.0113 | 10      | 0.87                | 4%             | 0    |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)          | 0534     | 0.2700   | 0.0000 | 0.2348        | 0.0217 | 0.0113 | 10      | 1.51                | 8%             | 0    |
| 165.00      | Acid Soluble Boron , Spectrophotometric (0.3%)          | 0506     | 0.2300   | 0.0600 | 0.2348        | 0.0217 | 0.0113 | 10      | -0.20               | 1%             | 1    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0072     | 0.2160   | 0.0020 | 0.2485        | 0.0259 | 0.0073 | 11      | -1.17               | 7%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0324     | 0.2190   | 0.0040 | 0.2485        | 0.0259 | 0.0073 | 11      | -1.06               | 6%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0037     | 0.2300   | 0.0280 | 0.2485        | 0.0259 | 0.0073 | 11      | -0.67               | 4%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0444     | 0.2300   | 0.0200 | 0.2485        | 0.0259 | 0.0073 | 11      | -0.67               | 4%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0521     | 0.2449   | 0.0000 | 0.2485        | 0.0259 | 0.0073 | 11      | -0.13               | 1%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0136     | 0.2500   | 0.0000 | 0.2485        | 0.0259 | 0.0073 | 11      | 0.06                | 0%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0394     | 0.2543   | 0.0060 | 0.2485        | 0.0259 | 0.0073 | 11      | 0.21                | 1%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0390     | 0.2645   | 0.0109 | 0.2485        | 0.0259 | 0.0073 | 11      | 0.58                | 3%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0354     | 0.2685   | 0.0070 | 0.2485        | 0.0259 | 0.0073 | 11      | 0.72                | 4%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0433     | 0.2685   | 0.0010 | 0.2485        | 0.0259 | 0.0073 | 11      | 0.72                | 4%             | 0    |
| 165.30      | Acid Soluble Boron , ICP, test portion in 982... (0.3%) | 0086     | 0.2983   | 0.0015 | 0.2485        | 0.0259 | 0.0073 | 11      | 1.80                | 10%            | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0476     | 0.1275*  | 0.0010 | 0.2547        | 0.0318 | 0.0107 | 19      | -3.99               | 25%            | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0513     | 0.2000*  | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | -1.72               | 11%            | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0472     | 0.2200   | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | -1.09               | 7%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0482     | 0.2300   | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.77               | 5%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0423     | 0.2375   | 0.0030 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.54               | 3%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0117     | 0.2380   | 0.0030 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.52               | 3%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0300     | 0.2395   | 0.0006 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.48               | 3%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0368     | 0.2478   | 0.0444 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.22               | 1%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0527     | 0.2495   | 0.0130 | 0.2547        | 0.0318 | 0.0107 | 19      | -0.16               | 1%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0231     | 0.2600   | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.17                | 1%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0291     | 0.2600   | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.17                | 1%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0043     | 0.2650   | 0.0100 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.32                | 2%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0519     | 0.2650   | 0.0100 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.32                | 2%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0515     | 0.2689   | 0.0362 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.45                | 3%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0523     | 0.2750   | 0.0100 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.64                | 4%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0360     | 0.2765   | 0.0030 | 0.2547        | 0.0318 | 0.0107 | 19      | 0.69                | 4%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0486     | 0.2900   | 0.0200 | 0.2547        | 0.0318 | 0.0107 | 19      | 1.11                | 7%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0501     | 0.3000   | 0.0000 | 0.2547        | 0.0318 | 0.0107 | 19      | 1.42                | 9%             | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0255     | 0.3585   | 0.0490 | 0.2547        | 0.0318 | 0.0107 | 19      | 3.26                | 20%            | 0    |
| 165.99      | Acid Soluble Boron , Other (0.3%)                       | 0483     | 2,800    | 40.00  | 0.2547        | 0.0318 | 0.0107 | 19      | 87906.04            | 549653%        | 2    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0540     | 0.1005   | 0.0030 | 0.1378        | 0.0380 | 0.0086 | 10      | -0.91               | 14%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0537     | 0.1015   | 0.0070 | 0.1378        | 0.0380 | 0.0086 | 10      | -0.89               | 13%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0532     | 0.1040   | 0.0020 | 0.1378        | 0.0380 | 0.0086 | 10      | -0.83               | 12%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0536     | 0.1050   | 0.0100 | 0.1378        | 0.0380 | 0.0086 | 10      | -0.80               | 12%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0533     | 0.1370   | 0.0040 | 0.1378        | 0.0380 | 0.0086 | 10      | -0.02               | 0%             | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0538     | 0.1500   | 0.0200 | 0.1378        | 0.0380 | 0.0086 | 10      | 0.30                | 4%             | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0539     | 0.1550   | 0.0100 | 0.1378        | 0.0380 | 0.0086 | 10      | 0.42                | 6%             | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)            | 0531     | 0.1650   | 0.0100 | 0.1378        | 0.0380 | 0.0086 | 10      | 0.67                | 10%            | 0    |

| Method Code | Analyte Name and Method (Units)                        | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |  |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)           | 0535     | 0.1650   | 0.0100 | 0.1378        | 0.0380 | 0.0086 | 10      | 0.67                | 10%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)           | 0486     | 0.2150   | 0.0100 | 0.1378        | 0.0380 | 0.0086 | 10      | 1.89                | 28%            | 0    |
| 171.10      | Water Soluble Boron , Spectrophotometric (%)           | 0518     | 0.4300   | 0.0400 | 0.1378        | 0.0380 | 0.0086 | 10      | 7.16                | 106%           | 1    |
| 171.99      | Water Soluble Boron , Other (%)                        | 0444     | 0.2350   | 0.0100 |               |        |        | 2       |                     |                | 0    |
| 171.99      | Water Soluble Boron , Other (%)                        | 0402     | 0.2550   | 0.0100 |               |        |        | 2       |                     |                | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0501     | 55.50    | 5.000  | 148.8         | 50.51  | 4.281  | 9       | -1.70               | 31%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0523     | 105.7    | 1.300  | 148.8         | 50.51  | 4.281  | 9       | -0.79               | 14%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0444     | 108.0    | 2.000  | 148.8         | 50.51  | 4.281  | 9       | -0.74               | 14%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0255     | 136.2    | 6.928  | 148.8         | 50.51  | 4.281  | 9       | -0.23               | 4%             | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0389     | 164.5    | 3.000  | 148.8         | 50.51  | 4.281  | 9       | 0.29                | 5%             | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0096     | 182.0    | 1.300  | 148.8         | 50.51  | 4.281  | 9       | 0.61                | 11%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0482     | 185.5    | 1.000  | 148.8         | 50.51  | 4.281  | 9       | 0.67                | 12%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0541     | 189.5    | 9.000  | 148.8         | 50.51  | 4.281  | 9       | 0.74                | 14%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0394     | 194.5    | 9.000  | 148.8         | 50.51  | 4.281  | 9       | 0.84                | 15%            | 0    |
