

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190611

Grade 1-17-1

Statistical Summary

Methods: 151

Labs Reporting: 98

Issue Date : 07/31/2019

| Method Code | Analyte & Method Sample # 190611 | # Tests Submitted | # Tests in Robust Calculations | Raw Mean | Raw SD | Assigned Value Robust Mean | IA at Method Value | Robust sd | Robust Uncertainty (U) | Robust % RSD | Method IA Ratio | Average Range (R-bar) | Horwitz %RSD |
|-------------|---|----------------------|-----------------------------------|----------|--------|-------------------------------|-----------------------|-----------|---------------------------|--------------|-----------------|--------------------------|--------------|
| 001.99 | Ammoniacal N, Other (%) | 3 | 3 | 0.1417 | 0.0208 | 0.1417 | | 0.0208 | 0.0150 | 14.68% | | 0.0156 | 5.37% |
| 005.99 | Urea N, Other (%) | 1 | | 0.0344 | | | | | | | | | |
| 009.10 | Ammoniacal Plus Nitrate N, Devarda (%) | 1 | | 0.1450 | | | | | | | | | |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 9 | 9 | 0.4283 | 0.3135 | 0.4283 | 0.4900 | 0.3555 | 0.1481 | 83.01% | 1.69 | 0.0367 | 4.54% |
| 010.12 | Total N, Salicylic (0.9%) | 1 | | 0.3500 | | | | | | | | | |
| 010.17 | Total N, Comprehensive (0.9%) | 1 | | 1.806 | | | | | | | | | |
| 010.60 | Total N, Combustion (0.9%) | 53 | 49 | 0.2829 | 0.0766 | 0.2813 | 0.4900 | 0.0783 | 0.0140 | 27.84% | 0.37 | 0.0193 | 4.84% |
| 010.99 | Total N, Other (0.9%) | 13 | 13 | 0.6777 | 0.3706 | 0.6620 | 0.4900 | 0.3837 | 0.1330 | 57.96% | 1.82 | 0.0348 | 4.26% |
| 020.10 | Total P2O5, Gravimetric Quinolinium MolybdoP (%) | 2 | 2 | 20.22 | 0.1202 | | | | | | | | |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 19 | 18 | 19.64 | 1.945 | 20.15 | | 0.6112 | 0.1801 | 3.03% | | 0.2153 | 2.55% |
| 020.40 | Total P2O5, Automated (%) | 2 | 2 | 20.42 | 0.1167 | | | | | | | | |
| 020.50 | Total P2O5, ICP (%) | 24 | 23 | 19.66 | 2.676 | 20.18 | | 1.281 | 0.3338 | 6.35% | | 0.2675 | 2.54% |
| 020.99 | Total P2O5, Other (%) | 4 | 4 | 19.25 | 1.067 | 19.25 | | 1.067 | 0.6667 | 5.54% | | 0.3838 | 2.56% |
| 030.40 | Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%) | 1 | | 3.990 | | | | | | | | | |
| 040.20 | Indirect Available P2O5, Spectrophotometric (17%) | 1 | | 17.24 | | | | | | | | | |
| 040.40 | Indirect Available P2O5, Automated (17%) | 1 | | 16.52 | | | | | | | | | |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 7 | 7 | 16.65 | 0.7445 | 16.65 | 0.7033 | 0.8443 | 0.3989 | 5.07% | 2.80 | 0.3000 | 2.62% |
| 041.11 | Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext... (17%) | 3 | 3 | 16.97 | 1.354 | 16.97 | 0.7048 | 1.354 | 0.9772 | 7.98% | 4.48 | 0.0896 | 2.61% |
| 041.20 | Direct Available P2O5, Spectrophotometric (17%) | 2 | 2 | 15.42 | 0.4985 | | | | | | | | |
| 041.21 | Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (17%) | 4 | 4 | 15.64 | 2.595 | 15.64 | 0.7000 | 2.595 | 1.622 | 16.60% | 8.64 | 0.0900 | 2.64% |
| 041.40 | Direct Available P2O5, Automated (17%) | 2 | 2 | 16.38 | 1.662 | | | | | | | | |
| 041.50 | Direct Available P2O5, ICP (17%) | 5 | 5 | 16.63 | 2.141 | 16.63 | 0.7031 | 2.141 | 1.197 | 12.88% | 7.09 | 0.1844 | 2.62% |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 8 | 8 | 16.20 | 1.134 | 16.20 | 0.7010 | 1.286 | 0.5684 | 7.94% | 4.27 | 0.2575 | 2.63% |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 13 | 13 | 16.69 | 1.208 | 16.69 | 0.7035 | 1.370 | 0.4748 | 8.21% | 4.54 | 0.2867 | 2.62% |
| 041.99 | Direct Available P2O5, Other (17%) | 9 | 9 | 17.09 | 0.2204 | 17.07 | 0.7053 | 0.1977 | 0.0824 | 1.16% | 0.65 | 0.1522 | 2.61% |
| 048.10 | Water Soluble P2O5, Gravimetric Quinolinium (%) | 1 | | 13.97 | | | | | | | | | |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 6 | 5 | 14.04 | 0.2286 | 14.04 | | 0.2286 | 0.1278 | 1.63% | | 0.0908 | 2.69% |
| 048.40 | Water Soluble P2O5, Automated (%) | 1 | | 13.86 | | | | | | | | | |
| 048.50 | Water Soluble P2O5, ICP (%) | 1 | | 14.89 | | | | | | | | | |
| 048.99 | Water Soluble P2O5, Other (%) | 3 | 3 | 13.42 | 1.168 | 13.42 | | 1.168 | 0.8432 | 8.70% | | 0.1333 | 2.71% |
| 050.00 | Soluble K2O, STPB Oxalate (0.9%) | 4 | 4 | 0.8213 | 0.3464 | 0.8213 | 0.4100 | 0.3464 | 0.2165 | 42.18% | 1.97 | 0.0325 | 4.12% |
| 050.10 | Soluble K2O, STPB Citrate (0.9%) | 1 | | 0.2400 | | | | | | | | | |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 5 | 5 | 0.2533 | 0.1403 | 0.2533 | 0.4100 | 0.1403 | 0.0784 | 55.39% | 0.80 | 0.0062 | 4.92% |