| 181.30      | Acid Soluble Cadmium , ICP (ppm)                       | 0035     | 160.0    | 30.00  | 148.8         | 50.51  | 4.281  | 9       | 0.21                | 4%             | 1    |
| 181.32      | Acid Soluble Cadmium , ICP, 2006.03 (ppm)              | 0300     | 176.9    | 4.100  |               |        |        | 1       |                     |                | 0    |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm) | 0086     | 151.4    | 7.960  | 173.0         | 19.53  | 5.319  | 5       | -1.11               | 6%             | 0    |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm) | 0515     | 156.7    | 1.375  | 173.0         | 19.53  | 5.319  | 5       | -0.83               | 5%             | 0    |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm) | 0117     | 171.8    | 0.1000 | 173.0         | 19.53  | 5.319  | 5       | -0.06               | 0%             | 0    |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm) | 0037     | 188.7    | 16.67  | 173.0         | 19.53  | 5.319  | 5       | 0.80                | 5%             | 0    |
| 181.33      | Acid Soluble Cadmium , ICP, 2006.03 modified ... (ppm) | 0527     | 196.3    | 0.4920 | 173.0         | 19.53  | 5.319  | 5       | 1.20                | 7%             | 0    |
| 181.34      | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)      | 0515     | 157.1    | 4.928  |               |        |        | 2       |                     |                | 0    |
| 181.34      | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm)      | 0368     | 178.5    | 23.00  |               |        |        | 2       |                     |                | 0    |
| 181.99      | Acid Soluble Cadmium , Other (ppm)                     | 0519     | 120.3    | 0.1000 | 148.2         | 24.75  | 0.3700 | 3       | -1.13               | 9%             | 0    |
| 181.99      | Acid Soluble Cadmium , Other (ppm)                     | 0476     | 156.7    | 0.0100 | 148.2         | 24.75  | 0.3700 | 3       | 0.35                | 3%             | 0    |
| 181.99      | Acid Soluble Cadmium , Other (ppm)                     | 0506     | 167.5    | 1.000  | 148.2         | 24.75  | 0.3700 | 3       | 0.78                | 7%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0501     | 210.5    | 15.00  | 349.0         | 79.62  | 15.14  | 9       | -1.61               | 20%            | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0444     | 276.5    | 9.000  | 349.0         | 79.62  | 15.14  | 9       | -0.84               | 10%            | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0523     | 301.5    | 3.200  | 349.0         | 79.62  | 15.14  | 9       | -0.55               | 7%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0394     | 339.0    | 8.000  | 349.0         | 79.62  | 15.14  | 9       | -0.12               | 1%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0482     | 350.5    | 3.000  | 349.0         | 79.62  | 15.14  | 9       | 0.02                | 0%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0035     | 373.0    | 38.00  | 349.0         | 79.62  | 15.14  | 9       | 0.28                | 3%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0389     | 411.5    | 7.000  | 349.0         | 79.62  | 15.14  | 9       | 0.72                | 9%             | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0541     | 423.0    | 36.00  | 349.0         | 79.62  | 15.14  | 9       | 0.86                | 11%            | 0    |
| 191.30      | Acid Soluble Chromium , ICP (ppm)                      | 0096     | 436.2    | 17.10  | 349.0         | 79.62  | 15.14  | 9       | 1.01                | 12%            | 0    |
| 191.32      | Acid Soluble Chromium , ICP, 2006.03 (ppm)             | 0300     | 421.2    | 3.800  |               |        |        | 1       |                     |                | 0    |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified... (ppm) | 0086     | 375.0    | 8.890  | 415.3         | 28.54  | 5.936  | 5       | -1.41               | 5%             | 0    |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified... (ppm) | 0515     | 406.2    | 4.982  | 415.3         | 28.54  | 5.936  | 5       | -0.32               | 1%             | 0    |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified... (ppm) | 0117     | 412.0    | 2.200  | 415.3         | 28.54  | 5.936  | 5       | -0.12               | 0%             | 0    |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified... (ppm) | 0527     | 433.4    | 7.020  | 415.3         | 28.54  | 5.936  | 5       | 0.63                | 2%             | 0    |
| 191.33      | Acid Soluble Chromium , ICP, 2006.03 modified... (ppm) | 0037     | 450.1    | 6.588  | 415.3         | 28.54  | 5.936  | 5       | 1.22                | 4%             | 0    |
| 191.34      | Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)     | 0515     | 392.6    | 3.798  |               |        |        | 2       |                     |                | 0    |
| 191.34      | Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppm)     | 0368     | 410.0    | 88.00  |               |        |        | 2       |                     |                | 0    |



| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 191.99      | Acid Soluble Chromium , Other (ppm)                     | 0476     | 290.3    | 18.59  | 303.8         | 22.72  | 11.19  | 3       | -0.59               | 2%             | 0    |
| 191.99      | Acid Soluble Chromium , Other (ppm)                     | 0519     | 291.0    | 0.9700 | 303.8         | 22.72  | 11.19  | 3       | -0.56               | 2%             | 0    |
| 191.99      | Acid Soluble Chromium , Other (ppm)                     | 0506     | 330.0    | 14.00  | 303.8         | 22.72  | 11.19  | 3       | 1.15                | 4%             | 0    |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                         | 0523     | 186.4    | 8.400  | 271.5         | 57.55  | 9.200  | 5       | -1.48               | 16%            | 0    |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                         | 0482     | 240.0    | 6.000  | 271.5         | 57.55  | 9.200  | 5       | -0.55               | 6%             | 0    |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                         | 0035     | 296.0    | 20.00  | 271.5         | 57.55  | 9.200  | 5       | 0.43                | 5%             | 0    |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                         | 0389     | 308.0    | 10.00  | 271.5         | 57.55  | 9.200  | 5       | 0.63                | 7%             | 0    |
| 202.30      | Acid Soluble Cobalt , ICP (ppm)                         | 0096     | 327.0    | 1.600  | 271.5         | 57.55  | 9.200  | 5       | 0.96                | 10%            | 0    |
| 202.32      | Acid Soluble Cobalt , ICP, 2006.03 (ppm)                | 0423     | 283.0    | 2.000  |               |        |        | 2       |                     |                | 0    |
| 202.32      | Acid Soluble Cobalt , ICP, 2006.03 (ppm)                | 0300     | 312.6    | 3.200  |               |        |        | 2       |                     |                | 0    |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)  | 0086     | 276.4    | 5.390  | 310.0         | 26.39  | 5.820  | 5       | -1.27               | 5%             | 0    |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)  | 0515     | 289.4    | 3.243  | 310.0         | 26.39  | 5.820  | 5       | -0.78               | 3%             | 0    |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)  | 0117     | 320.1    | 5.200  | 310.0         | 26.39  | 5.820  | 5       | 0.38                | 2%             | 0    |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)  | 0527     | 323.3    | 8.450  | 310.0         | 26.39  | 5.820  | 5       | 0.50                | 2%             | 0    |
| 202.33      | Acid Soluble Cobalt , ICP, 2006.03 modified w... (ppm)  | 0037     | 340.9    | 6.818  | 310.0         | 26.39  | 5.820  | 5       | 1.17                | 5%             | 0    |
| 202.34      | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)        | 0501     | 153.5    | 7.000  | 251.4         | 85.25  | 25.82  | 3       | -1.15               | 19%            | 0    |
| 202.34      | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)        | 0515     | 291.1    | 7.448  | 251.4         | 85.25  | 25.82  | 3       | 0.47                | 8%             | 0    |
| 202.34      | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm)        | 0368     | 309.5    | 63.00  | 251.4         | 85.25  | 25.82  | 3       | 0.68                | 12%            | 0    |
| 202.99      | Acid Soluble Cobalt , Other (ppm)                       | 0476     | 242.6    | 3.120  | 278.9         | 35.43  | 9.350  | 4       | -1.03               | 7%             | 0    |
| 202.99      | Acid Soluble Cobalt , Other (ppm)                       | 0255     | 254.4    | 17.47  | 278.9         | 35.43  | 9.350  | 4       | -0.69               | 4%             | 0    |
| 202.99      | Acid Soluble Cobalt , Other (ppm)                       | 0506     | 309.0    | 16.00  | 278.9         | 35.43  | 9.350  | 4       | 0.85                | 5%             | 0    |
| 202.99      | Acid Soluble Cobalt , Other (ppm)                       | 0519     | 309.6    | 0.8100 | 278.9         | 35.43  | 9.350  | 4       | 0.87                | 6%             | 0    |
| 221.00      | Acid Soluble Copper , AA, inorganic 965.09 (0.1%)       | 0029     | 0.0248   | 0.0017 | 0.0351        | 0.0131 | 0.0018 | 4       | -0.79               | 15%            | 0    |
| 221.00      | Acid Soluble Copper , AA, inorganic 965.09 (0.1%)       | 0040     | 0.0290   | 0.0005 | 0.0351        | 0.0131 | 0.0018 | 4       | -0.47               | 9%             | 0    |
| 221.00      | Acid Soluble Copper , AA, inorganic 965.09 (0.1%)       | 0485     | 0.0325   | 0.0029 | 0.0351        | 0.0131 | 0.0018 | 4       | -0.20               | 4%             | 0    |
| 221.00      | Acid Soluble Copper , AA, inorganic 965.09 (0.1%)       | 0531     | 0.0542   | 0.0019 | 0.0351        | 0.0131 | 0.0018 | 4       | 1.46                | 27%            | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0255     | 0.01850* | 0.0010 | 0.0263        | 0.0039 | 0.0010 | 16      | -2.00               | 15%            | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0433     | 0.0215   | 0.0010 | 0.0263        | 0.0039 | 0.0010 | 16      | -1.23               | 9%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0035     | 0.0226   | 0.0004 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.94               | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0324     | 0.0229   | 0.0007 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.88               | 6%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0360     | 0.0233   | 0.0006 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.76               | 6%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0541     | 0.0241   | 0.0032 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.56               | 4%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0157     | 0.0260   | 0.0040 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.07               | 0%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0444     | 0.0260   | 0.0020 | 0.0263        | 0.0039 | 0.0010 | 16      | -0.07               | 0%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0102     | 0.0265   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.06                | 0%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0096     | 0.0279   | 0.0008 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.42                | 3%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0354     | 0.0290   | 0.0020 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.71                | 5%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0136     | 0.0300   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.96                | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0231     | 0.0300   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.96                | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0402     | 0.0300   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.96                | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0472     | 0.0300   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.96                | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0482     | 0.0300   | 0.0000 | 0.0263        | 0.0039 | 0.0010 | 16      | 0.96                | 7%             | 0    |
| 221.30      | Acid Soluble Copper , ICP, test portion inorg... (0.1%) | 0483     | 273.5    | 19.00  | 0.0263        | 0.0039 | 0.0010 | 16      | 70562.56            | 520656%        | 2    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 221.32      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0521     | 0.0231   | 0.0000 | 128.8         | 257.5  | 7.500  | 4       | -0.50               | 50%            | 0    |
| 221.32      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0300     | 0.0242   | 0.0001 | 128.8         | 257.5  | 7.500  | 4       | -0.50               | 50%            | 0    |
| 221.32      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0394     | 0.0261   | 0.0002 | 128.8         | 257.5  | 7.500  | 4       | -0.50               | 50%            | 0    |
| 221.32      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0423     | 515.0    | 30.00  | 128.8         | 257.5  | 7.500  | 4       | 1.50                | 150%           | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0515     | 0.0224   | 0.0013 | 0.0251        | 0.0011 | 0.0010 | 8       | -2.40               | 6%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0177     | 0.0246   | 0.0012 | 0.0251        | 0.0011 | 0.0010 | 8       | -0.45               | 1%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0086     | 0.0249   | 0.0013 | 0.0251        | 0.0011 | 0.0010 | 8       | -0.24               | 1%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0117     | 0.0249   | 0.0035 | 0.0251        | 0.0011 | 0.0010 | 8       | -0.24               | 1%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0527     | 0.0250   | 0.0000 | 0.0251        | 0.0011 | 0.0010 | 8       | -0.11               | 0%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0106     | 0.0255   | 0.0003 | 0.0251        | 0.0011 | 0.0010 | 8       | 0.28                | 1%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0055     | 0.0260   | 0.0000 | 0.0251        | 0.0011 | 0.0010 | 8       | 0.76                | 2%             | 0    |
| 221.33      | Acid Soluble Copper , ICP, test portion 2006.... (0.1%) | 0486     | 0.0300   | 0.0000 | 0.0251        | 0.0011 | 0.0010 | 8       | 4.21                | 10%            | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0476     | 0.01800* | 0.0000 | 0.0272        | 0.0039 | 0.0059 | 8       | -2.14               | 17%            | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0389     | 0.0250   | 0.0020 | 0.0272        | 0.0039 | 0.0059 | 8       | -0.51               | 4%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0523     | 0.0250   | 0.0100 | 0.0272        | 0.0039 | 0.0059 | 8       | -0.51               | 4%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0368     | 0.0274   | 0.0034 | 0.0272        | 0.0039 | 0.0059 | 8       | 0.05                | 0%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0027     | 0.0280   | 0.0020 | 0.0272        | 0.0039 | 0.0059 | 8       | 0.19                | 2%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0390     | 0.0283   | 0.0014 | 0.0272        | 0.0039 | 0.0059 | 8       | 0.26                | 2%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0515     | 0.0294   | 0.0087 | 0.0272        | 0.0039 | 0.0059 | 8       | 0.51                | 4%             | 0    |
| 221.99      | Acid Soluble Copper , Other (0.1%)                      | 0519     | 0.1000   | 0.0200 | 0.0272        | 0.0039 | 0.0059 | 8       | 16.97               | 134%           | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0513     | 0.4300*  | 0.0200 | 0.5078        | 0.0683 | 0.0149 | 7       | -1.03               | 8%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0534     | 0.4500*  | 0.0200 | 0.5078        | 0.0683 | 0.0149 | 7       | -0.77               | 6%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0356     | 0.4930   | 0.0100 | 0.5078        | 0.0683 | 0.0149 | 7       | -0.20               | 1%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0516     | 0.4997   | 0.0054 | 0.5078        | 0.0683 | 0.0149 | 7       | -0.11               | 1%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0531     | 0.5143   | 0.0049 | 0.5078        | 0.0683 | 0.0149 | 7       | 0.09                | 1%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0029     | 0.5678   | 0.0156 | 0.5078        | 0.0683 | 0.0149 | 7       | 0.80                | 6%             | 0    |