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|-------------|--|----------------------|-----------------------------------|----------|--------|-------------------------------|-----------------------|-----------|---------------------------|--------------|-----------------|--------------------------|--------------|
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 10 | 10 | 0.2063 | 0.0764 | 0.2026 | 0.4100 | 0.0781 | 0.0309 | 38.56% | 0.44 | 0.0134 | 5.09% |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 6 | 5 | 0.2083 | 0.0762 | 0.2083 | 0.4100 | 0.0762 | 0.0426 | 36.60% | 0.43 | 0.0048 | 5.06% |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 7 | 5 | 0.1551 | 0.0229 | 0.1551 | 0.4100 | 0.0229 | 0.0128 | 14.76% | 0.13 | 0.0194 | 5.29% |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 5 | 5 | 2.713 | 5.270 | 2.713 | 0.4100 | 5.270 | 2.946 | 194.23% | 29.95 | 0.1048 | 3.44% |
| 050.61 | Soluble K2O, Flame Photometric (Citrate) (0.9%) | 1 | | 0.1490 | | | | | | | | | |
| 050.62 | Soluble K2O, Flame Photometric (Citrate-EDTA) (0.9%) | 3 | 3 | 0.2785 | 0.1940 | 0.2785 | 0.4100 | 0.1940 | 0.1400 | 69.64% | 1.10 | 0.0090 | 4.85% |
| 050.99 | Soluble K2O, Other (0.9%) | 25 | 22 | 0.2844 | 0.2285 | 0.2090 | 0.4100 | 0.0538 | 0.0143 | 25.74% | 0.31 | 0.0133 | 5.06% |
| 060.00 | Water (Free), Vacuum Oven (%) | 2 | 2 | 1.652 | 0.0255 | | | | | | | | |
| 060.30 | Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%) | 1 | | 2.100 | | | | | | | | | |
| 060.99 | Water (Free), Other (%) | 3 | 3 | 1.635 | 0.2548 | 1.635 | | 0.2548 | 0.1839 | 15.59% | | 0.0789 | 3.71% |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 5 | 5 | 25.57 | 3.791 | 25.57 | 1.0000 | 3.791 | 2.119 | 14.82% | 8.83 | 0.4560 | 2.46% |
| 101.03 | Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (20%) | 1 | | 18.55 | | | | | | | | | |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 17 | 16 | 22.59 | 1.386 | 22.68 | 1.0000 | 1.355 | 0.4235 | 5.98% | 3.16 | 0.2657 | 2.50% |
| 101.32 | Acid Soluble Ca, ICP, test portion 2006.03A-C (20%) | 4 | 4 | 22.50 | 2.411 | 22.50 | 1.0000 | 2.411 | 1.507 | 10.72% | 5.62 | 0.2145 | 2.50% |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 17 | 16 | 22.50 | 0.9039 | 22.54 | 1.0000 | 0.9498 | 0.2968 | 4.21% | 2.21 | 0.6106 | 2.50% |
| 101.70 | Acid Soluble Ca, Titrimetric (20%) | 3 | 3 | 21.10 | 3.047 | 21.10 | 1.0000 | 3.047 | 2.199 | 14.44% | 7.10 | 0.0712 | 2.53% |
| 101.99 | Acid Soluble Ca, Other (20%) | 11 | 10 | 21.09 | 5.377 | 22.47 | 1.0000 | 1.905 | 0.7532 | 8.48% | 4.44 | 0.2584 | 2.50% |
| 121.00 | Acid Soluble Mg, AA, inorganic 965.09 (%) | 1 | | 0.5070 | | | | | | | | | |
| 121.03 | Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 2 | 2 | 0.3341 | 0.0447 | | | | | | | | |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 7 | 7 | 0.3925 | 0.1262 | 0.4298 | 0.2215 | 0.0392 | 0.0185 | 9.11% | 0.41 | 0.0064 | 4.54% |