| 241.00      | Acid Soluble Iron, AA, inorganic 965.09 (0.5%)          | 0485     | 0.5996   | 0.0283 | 0.5078        | 0.0683 | 0.0149 | 7       | 1.22                | 9%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0255     | 0.4950   | 0.0200 | 0.5671        | 0.0452 | 0.0149 | 17      | -1.60               | 6%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0402     | 0.5050   | 0.0100 | 0.5671        | 0.0452 | 0.0149 | 17      | -1.37               | 5%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0433     | 0.5250   | 0.0040 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.93               | 4%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0472     | 0.5300   | 0.0000 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.82               | 3%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0102     | 0.5455   | 0.0124 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.48               | 2%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0035     | 0.5480   | 0.0120 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.42               | 2%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0324     | 0.5570   | 0.0220 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.22               | 1%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0371     | 0.5600   | 0.0000 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.16               | 1%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0096     | 0.5650   | 0.0100 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.05               | 0%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0444     | 0.5650   | 0.0100 | 0.5671        | 0.0452 | 0.0149 | 17      | -0.05               | 0%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0354     | 0.5825   | 0.0230 | 0.5671        | 0.0452 | 0.0149 | 17      | 0.34                | 1%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0157     | 0.5855   | 0.0550 | 0.5671        | 0.0452 | 0.0149 | 17      | 0.41                | 2%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0482     | 0.6000   | 0.0200 | 0.5671        | 0.0452 | 0.0149 | 17      | 0.73                | 3%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0231     | 0.6050   | 0.0300 | 0.5671        | 0.0452 | 0.0149 | 17      | 0.84                | 3%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0360     | 0.6065   | 0.0030 | 0.5671        | 0.0452 | 0.0149 | 17      | 0.87                | 3%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0390     | 0.6270   | 0.0021 | 0.5671        | 0.0452 | 0.0149 | 17      | 1.32                | 5%             | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0234     | 0.6400   | 0.0200 | 0.5671        | 0.0452 | 0.0149 | 17      | 1.61                | 6%             | 0    |
| 241.30      | Acid Soluble Iron, ICP, test portion inorgani... (0.5%) | 0483     | 6,255    | 10.00  | 0.5671        | 0.0452 | 0.0149 | 17      | 138308.01           | 551411%        | 2    |
| 241.32      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0300     | 0.4963   | 0.0005 | 0.5701        | 0.1077 | 0.0161 | 4       | -0.69               | 6%             | 0    |
| 241.32      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0521     | 0.5213   | 0.0000 | 0.5701        | 0.1077 | 0.0161 | 4       | -0.45               | 4%             | 0    |
| 241.32      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0423     | 0.5330   | 0.0240 | 0.5701        | 0.1077 | 0.0161 | 4       | -0.34               | 3%             | 0    |
| 241.32      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0541     | 0.7300   | 0.0400 | 0.5701        | 0.1077 | 0.0161 | 4       | 1.48                | 14%            | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0515     | 0.5144   | 0.0080 | 0.5583        | 0.0327 | 0.0097 | 11      | -1.34               | 4%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0397     | 0.5280   | 0.0190 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.93               | 3%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0486     | 0.5350   | 0.0100 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.71               | 2%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0086     | 0.5370   | 0.0085 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.65               | 2%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0117     | 0.5540   | 0.0069 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.13               | 0%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0527     | 0.5545   | 0.0230 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.12               | 0%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0034     | 0.5645   | 0.0030 | 0.5583        | 0.0327 | 0.0097 | 11      | 0.19                | 1%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0055     | 0.5750   | 0.0100 | 0.5583        | 0.0327 | 0.0097 | 11      | 0.51                | 1%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0177     | 0.5762   | 0.0095 | 0.5583        | 0.0327 | 0.0097 | 11      | 0.55                | 2%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0037     | 0.5955   | 0.0090 | 0.5583        | 0.0327 | 0.0097 | 11      | 1.14                | 3%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0136     | 0.6100   | 0.0000 | 0.5583        | 0.0327 | 0.0097 | 11      | 1.58                | 5%             | 0    |
| 241.33      | Acid Soluble Iron, ICP, test portion 2006.03A... (0.5%) | 0106     | 0.5510   | 0.0550 | 0.5583        | 0.0327 | 0.0097 | 11      | -0.22               | 1%             | 1    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0476     | 0.3730*  | 0.0080 | 0.5260        | 0.0674 | 0.0236 | 9       | -2.10               | 15%            | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0519     | 0.4350*  | 0.0100 | 0.5260        | 0.0674 | 0.0236 | 9       | -1.25               | 9%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0501     | 0.5150   | 0.0700 | 0.5260        | 0.0674 | 0.0236 | 9       | -0.15               | 1%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0506     | 0.5300   | 0.0000 | 0.5260        | 0.0674 | 0.0236 | 9       | 0.05                | 0%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0515     | 0.5455   | 0.0238 | 0.5260        | 0.0674 | 0.0236 | 9       | 0.27                | 2%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0027     | 0.5560   | 0.0200 | 0.5260        | 0.0674 | 0.0236 | 9       | 0.41                | 3%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0523     | 0.5600   | 0.0400 | 0.5260        | 0.0674 | 0.0236 | 9       | 0.47                | 3%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0389     | 0.5680   | 0.0120 | 0.5260        | 0.0674 | 0.0236 | 9       | 0.57                | 4%             | 0    |
| 241.99      | Acid Soluble Iron, Other (0.5%)                         | 0368     | 0.5997   | 0.0290 | 0.5260        | 0.0674 | 0.0236 | 9       | 1.01                | 7%             | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0501     | 381.5    | 13.00  | 757.4         | 223.9  | 33.03  | 10      | -1.56               | 25%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0523     | 549.8    | 23.20  | 757.4         | 223.9  | 33.03  | 10      | -0.86               | 14%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0444     | 561.0    | 26.00  | 757.4         | 223.9  | 33.03  | 10      | -0.82               | 13%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0482     | 686.5    | 29.00  | 757.4         | 223.9  | 33.03  | 10      | -0.29               | 5%             | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0394     | 735.5    | 27.00  | 757.4         | 223.9  | 33.03  | 10      | -0.09               | 1%             | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0035     | 842.5    | 71.00  | 757.4         | 223.9  | 33.03  | 10      | 0.35                | 6%             | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0255     | 907.9    | 5.076  | 757.4         | 223.9  | 33.03  | 10      | 0.63                | 10%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0096     | 925.9    | 2.000  | 757.4         | 223.9  | 33.03  | 10      | 0.70                | 11%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0541     | 950.0    | 116.0  | 757.4         | 223.9  | 33.03  | 10      | 0.80                | 13%            | 0    |
| 251.30      | Acid Soluble Lead , ICP (ppm)                           | 0389     | 993.0    | 18.00  | 757.4         | 223.9  | 33.03  | 10      | 0.98                | 16%            | 0    |
| 251.32      | Acid Soluble Lead , ICP, 2006.03 (ppm)                  | 0300     | 906.9    | 24.10  |               |        |        | 1       |                     |                | 0    |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)  | 0086     | 825.1    | 30.99  | 957.6         | 112.6  | 38.07  | 5       | -1.18               | 7%             | 0    |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)  | 0527     | 899.5    | 12.19  | 957.6         | 112.6  | 38.07  | 5       | -0.52               | 3%             | 0    |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)  | 0117     | 917.5    | 5.600  | 957.6         | 112.6  | 38.07  | 5       | -0.36               | 2%             | 0    |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)  | 0037     | 1,046    | 19.92  | 957.6         | 112.6  | 38.07  | 5       | 0.78                | 5%             | 0    |
| 251.33      | Acid Soluble Lead , ICP, 2006.03 modified w/9... (ppm)  | 0515     | 1,100    | 121.7  | 957.6         | 112.6  | 38.07  | 5       | 1.27                | 7%             | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 251.34      | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)          | 0368     | 963.0    | 14.00  |               |        |        | 2       |                     |                | 0    |
| 251.34      | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm)          | 0515     | 1,090    | 29.02  |               |        |        | 2       |                     |                | 0    |
| 251.99      | Acid Soluble Lead , Other (ppm)                         | 0519     | 569.7    | 0.6600 | 760.8         | 206.9  | 6.107  | 3       | -0.92               | 13%            | 0    |
| 251.99      | Acid Soluble Lead , Other (ppm)                         | 0476     | 732.1    | 2.660  | 760.8         | 206.9  | 6.107  | 3       | -0.14               | 2%             | 0    |
| 251.99      | Acid Soluble Lead , Other (ppm)                         | 0506     | 980.5    | 15.00  | 760.8         | 206.9  | 6.107  | 3       | 1.06                | 14%            | 0    |
| 261.12      | Acid Soluble Manganese , AA, inorganic 965.09... (0.3%) | 0029     | 0.0242   | 0.0032 | 0.0272        | 0.0025 | 0.0040 | 4       | -1.18               | 5%             | 0    |
| 261.12      | Acid Soluble Manganese , AA, inorganic 965.09... (0.3%) | 0040     | 0.0265   | 0.0050 | 0.0272        | 0.0025 | 0.0040 | 4       | -0.26               | 1%             | 0    |
| 261.12      | Acid Soluble Manganese , AA, inorganic 965.09... (0.3%) | 0531     | 0.0277   | 0.0020 | 0.0272        | 0.0025 | 0.0040 | 4       | 0.21                | 1%             | 0    |
| 261.12      | Acid Soluble Manganese , AA, inorganic 965.09... (0.3%) | 0485     | 0.0303   | 0.0059 | 0.0272        | 0.0025 | 0.0040 | 4       | 1.23                | 6%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0472     | 0.0200   | 0.0000 | 0.0258        | 0.0044 | 0.0006 | 9       | -1.21               | 11%            | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0433     | 0.0230   | 0.0000 | 0.0258        | 0.0044 | 0.0006 | 9       | -0.59               | 5%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0035     | 0.0242   | 0.0010 | 0.0258        | 0.0044 | 0.0006 | 9       | -0.34               | 3%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0354     | 0.0245   | 0.0010 | 0.0258        | 0.0044 | 0.0006 | 9       | -0.27               | 3%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0157     | 0.0250   | 0.0000 | 0.0258        | 0.0044 | 0.0006 | 9       | -0.17               | 2%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0096     | 0.0256   | 0.0007 | 0.0258        | 0.0044 | 0.0006 | 9       | -0.06               | 1%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0102     | 0.0263   | 0.0009 | 0.0258        | 0.0044 | 0.0006 | 9       | 0.09                | 1%             | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0390     | 0.0314   | 0.0018 | 0.0258        | 0.0044 | 0.0006 | 9       | 1.16                | 11%            | 0    |
| 261.30      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0291     | 0.1100   | 0.0000 | 0.0258        | 0.0044 | 0.0006 | 9       | 17.50               | 163%           | 0    |
| 261.31      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0324     | 0.0246   | 0.0027 | 0.0269        | 0.0028 | 0.0013 | 3       | -0.83               | 4%             | 0    |
| 261.31      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0360     | 0.0261   | 0.0012 | 0.0269        | 0.0028 | 0.0013 | 3       | -0.28               | 1%             | 0    |
| 261.31      | Acid Soluble Manganese , ICP, test portion 97... (0.3%) | 0482     | 0.0300   | 0.0000 | 0.0269        | 0.0028 | 0.0013 | 3       | 1.11                | 6%             | 0    |
| 261.32      | Acid Soluble Manganese , ICP, test portion in... (0.3%) | 0541     | 0.0248   | 0.0016 | 32.75         | 73.09  | 2.656  | 5       | -0.45               | 50%            | 0    |
| 261.32      | Acid Soluble Manganese , ICP, test portion in... (0.3%) | 0444     | 0.0260   | 0.0000 | 32.75         | 73.09  | 2.656  | 5       | -0.45               | 50%            | 0    |
| 261.32      | Acid Soluble Manganese , ICP, test portion in... (0.3%) | 0402     | 0.0350   | 0.0100 | 32.75         | 73.09  | 2.656  | 5       | -0.45               | 50%            | 0    |
| 261.32      | Acid Soluble Manganese , ICP, test portion in... (0.3%) | 0231     | 0.1650   | 0.2700 | 32.75         | 73.09  | 2.656  | 5       | -0.45               | 50%            | 0    |
| 261.32      | Acid Soluble Manganese , ICP, test portion in... (0.3%) | 0483     | 163.5    | 13.00  | 32.75         | 73.09  | 2.656  | 5       | 1.79                | 200%           | 0    |
| 261.33      | Acid Soluble Manganese , ICP, test portion or... (0.3%) | 0086     | 0.0263   | 0.0011 |               |        |        | 1       |                     |                | 0    |
| 261.34      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0521     | 0.0228   | 0.0000 | 0.0253        | 0.0021 | 0.0006 | 4       | -1.20               | 5%             | 0    |
| 261.34      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0394     | 0.0245   | 0.0010 | 0.0253        | 0.0021 | 0.0006 | 4       | -0.39               | 2%             | 0    |
| 261.34      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0300     | 0.0264   | 0.0002 | 0.0253        | 0.0021 | 0.0006 | 4       | 0.53                | 2%             | 0    |
| 261.34      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0423     | 0.0275   | 0.0010 | 0.0253        | 0.0021 | 0.0006 | 4       | 1.06                | 4%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0515     | 0.01420* | 0.0186 | 0.0260        | 0.0047 | 0.0082 | 8       | -2.30               | 23%            | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0106     | 0.0232   | 0.0011 | 0.0260        | 0.0047 | 0.0082 | 8       | -0.56               | 6%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0136     | 0.0250   | 0.0100 | 0.0260        | 0.0047 | 0.0082 | 8       | -0.20               | 2%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0177     | 0.0251   | 0.0024 | 0.0260        | 0.0047 | 0.0082 | 8       | -0.18               | 2%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0117     | 0.0265   | 0.0004 | 0.0260        | 0.0047 | 0.0082 | 8       | 0.09                | 1%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0527     | 0.0265   | 0.0030 | 0.0260        | 0.0047 | 0.0082 | 8       | 0.09                | 1%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0486     | 0.0300   | 0.0000 | 0.0260        | 0.0047 | 0.0082 | 8       | 0.77                | 8%             | 0    |
| 261.35      | Acid Soluble Manganese , ICP, test portion 20... (0.3%) | 0055     | 0.2750   | 0.0300 | 0.0260        | 0.0047 | 0.0082 | 8       | 48.34               | 478%           | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                   | 0476     | 0.0200   | 0.0000 | 0.0253        | 0.0035 | 0.0028 | 8       | -1.40               | 11%            | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                   | 0255     | 0.0230   | 0.0020 | 0.0253        | 0.0035 | 0.0028 | 8       | -0.61               | 5%             | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                   | 0389     | 0.0245   | 0.0010 | 0.0253        | 0.0035 | 0.0028 | 8       | -0.22               | 2%             | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                   | 0523     | 0.0250   | 0.0100 | 0.0253        | 0.0035 | 0.0028 | 8       | -0.09               | 1%             | 0    |



| Method Code | Analyte Name and Method (Units)                           | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                     | 0515     | 0.0253   | 0.0060 | 0.0253        | 0.0035 | 0.0028 | 8       | -0.01               | 0%             | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                     | 0368     | 0.0268   | 0.0027 | 0.0253        | 0.0035 | 0.0028 | 8       | 0.37                | 3%             | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                     | 0027     | 0.0275   | 0.0010 | 0.0253        | 0.0035 | 0.0028 | 8       | 0.57                | 4%             | 0    |