| 121.32 | Acid Soluble Mg, ICP, test portion 2006.03A-C (%) | 2 | 2 | 0.3957 | 0.0009 | | | | | | | | |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 6 | 6 | 0.3913 | 0.0372 | 0.3913 | 0.2196 | 0.0422 | 0.0215 | 10.78% | 0.45 | 0.0159 | 4.61% |
| 121.99 | Acid Soluble Mg, Other (%) | 6 | 6 | 0.3724 | 0.0240 | 0.3724 | 0.2186 | 0.0272 | 0.0139 | 7.30% | 0.29 | 0.0698 | 4.64% |
| 131.00 | Water Soluble Mg, AA (%) | 1 | | 0.4285 | | | | | | | | | |
| 143.00 | Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfur (%) | 1 | | 0.2150 | | | | | | | | | |
| 143.99 | Elemental S, Other (%) | 7 | 6 | 10.64 | 1.463 | 10.97 | | 0.8234 | 0.4202 | 7.51% | | 0.0434 | 2.79% |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 11 | 11 | 10.98 | 1.737 | 11.45 | | 0.3170 | 0.1195 | 2.77% | | 0.1197 | 2.77% |
| 145.99 | Sulfate S, HCl soluble, Other (%) | 1 | | 9.605 | | | | | | | | | |
| 148.00 | Total S, Combustion (11%) | 9 | 9 | 11.54 | 0.4778 | 11.46 | 0.7728 | 0.2962 | 0.1234 | 2.59% | 0.89 | 0.2919 | 2.77% |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 10 | 10 | 11.47 | 0.2904 | 11.45 | 0.7724 | 0.2537 | 0.1003 | 2.22% | 0.77 | 0.2137 | 2.77% |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 19 | 19 | 10.48 | 2.469 | 11.04 | 0.7522 | 0.7386 | 0.2118 | 6.69% | 2.29 | 0.2044 | 2.79% |
| 148.99 | Total S, Other (11%) | 12 | 12 | 10.91 | 1.052 | 11.01 | 0.7503 | 0.9463 | 0.3415 | 8.60% | 2.94 | 0.1175 | 2.79% |
| 149.04 | S - HNO3 soluble, ICP (%) | 4 | 4 | 11.09 | 0.4972 | 11.09 | | 0.4972 | 0.3107 | 4.48% | | 0.1911 | 2.78% |
| 151.00 | Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm) | 3 | 1 | 1.550 | | 11.09 | | 0.4972 | 0.6215 | 4.48% | | 0.1000 | 11.14% |
| 151.30 | Acid Soluble As, ICP (ppm) | 7 | 6 | 6.998 | 2.584 | 6.998 | | 2.930 | 1.495 | 41.87% | | 0.3841 | 11.94% |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 7 | 5 | 6.166 | 2.857 | 6.166 | | 2.857 | 1.597 | 46.34% | | 0.5566 | 12.17% |
| 151.34 | Acid Soluble As, ICP, EPA 3050B/6010C (ppm) | 2 | 2 | 6.814 | 3.941 | | | | | | | | |
| 151.99 | Acid Soluble As, Other (ppm) | 5 | 5 | 4.819 | 3.819 | 4.819 | | 3.819 | 2.135 | 79.24% | | 0.6550 | 12.63% |
| 165.30 | Acid Soluble B, ICP, test portion in 982.01 (%) | 4 | 4 | 0.0112 | 0.0160 | 0.0112 | 0.0047 | 0.0160 | 0.0100 | 142.86% | 7.95 | 0.0035 | 7.87% |
| 165.99 | Acid Soluble B, Other (%) | 8 | 7 | 0.0062 | 0.0042 | 0.0062 | 0.0039 | 0.0048 | 0.0022 | 76.64% | 2.82 | 0.0005 | 8.60% |
| 181.00 | Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm) | 3 | 3 | 14.13 | 1.666 | 14.13 | | 1.666 | 1.203 | 11.79% | | 2.335 | 10.74% |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 12 | 11 | 10.63 | 2.695 | 10.42 | | 2.544 | 0.9587 | 24.41% | | 0.7675 | 11.24% |
| 181.32 | Acid Soluble Cd, ICP, 2006.03 (ppm) | 1 | | 11.65 | | | | | | | | | |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 7 | 7 | 13.87 | 1.676 | 14.04 | | 1.480 | 0.6993 | 10.54% | | 0.4906 | 10.75% |

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|-------------|--|-------------------|--------------------------------|----------|--------|-------------------------------|--------------------|-----------|------------------------|--------------|-----------------|-----------------------|--------------|
| 181.34 | Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm) | 2 | 2 | 11.63 | 2.993 | | | | | | | | |
| 181.99 | Acid Soluble Cd, Other (ppm) | 5 | 5 | 12.96 | 2.830 | 12.96 | | 2.830 | 1.582 | 21.84% | | 0.4356 | 10.88% |
| 190.00 | Water Soluble Cl, Titrimetric (%) | 1 | | 0.1400 | | | | | | | | | |
| 190.99 | Water Soluble Cl, Other (%) | 1 | | 0.0750 | | | | | | | | | |
| 191.00 | Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm) | 3 | 3 | 112.2 | 32.59 | 112.2 | | 32.59 | 23.52 | 29.05% | | 2.527 | 7.86% |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 11 | 10 | 210.9 | 313.8 | 116.5 | | 27.53 | 10.88 | 23.63% | | 5.958 | 7.82% |
| 191.32 | Acid Soluble Cr, ICP, 2006.03 (ppm) | 1 | | 112.5 | | | | | | | | | |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 8 | 7 | 136.9 | 3.567 | 137.2 | | 3.211 | 1.517 | 2.34% | | 1.609 | 7.63% |
| 191.34 | Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm) | 2 | 2 | 122.8 | 0.2889 | | | | | | | | |
| 191.99 | Acid Soluble Cr, Other (ppm) | 5 | 5 | 131.3 | 24.12 | 131.3 | | 24.12 | 13.48 | 18.37% | | 3.563 | 7.68% |
| 202.00 | Acid Soluble Co, AA, test portion 2006.03 modified w/dual acid (ppm) | 1 | | 14.79 | | | | | | | | | |
| 202.30 | Acid Soluble Co, ICP (ppm) | 8 | 7 | 6.029 | 1.933 | 6.029 | 2.8088 | 2.192 | 1.036 | 36.36% | 1.82 | 0.2262 | 12.21% |
| 202.32 | Acid Soluble Co, ICP, 2006.03 (ppm) | 2 | 2 | 5.843 | 3.150 | | | | | | | | |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 8 | 8 | 8.133 | 1.734 | 8.133 | 3.4400 | 1.966 | 0.8689 | 24.17% | 1.33 | 0.6060 | 11.67% |
| 202.34 | Acid Soluble Co, ICP, EPA 3050B/6010C (ppm) | 3 | 3 | 6.047 | 1.829 | 6.047 | 2.8141 | 1.829 | 1.320 | 30.24% | 1.51 | 0.2030 | 12.20% |
| 202.99 | Acid Soluble Co, Other (ppm) | 6 | 4 | 8.161 | 2.775 | 8.161 | 3.4482 | 2.775 | 1.735 | 34.01% | 1.88 | 0.3080 | 11.66% |
| 221.00 | Acid Soluble Cu, AA, inorganic 965.09 (%) | 4 | 4 | 0.0015 | 0.0004 | 0.0015 | 0.0051 | 0.0004 | 0.0003 | 29.87% | 0.20 | 0.0005 | 10.67% |
| 221.03 | Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 1 | | 0.0045 | | | | | | | | | |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 8 | 4 | 0.0011 | 0.0009 | 0.0011 | 0.0051 | 0.0009 | 0.0005 | 82.57% | 0.40 | 0.0001 | 11.23% |
| 221.32 | Acid Soluble Cu, ICP, test portion 2006.03A-C (%) | 2 | 2 | 5.368 | 7.590 | | | | | | | | |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 10 | 7 | 0.0007 | 0.0002 | 0.0007 | 0.0051 | 0.0001 | 0.0000 | 12.19% | 0.04 | 0.0001 | 11.89% |