| 261.99      | Acid Soluble Manganese , Other (0.3%)                     | 0519     | 0.2700   | 0.0000 | 0.0253        | 0.0035 | 0.0028 | 8       | 64.20               | 483%           | 0    |
| 271.00      | Water Soluble Manganese , AA (%)                          | 0027     | 0.0140   | 0.0020 |               |        |        | 1       |                     |                | 0    |
| 271.30      | Water Soluble Manganese , ICP, Ext. 972.03 (%)            | 0444     | 0.0130   | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 271.30      | Water Soluble Manganese , ICP, Ext. 972.03 (%)            | 0486     | 0.0135   | 0.0010 |               |        |        | 2       |                     |                | 0    |
| 281.00      | Acid Soluble Mercury , AA (ppm)                           | 0117     | 25.59    | 2.690  |               |        |        | 1       |                     |                | 0    |
| 281.30      | Acid Soluble Mercury , ICP (ppm)                          | 0515     | 0.0085   | 0.0010 | 15.94         | 16.90  | 0.9650 | 4       | -0.94               | 50%            | 0    |
| 281.30      | Acid Soluble Mercury , ICP (ppm)                          | 0541     | 2.975    | 0.4500 | 15.94         | 16.90  | 0.9650 | 4       | -0.77               | 41%            | 0    |
| 281.30      | Acid Soluble Mercury , ICP (ppm)                          | 0394     | 27.45    | 2.210  | 15.94         | 16.90  | 0.9650 | 4       | 0.68                | 36%            | 0    |
| 281.30      | Acid Soluble Mercury , ICP (ppm)                          | 0527     | 33.32    | 1.199  | 15.94         | 16.90  | 0.9650 | 4       | 1.03                | 55%            | 0    |
| 281.99      | Acid Soluble Mercury , Other (ppm)                        | 0519     | 8.780    | 0.0400 |               |        |        | 2       |                     |                | 0    |
| 281.99      | Acid Soluble Mercury , Other (ppm)                        | 0476     | 29.11    | 0.7400 |               |        |        | 2       |                     |                | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0519     | 249.0*   | 2.000  | 594.6         | 79.65  | 24.50  | 10      | -4.03               | 29%            | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0433     | 525.0    | 10.00  | 594.6         | 79.65  | 24.50  | 10      | -0.81               | 6%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0521     | 566.6    | 0.0000 | 594.6         | 79.65  | 24.50  | 10      | -0.33               | 2%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0035     | 570.5    | 19.00  | 594.6         | 79.65  | 24.50  | 10      | -0.28               | 2%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0255     | 576.5    | 39.50  | 594.6         | 79.65  | 24.50  | 10      | -0.21               | 2%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0541     | 578.0    | 24.00  | 594.6         | 79.65  | 24.50  | 10      | -0.19               | 1%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0523     | 610.0    | 29.50  | 594.6         | 79.65  | 24.50  | 10      | 0.18                | 1%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0444     | 665.0    | 10.00  | 594.6         | 79.65  | 24.50  | 10      | 0.82                | 6%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0096     | 682.5    | 59.00  | 594.6         | 79.65  | 24.50  | 10      | 1.03                | 7%             | 0    |
| 289.30      | Acid Soluble Molybdenum , ICP (100ppm)                    | 0102     | 696.5    | 52.00  | 594.6         | 79.65  | 24.50  | 10      | 1.19                | 9%             | 0    |
| 289.32      | Acid Soluble Molybdenum , ICP, 2006.03 (100ppm)           | 0394     | 592.0    | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 289.32      | Acid Soluble Molybdenum , ICP, 2006.03 (100ppm)           | 0300     | 635.6    | 21.30  |               |        |        | 2       |                     |                | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0515     | 547.8    | 31.74  | 653.5         | 98.30  | 29.45  | 8       | -0.98               | 8%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0486     | 569.0    | 42.00  | 653.5         | 98.30  | 29.45  | 8       | -0.79               | 6%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0086     | 590.2    | 14.19  | 653.5         | 98.30  | 29.45  | 8       | -0.59               | 5%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0423     | 615.0    | 6.000  | 653.5         | 98.30  | 29.45  | 8       | -0.36               | 3%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0117     | 672.8    | 26.70  | 653.5         | 98.30  | 29.45  | 8       | 0.18                | 1%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0037     | 700.0    | 20.00  | 653.5         | 98.30  | 29.45  | 8       | 0.43                | 4%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0527     | 748.9    | 13.96  | 653.5         | 98.30  | 29.45  | 8       | 0.89                | 7%             | 0    |
| 289.33      | Acid Soluble Molybdenum , ICP, 2006.03 modifi... (100ppm) | 0106     | 784.5    | 81.00  | 653.5         | 98.30  | 29.45  | 8       | 1.22                | 10%            | 0    |
| 289.34      | Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (100ppm) | 0501     | 286.7*   | 24.40  | 558.9         | 239.2  | 65.66  | 3       | -1.14               | 24%            | 0    |
| 289.34      | Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (100ppm) | 0368     | 654.5    | 125.0  | 558.9         | 239.2  | 65.66  | 3       | 0.40                | 9%             | 0    |
| 289.34      | Acid Soluble Molybdenum , ICP, EPA 3050B/6010... (100ppm) | 0515     | 735.5    | 47.59  | 558.9         | 239.2  | 65.66  | 3       | 0.74                | 16%            | 0    |
| 289.99      | Acid Soluble Molybdenum , Other (100ppm)                  | 0027     | 0.07450* | 0.0030 | 504.1         | 452.5  | 6.331  | 3       | -1.11               | 50%            | 0    |
| 289.99      | Acid Soluble Molybdenum , Other (100ppm)                  | 0476     | 636.7    | 15.99  | 504.1         | 452.5  | 6.331  | 3       | 0.29                | 13%            | 0    |
| 289.99      | Acid Soluble Molybdenum , Other (100ppm)                  | 0506     | 875.5    | 3.000  | 504.1         | 452.5  | 6.331  | 3       | 0.82                | 37%            | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                           | 0444     | 14.95    | 0.4000 | 20.64         | 5.749  | 0.6114 | 7       | -0.90               | 14%            | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                           | 0482     | 17.10    | 0.2000 | 20.64         | 5.749  | 0.6114 | 7       | -0.56               | 9%             | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                           | 0521     | 18.39    | 0.0000 | 20.64         | 5.749  | 0.6114 | 7       | -0.35               | 5%             | 0    |

| Method Code | Analyte Name and Method (Units)                        | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |  |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                        | 0394     | 19.30    | 1.000  | 20.64         | 5.749  | 0.6114 | 7       | -0.21               | 3%             | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                        | 0541     | 19.36    | 1.280  | 20.64         | 5.749  | 0.6114 | 7       | -0.20               | 3%             | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                        | 0096     | 26.95    | 0.9000 | 20.64         | 5.749  | 0.6114 | 7       | 0.99                | 15%            | 0    |
| 291.30      | Acid Soluble Nickel , ICP (ppm)                        | 0035     | 28.45    | 0.5000 | 20.64         | 5.749  | 0.6114 | 7       | 1.23                | 19%            | 0    |
| 291.32      | Acid Soluble Nickel , ICP, 2006.03 (ppm)               | 0300     | 23.68    | 0.9700 |               |        |        | 1       |                     |                | 0    |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm) | 0117     | 22.29    | 3.710  | 26.14         | 2.230  | 6.555  | 5       | -1.73               | 7%             | 0    |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm) | 0527     | 26.26    | 0.2870 | 26.14         | 2.230  | 6.555  | 5       | 0.05                | 0%             | 0    |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm) | 0515     | 26.92    | 3.565  | 26.14         | 2.230  | 6.555  | 5       | 0.35                | 1%             | 0    |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm) | 0086     | 27.49    | 14.46  | 26.14         | 2.230  | 6.555  | 5       | 0.61                | 3%             | 0    |