| 221.99 | Acid Soluble Cu, Other (%) | 10 | 5 | 0.0009 | 0.0007 | 0.0009 | 0.0051 | 0.0007 | 0.0004 | 73.51% | 0.30 | 0.0000 | 11.51% |
| 241.00 | Acid Soluble Fe, AA, inorganic 965.09 (%) | 3 | 3 | 0.2401 | 0.0413 | 0.2401 | 0.0290 | 0.0413 | 0.0298 | 17.20% | 3.32 | 0.0145 | 4.96% |
| 241.03 | Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 1 | | 0.2165 | | | | | | | | | |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 8 | 8 | 0.2697 | 0.0371 | 0.2621 | 0.0312 | 0.0214 | 0.0095 | 8.16% | 1.60 | 0.0074 | 4.89% |
| 241.32 | Acid Soluble Fe, ICP, test portion 2006.03A-C (%) | 2 | 2 | 0.2341 | 0.0211 | | | | | | | | |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 7 | 6 | 0.2646 | 0.0196 | 0.2654 | 0.0315 | 0.0201 | 0.0103 | 7.59% | 1.49 | 0.0041 | 4.88% |
| 241.99 | Acid Soluble Fe, Other (%) | 4 | 3 | 0.2412 | 0.0236 | 0.2412 | 0.0291 | 0.0236 | 0.0170 | 9.77% | 1.89 | 0.0017 | 4.95% |
| 251.00 | Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm) | 2 | 2 | 15.27 | 8.550 | | | | | | | | |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 11 | 10 | 2.577 | 0.8780 | 2.577 | | 0.9956 | 0.3936 | 38.64% | | 0.1789 | 13.87% |
| 251.32 | Acid Soluble Pb, ICP, 2006.03 (ppm) | 1 | | 2.175 | | | | | | | | | |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 6 | 4 | 3.467 | 0.5794 | 3.467 | | 0.5794 | 0.3622 | 16.71% | | 0.5879 | 13.27% |
| 251.34 | Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm) | 1 | | 0.5000 | | | | | | | | | |
| 251.99 | Acid Soluble Pb, Other (ppm) | 5 | 4 | 2.868 | 1.199 | 2.868 | | 1.199 | 0.7491 | 41.79% | | 0.3305 | 13.65% |
| 261.00 | Acid Soluble Mn, AA, Mn2+ only (%) | 1 | | 0.0067 | | | | | | | | | |
| 261.12 | Acid Soluble Mn, AA, inorganic 965.09 (%) | 2 | 2 | 0.0031 | 0.0003 | | | | | | | | |
| 261.15 | Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 1 | | 0.0039 | | | | | | | | | |
| 261.30 | Acid Soluble Mn, ICP, test portion 972.02a (%) | 3 | 2 | 0.0037 | 0.0005 | 0.0037 | 0.0054 | 0.0005 | 0.0004 | 12.51% | 0.20 | 0.0002 | 9.30% |
| 261.32 | Acid Soluble Mn, ICP, test portion inorganic 965.09 (%) | 1 | | 0.1650 | | | | | | | | | |
| 261.34 | Acid Soluble Mn, ICP, test portion 2006.03A-C (%) | 1 | | 0.0045 | | | | | | | | | |
| 261.35 | Acid Soluble Mn, ICP, 2017.02 (%) | 4 | 4 | 0.0034 | 0.0011 | 0.0034 | 0.0053 | 0.0011 | 0.0007 | 33.47% | 0.50 | 0.0002 | 9.41% |
| 261.99 | Acid Soluble Mn, Other (%) | 3 | 3 | 0.0032 | 0.0009 | 0.0032 | 0.0053 | 0.0009 | 0.0006 | 28.11% | 0.39 | 0.0006 | 9.50% |
| 281.00 | Acid Soluble Hg, AA (ppm) | 3 | 1 | 0.0023 | | 0.0032 | | 0.0009 | 0.0011 | 28.11% | | 0.0005 | 38.01% |
| 281.30 | Acid Soluble Hg, ICP (ppm) | 4 | 1 | 0.0325 | | 0.0032 | | 0.0009 | 0.0011 | 28.11% | | 0.0090 | 38.01% |

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|-------------|--|-------------------|--------------------------------|----------|--------|-------------------------------|--------------------|-----------|------------------------|--------------|-----------------|-----------------------|--------------|
| 281.99 | Acid Soluble Hg, Other (ppm) | 7 | 4 | 4.812 | 9.559 | 4.812 | | 9.559 | 5.974 | 198.65% | | 0.0254 | 12.63% |
| 289.00 | Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm) | 2 | 1 | 5.280 | | | | | | | | | |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 9 | 7 | 3.243 | 2.040 | 3.243 | 1.9730 | 2.313 | 1.093 | 71.31% | 2.73 | 0.1608 | 13.40% |
| 289.32 | Acid Soluble Mo, ICP, 2006.03 (ppm) | 1 | | 2.755 | | | | | | | | | |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 9 | 7 | 3.355 | 1.578 | 3.679 | 2.1037 | 0.9424 | 0.4453 | 25.62% | 1.04 | 0.1353 | 13.15% |
| 289.34 | Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm) | 3 | 2 | 4.389 | 0.2846 | 4.389 | 2.3166 | 0.2846 | 0.2516 | 6.49% | 0.29 | 1.332 | 12.80% |
| 289.99 | Acid Soluble Mo, Other (ppm) | 5 | 3 | 4.127 | 0.3254 | 4.127 | 2.2382 | 0.3254 | 0.2348 | 7.88% | 0.34 | 0.1693 | 12.92% |
| 291.00 | Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm) | 2 | 2 | 12.82 | 2.449 | | | | | | | | |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 10 | 9 | 8.997 | 1.923 | 9.032 | | 2.060 | 0.8583 | 22.81% | | 0.6990 | 11.49% |
| 291.32 | Acid Soluble Ni, ICP, 2006.03 (ppm) | 1 | | 10.20 | | | | | | | | | |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 8 | 7 | 12.03 | 2.167 | 12.02 | | 2.445 | 1.155 | 20.34% | | 0.5651 | 11.00% |
| 291.34 | Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm) | 3 | 3 | 11.15 | 2.007 | 11.15 | | 2.007 | 1.448 | 18.01% | | 0.7887 | 11.13% |
| 291.99 | Acid Soluble Ni, Other (ppm) | 6 | 6 | 9.922 | 2.707 | 9.922 | | 3.070 | 1.567 | 30.94% | | 0.2267 | 11.33% |
| 301.00 | Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm) | 2 | 1 | 0.9767 | | | | | | | | | |
| 301.30 | Acid Soluble Se, ICP (ppm) | 4 | 3 | 29.41 | 14.57 | 29.41 | | 14.57 | 10.51 | 49.53% | | 1.373 | 9.62% |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 6 | 6 | 27.66 | 8.648 | 27.28 | | 8.914 | 4.549 | 32.67% | | 0.9597 | 9.73% |
| 301.34 | Acid Soluble Se, ICP, EPA 3050B/6010C (ppm) | 2 | 2 | 48.73 | 38.99 | | | | | | | | |
| 301.99 | Acid Soluble Se, Other (ppm) | 6 | 6 | 36.85 | 20.92 | 36.85 | | 23.73 | 12.11 | 64.39% | | 1.544 | 9.30% |
| 311.32 | Sodium, ICP, 2006.03 test portion (%) | 1 | | 0.5368 | | | | | | | | | |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 7 | 6 | 0.5220 | 0.0164 | 0.5220 | 0.0572 | 0.0186 | 0.0095 | 3.57% | 0.76 | 0.0091 | 4.41% |
| 311.99 | Sodium, Other (%) | 3 | 3 | 0.5500 | 0.0050 | 0.5500 | 0.0600 | 0.0050 | 0.0036 | 0.91% | 0.19 | 0.0067 | 4.38% |
| 321.00 | Acid Soluble Zn, AA, inorganic 965.09 (%) | 4 | 4 | 0.0209 | 0.0036 | 0.0209 | 0.0071 | 0.0036 | 0.0022 | 16.97% | 1.17 | 0.0019 | 7.16% |
| 321.02 | Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C (%) | 1 | | 0.0200 | | | | | | | | | |
| 321.03 | Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 1 | | 0.0171 | | | | | | | | | |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 13 | 10 | 0.0188 | 0.0067 | 0.0190 | 0.0069 | 0.0066 | 0.0026 | 34.98% | 2.24 | 0.0012 | 7.26% |
| 321.32 | Acid Soluble Zn, ICP, test portion 2006.03A-C (%) | 3 | 3 | 0.0199 | 0.0027 | 0.0199 | 0.0070 | 0.0027 | 0.0020 | 13.65% | 0.91 | 0.0013 | 7.21% |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 12 | 11 | 0.0171 | 0.0024 | 0.0171 | 0.0067 | 0.0027 | 0.0010 | 15.56% | 0.92 | 0.0006 | 7.38% |
| 321.99 | Acid Soluble Zn, Other (%) | 10 | 8 | 0.0146 | 0.0052 | 0.0151 | 0.0065 | 0.0046 | 0.0020 | 30.30% | 1.64 | 0.0032 | 7.52% |
| 325.00 | Water Soluble Zn, AA (%) | 1 | | 0.0050 | | | | | | | | | |
| 325.30 | Water Soluble Zn, ICP (%) | 1 | | 0.5000 | | | | | | | | | |