| 291.33      | Acid Soluble Nickel , ICP, 2006.03 modified w... (ppm) | 0037     | 27.75    | 10.75  | 26.14         | 2.230  | 6.555  | 5       | 0.72                | 3%             | 0    |
| 291.34      | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)       | 0501     | 8.765    | 2.630  | 22.50         | 12.85  | 3.586  | 3       | -1.07               | 31%            | 0    |
| 291.34      | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)       | 0368     | 24.50    | 3.000  | 22.50         | 12.85  | 3.586  | 3       | 0.16                | 4%             | 0    |
| 291.34      | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm)       | 0515     | 34.22    | 5.127  | 22.50         | 12.85  | 3.586  | 3       | 0.91                | 26%            | 0    |
| 291.99      | Acid Soluble Nickel , Other (ppm)                      | 0519     | 11.60    | 0.0100 | 19.05         | 7.950  | 3.113  | 4       | -0.94               | 20%            | 0    |
| 291.99      | Acid Soluble Nickel , Other (ppm)                      | 0476     | 12.97    | 0.2600 | 19.05         | 7.950  | 3.113  | 4       | -0.77               | 16%            | 0    |
| 291.99      | Acid Soluble Nickel , Other (ppm)                      | 0255     | 24.20    | 11.28  | 19.05         | 7.950  | 3.113  | 4       | 0.65                | 14%            | 0    |
| 291.99      | Acid Soluble Nickel , Other (ppm)                      | 0506     | 27.45    | 0.9000 | 19.05         | 7.950  | 3.113  | 4       | 1.06                | 22%            | 0    |
| 301.30      | Acid Soluble Selenium , ICP (ppm)                      | 0541     | 96.55    | 18.90  | 207.4         | 148.8  | 10.75  | 3       | -0.75               | 27%            | 0    |
| 301.30      | Acid Soluble Selenium , ICP (ppm)                      | 0501     | 149.2    | 12.90  | 207.4         | 148.8  | 10.75  | 3       | -0.39               | 14%            | 0    |
| 301.30      | Acid Soluble Selenium , ICP (ppm)                      | 0086     | 376.5    | 0.4500 | 207.4         | 148.8  | 10.75  | 3       | 1.14                | 41%            | 0    |
| 301.32      | Acid Soluble Selenium , ICP, 2006.03 (ppm)             | 0300     | 381.3    | 1.000  |               |        |        | 1       |                     |                | 0    |
| 301.33      | Acid Soluble Selenium , ICP, 2006.03 modified... (ppm) | 0515     | 362.9    | 19.11  | 388.9         | 25.70  | 5.350  | 4       | -1.01               | 3%             | 0    |
| 301.33      | Acid Soluble Selenium , ICP, 2006.03 modified... (ppm) | 0117     | 375.1    | 1.700  | 388.9         | 25.70  | 5.350  | 4       | -0.54               | 2%             | 0    |
| 301.33      | Acid Soluble Selenium , ICP, 2006.03 modified... (ppm) | 0527     | 396.1    | 0.2130 | 388.9         | 25.70  | 5.350  | 4       | 0.28                | 1%             | 0    |
| 301.33      | Acid Soluble Selenium , ICP, 2006.03 modified... (ppm) | 0037     | 421.5    | 0.3790 | 388.9         | 25.70  | 5.350  | 4       | 1.27                | 4%             | 0    |
| 301.34      | Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)     | 0515     | 321.6    | 11.24  |               |        |        | 2       |                     |                | 0    |
| 301.34      | Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppm)     | 0368     | 373.0    | 20.00  |               |        |        | 2       |                     |                | 0    |
| 301.99      | Acid Soluble Selenium , Other (ppm)                    | 0519     | 102.4    | 1.040  | 250.6         | 109.6  | 3.925  | 4       | -1.35               | 30%            | 0    |
| 301.99      | Acid Soluble Selenium , Other (ppm)                    | 0506     | 238.0    | 10.00  | 250.6         | 109.6  | 3.925  | 4       | -0.12               | 3%             | 0    |
| 301.99      | Acid Soluble Selenium , Other (ppm)                    | 0476     | 309.0    | 0.4100 | 250.6         | 109.6  | 3.925  | 4       | 0.53                | 12%            | 0    |
| 301.99      | Acid Soluble Selenium , Other (ppm)                    | 0255     | 353.2    | 4.250  | 250.6         | 109.6  | 3.925  | 4       | 0.94                | 20%            | 0    |
| 311.32      | Sodium, ICP, 2006.03 test portion (%)                  | 0324     | 0.6890   | 0.0600 |               |        |        | 2       |                     |                | 0    |
| 311.32      | Sodium, ICP, 2006.03 test portion (%)                  | 0521     | 0.6895   | 0.0000 |               |        |        | 2       |                     |                | 0    |
| 311.33      | Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)   | 0035     | 0.6510   | 0.0000 | 0.7350        | 0.0751 | 0.0102 | 4       | -1.12               | 6%             | 0    |
| 311.33      | Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)   | 0086     | 0.7185   | 0.0318 | 0.7350        | 0.0751 | 0.0102 | 4       | -0.22               | 1%             | 0    |
| 311.33      | Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)   | 0423     | 0.7375   | 0.0050 | 0.7350        | 0.0751 | 0.0102 | 4       | 0.03                | 0%             | 0    |
| 311.33      | Sodium, ICP, 2006.03 modified w/9:3 HNO3:HCl ... (%)   | 0527     | 0.8330   | 0.0040 | 0.7350        | 0.0751 | 0.0102 | 4       | 1.30                | 7%             | 0    |
| 311.99      | Sodium, Other (%)                                      | 0482     | 0.7050   | 0.0300 | 0.7458        | 0.0413 | 0.0303 | 3       | -0.99               | 3%             | 0    |
| 311.99      | Sodium, Other (%)                                      | 0096     | 0.7450   | 0.0300 | 0.7458        | 0.0413 | 0.0303 | 3       | -0.02               | 0%             | 0    |
| 311.99      | Sodium, Other (%)                                      | 0354     | 0.7875   | 0.0310 | 0.7458        | 0.0413 | 0.0303 | 3       | 1.01                | 3%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)        | 0029     | 1.101    | 0.0570 | 1.177         | 0.0525 | 0.0272 | 13      | -1.46               | 3%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)        | 0428     | 1.112    | 0.0519 | 1.177         | 0.0525 | 0.0272 | 13      | -1.25               | 3%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)        | 0513     | 1.135    | 0.0100 | 1.177         | 0.0525 | 0.0272 | 13      | -0.80               | 2%             | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0531     | 1.153    | 0.0330 | 1.177         | 0.0525 | 0.0272 | 13      | -0.46               | 1%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0040     | 1.175    | 0.0700 | 1.177         | 0.0525 | 0.0272 | 13      | -0.04               | 0%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0169     | 1.175    | 0.0100 | 1.177         | 0.0525 | 0.0272 | 13      | -0.04               | 0%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0535     | 1.175    | 0.0100 | 1.177         | 0.0525 | 0.0272 | 13      | -0.04               | 0%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0536     | 1.190    | 0.0200 | 1.177         | 0.0525 | 0.0272 | 13      | 0.25                | 1%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0539     | 1.190    | 0.0200 | 1.177         | 0.0525 | 0.0272 | 13      | 0.25                | 1%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0540     | 1.190    | 0.0200 | 1.177         | 0.0525 | 0.0272 | 13      | 0.25                | 1%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0533     | 1.195    | 0.0100 | 1.177         | 0.0525 | 0.0272 | 13      | 0.34                | 1%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0534     | 1.305    | 0.0300 | 1.177         | 0.0525 | 0.0272 | 13      | 2.43                | 5%             | 0    |