The Method IA Ratio = 2.33 * Robust SD / IA at the Method Assigned Value. IA ratios of 1 and less indicate participant data dispersion is as good or less than the IA. Red indicates the IA ratio is significantly greater than 1, Orange indicates marginally greater than 1, Green indicates IA ratio is not significantly greater than 1 and Grey indicates < 6 labs reporting.

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Sample # 190611

Method Precision Report

Grade 1-17-1

Issue Date : 07/31/2019

| 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 |
|-------------|---|-------------------|---------------------------------|--------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|-------|
| 010.11 | Total N, Modified Comprehensive (0.9%) | 9 | 8 | 0.3906 | 0.3126 | 0.3123 | 0.0208 | 0.3129 | 79.94% | 5.32% | 80.11% | 15.07 |
| 010.60 | Total N, Combustion (0.9%) | 53 | 47 | 0.2779 | 0.0734 | 0.0723 | 0.0177 | 0.0745 | 26.03% | 6.38% | 26.80% | 4.198 |
| 010.99 | Total N, Other (0.9%) | 13 | 12 | 0.6588 | 0.3804 | 0.3800 | 0.0249 | 0.3808 | 57.68% | 3.79% | 57.81% | 15.27 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 19 | 16 | 20.25 | 0.4968 | 0.4822 | 0.1695 | 0.5111 | 2.38% | 0.84% | 2.52% | 3.015 |
| 020.50 | Total P2O5, ICP (%) | 24 | 20 | 20.22 | 1.458 | 1.454 | 0.1559 | 1.462 | 7.19% | 0.77% | 7.23% | 9.379 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 8 | 8 | 16.20 | 1.134 | 1.122 | 0.2368 | 1.146 | 6.93% | 1.46% | 7.08% | 4.841 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 13 | 13 | 16.69 | 1.208 | 1.192 | 0.2714 | 1.223 | 7.14% | 1.63% | 7.33% | 4.506 |
| 041.99 | Direct Available P2O5, Other (17%) | 9 | 9 | 17.09 | 0.2204 | 0.2033 | 0.1203 | 0.2363 | 1.19% | 0.70% | 1.38% | 1.963 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 10 | 10 | 0.2063 | 0.0764 | 0.0759 | 0.0123 | 0.0769 | 36.80% | 5.95% | 37.27% | 6.262 |
| 050.99 | Soluble K2O, Other (0.9%) | 25 | 19 | 0.2182 | 0.0986 | 0.0983 | 0.0097 | 0.0988 | 45.06% | 4.45% | 45.28% | 10.17 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 17 | 16 | 22.59 | 1.386 | 1.375 | 0.2471 | 1.397 | 6.09% | 1.09% | 6.19% | 5.654 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 17 | 15 | 22.61 | 0.8112 | 0.7348 | 0.4863 | 0.8811 | 3.25% | 2.15% | 3.90% | 1.812 |
| 101.99 | Acid Soluble Ca, Other (20%) | 11 | 8 | 22.73 | 1.703 | 1.699 | 0.1693 | 1.707 | 7.48% | 0.74% | 7.51% | 10.08 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 11 | 10 | 11.50 | 0.2486 | 0.2377 | 0.1030 | 0.2591 | 2.07% | 0.90% | 2.25% | 2.515 |
| 148.00 | Total S, Combustion (11%) | 9 | 8 | 11.40 | 0.2150 | 0.1429 | 0.2272 | 0.2684 | 1.25% | 1.99% | 2.35% | 1.181 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 10 | 8 | 11.39 | 0.2081 | 0.2012 | 0.0752 | 0.2148 | 1.77% | 0.66% | 1.89% | 2.857 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 19 | 17 | 10.96 | 0.8709 | 0.8634 | 0.1605 | 0.8782 | 7.88% | 1.46% | 8.01% | 5.471 |
| 148.99 | Total S, Other (11%) | 12 | 10 | 11.14 | 0.7790 | 0.7767 | 0.0845 | 0.7813 | 6.97% | 0.76% | 7.02% | 9.246 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 12 | 11 | 10.63 | 2.695 | 2.643 | 0.7459 | 2.746 | 24.86% | 7.02% | 25.83% | 3.682 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 11 | 9 | 111.9 | 20.64 | 20.25 | 5.636 | 21.02 | 18.10% | 5.04% | 18.79% | 3.730 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 8 | 8 | 8.133 | 1.734 | 1.685 | 0.5797 | 1.782 | 20.71% | 7.13% | 21.91% | 3.074 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 11 | 10 | 2.577 | 0.8780 | 0.8691 | 0.1761 | 0.8867 | 33.73% | 6.83% | 34.41% | 5.037 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 10 | 9 | 8.997 | 1.923 | 1.866 | 0.6535 | 1.977 | 20.74% | 7.26% | 21.98% | 3.026 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 13 | 9 | 0.0192 | 0.0070 | 0.0069 | 0.0007 | 0.0070 | 36.25% | 3.69% | 36.43% | 9.881 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 12 | 11 | 0.0171 | 0.0024 | 0.0023 | 0.0006 | 0.0024 | 13.62% | 3.71% | 14.12% | 3.807 |