| 321.00      | Acid Soluble Zinc , AA, inorganic 965.09 (1.3%)         | 0356     | 1.340    | 0.0120 | 1.177         | 0.0525 | 0.0272 | 13      | 3.10                | 7%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0102     | 1.075    | 0.0137 | 1.162         | 0.0546 | 0.0358 | 17      | -1.60               | 4%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0444     | 1.105    | 0.0300 | 1.162         | 0.0546 | 0.0358 | 17      | -1.05               | 2%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0324     | 1.115    | 0.0100 | 1.162         | 0.0546 | 0.0358 | 17      | -0.87               | 2%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0096     | 1.124    | 0.0020 | 1.162         | 0.0546 | 0.0358 | 17      | -0.70               | 2%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0472     | 1.130    | 0.0200 | 1.162         | 0.0546 | 0.0358 | 17      | -0.59               | 1%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0482     | 1.130    | 0.0400 | 1.162         | 0.0546 | 0.0358 | 17      | -0.59               | 1%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0234     | 1.135    | 0.0500 | 1.162         | 0.0546 | 0.0358 | 17      | -0.50               | 1%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0157     | 1.150    | 0.0200 | 1.162         | 0.0546 | 0.0358 | 17      | -0.23               | 1%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0255     | 1.160    | 0.2800 | 1.162         | 0.0546 | 0.0358 | 17      | -0.04               | 0%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0291     | 1.165    | 0.0100 | 1.162         | 0.0546 | 0.0358 | 17      | 0.05                | 0%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0035     | 1.170    | 0.0000 | 1.162         | 0.0546 | 0.0358 | 17      | 0.14                | 0%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0433     | 1.183    | 0.0030 | 1.162         | 0.0546 | 0.0358 | 17      | 0.37                | 1%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0354     | 1.201    | 0.0210 | 1.162         | 0.0546 | 0.0358 | 17      | 0.70                | 2%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0360     | 1.205    | 0.0700 | 1.162         | 0.0546 | 0.0358 | 17      | 0.78                | 2%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0390     | 1.225    | 0.0290 | 1.162         | 0.0546 | 0.0358 | 17      | 1.14                | 3%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0371     | 1.240    | 0.0000 | 1.162         | 0.0546 | 0.0358 | 17      | 1.42                | 3%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0231     | 1.265    | 0.0100 | 1.162         | 0.0546 | 0.0358 | 17      | 1.88                | 4%             | 0    |
| 321.30      | Acid Soluble Zinc , ICP, test portion inorgan... (1.3%) | 0483     | 12,850   | 500.0  | 1.162         | 0.0546 | 0.0358 | 17      | 235525.49           | 552670%        | 2    |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0541     | 0.9850*  | 0.0300 | 1.152         | 0.1235 | 0.0116 | 5       | -1.36               | 7%             | 0    |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0300     | 1.104    | 0.0080 | 1.152         | 0.1235 | 0.0116 | 5       | -0.39               | 2%             | 0    |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0394     | 1.150    | 0.0000 | 1.152         | 0.1235 | 0.0116 | 5       | -0.02               | 0%             | 0    |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0521     | 1.203    | 0.0000 | 1.152         | 0.1235 | 0.0116 | 5       | 0.41                | 2%             | 0    |
| 321.32      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0423     | 1.320    | 0.0200 | 1.152         | 0.1235 | 0.0116 | 5       | 1.36                | 7%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0106     | 0.9053*  | 0.2525 | 1.181         | 0.0718 | 0.0785 | 13      | -3.84               | 12%            | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0117     | 1.099    | 0.0250 | 1.181         | 0.0718 | 0.0785 | 13      | -1.14               | 3%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0072     | 1.125    | 0.1100 | 1.181         | 0.0718 | 0.0785 | 13      | -0.78               | 2%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0086     | 1.130    | 0.0472 | 1.181         | 0.0718 | 0.0785 | 13      | -0.70               | 2%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0397     | 1.159    | 0.0604 | 1.181         | 0.0718 | 0.0785 | 13      | -0.31               | 1%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0034     | 1.168    | 0.0180 | 1.181         | 0.0718 | 0.0785 | 13      | -0.18               | 1%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0037     | 1.169    | 0.0550 | 1.181         | 0.0718 | 0.0785 | 13      | -0.17               | 1%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0177     | 1.198    | 0.0182 | 1.181         | 0.0718 | 0.0785 | 13      | 0.24                | 1%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0055     | 1.210    | 0.0200 | 1.181         | 0.0718 | 0.0785 | 13      | 0.41                | 1%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0527     | 1.245    | 0.0370 | 1.181         | 0.0718 | 0.0785 | 13      | 0.89                | 3%             | 0    |

| Method Code | Analyte Name and Method (Units)                         | Lab Code | Lab Data |        | Method Values |        |        | # Tests | Magruder CS Z Score | Threshold %RSD | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|----------------|------|
|             |   |          | Value    | Range  | Rob Mean      | Rob SD | R-bar  |         |                     |                |      |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0486     | 1.250    | 0.0200 | 1.181         | 0.0718 | 0.0785 | 13      | 0.96                | 3%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0515     | 1.259    | 0.2066 | 1.181         | 0.0718 | 0.0785 | 13      | 1.10                | 3%             | 0    |
| 321.33      | Acid Soluble Zinc , ICP, test portion 2006.03... (1.3%) | 0136     | 1.265    | 0.1500 | 1.181         | 0.0718 | 0.0785 | 13      | 1.17                | 4%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0476     | 0.8615*  | 0.0010 | 1.168         | 0.1209 | 0.0462 | 9       | -2.34               | 13%            | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0368     | 1.102    | 0.0283 | 1.168         | 0.1209 | 0.0462 | 9       | -0.50               | 3%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0523     | 1.104    | 0.1220 | 1.168         | 0.1209 | 0.0462 | 9       | -0.49               | 3%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0506     | 1.110    | 0.0200 | 1.168         | 0.1209 | 0.0462 | 9       | -0.44               | 2%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0389     | 1.165    | 0.0300 | 1.168         | 0.1209 | 0.0462 | 9       | -0.02               | 0%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0027     | 1.199    | 0.1230 | 1.168         | 0.1209 | 0.0462 | 9       | 0.23                | 1%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0515     | 1.230    | 0.0318 | 1.168         | 0.1209 | 0.0462 | 9       | 0.47                | 3%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0519     | 1.265    | 0.0100 | 1.168         | 0.1209 | 0.0462 | 9       | 0.74                | 4%             | 0    |
| 321.99      | Acid Soluble Zinc , Other (1.3%)                        | 0518     | 1.625    | 0.0500 | 1.168         | 0.1209 | 0.0462 | 9       | 3.49                | 20%            | 0    |
| 325.00      | Water Soluble Zinc , AA (%)                             | 0356     | 0.2340   | 0.0320 | 0.4798        | 0.1382 | 0.0284 | 5       | -1.78               | 26%            | 0    |
| 325.00      | Water Soluble Zinc , AA (%)                             | 0537     | 0.5200   | 0.0200 | 0.4798        | 0.1382 | 0.0284 | 5       | 0.29                | 4%             | 0    |
| 325.00      | Water Soluble Zinc , AA (%)                             | 0532     | 0.5350   | 0.0300 | 0.4798        | 0.1382 | 0.0284 | 5       | 0.40                | 6%             | 0    |
| 325.00      | Water Soluble Zinc , AA (%)                             | 0539     | 0.5550   | 0.0300 | 0.4798        | 0.1382 | 0.0284 | 5       | 0.54                | 8%             | 0    |
| 325.00      | Water Soluble Zinc , AA (%)                             | 0540     | 0.5550   | 0.0300 | 0.4798        | 0.1382 | 0.0284 | 5       | 0.54                | 8%             | 0    |
| 325.30      | Water Soluble Zinc , ICP (%)                            | 0444     | 0.4300   | 0.0200 |               |        |        | 2       |                     |                | 0    |
| 325.30      | Water Soluble Zinc , ICP (%)                            | 0402     | 1.300    | 0.0200 |               |        |        | 2       |                     |                | 0    |

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier and a 4 flag indicates rejected due to 0 value submitted. A 9 flag indicates a data problem - scores not calculated. Robust statistics not used if < 6 labs used in calculations, in this case the Z Scores are included for information only (Grey). An offset lab value with an astrix indicates that the value is lower than the Analyte value less the IA. Method or Analyte codes in light green indicate a guaranteed analyte. Individual lab values may be below detection limits but are reported solely for the purpose of this Proficiency Testing program.