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)

Sample # 190611

Grade 1-17-1

Lab Values

Methods: 151

Labs Reporting: 98

Issue Date : 07/31/2019

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 001.99 | Ammoniacal N, Other (%) | 0423 | 0.1250 | 0.0100 | 0.1417 | 0.0208 | 0.0156 | 3 | -0.80 | | 0 |
| 001.99 | Ammoniacal N, Other (%) | 0096 | 0.1350 | 0.0100 | 0.1417 | 0.0208 | 0.0156 | 3 | -0.32 | | 0 |
| 001.99 | Ammoniacal N, Other (%) | 0524 | 0.1650 | 0.0269 | 0.1417 | 0.0208 | 0.0156 | 3 | 1.12 | | 0 |
| 005.99 | Urea N, Other (%) | 0524 | 0.0344 | 0.0267 | | | | 1 | | | 0 |
| 009.10 | Ammoniacal Plus Nitrate N, Devarda (%) | 0200 | 0.1450 | 0.0100 | | | | 1 | | | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0416 | 0.1800 | 0.0000 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.64 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0533 | 0.1900 | 0.0200 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.62 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0371 | 0.2350 | 0.0100 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.50 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0522 | 0.2400 | 0.0200 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.49 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0546 | 0.2400 | 0.0200 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.49 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0105 | 0.2500 | 0.0600 | 0.4283 | 0.3555 | 0.0367 | 9 | -0.46 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0309 | 0.7300 | 0.1400 | 0.4283 | 0.3555 | 0.0367 | 9 | 0.78 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0540 | 0.8700 | 0.0400 | 0.4283 | 0.3555 | 0.0367 | 9 | 1.15 | OK | 0 |
| 010.11 | Total N, Modified Comprehensive (0.9%) | 0531 | 0.9200 | 0.0200 | 0.4283 | 0.3555 | 0.0367 | 9 | 1.28 | High | 0 |
| 010.12 | Total N, Salicylic (0.9%) | 0498 | 0.3500 | 0.1000 | | | | 1 | | | 0 |
| 010.17 | Total N, Comprehensive (0.9%) | 0526 | 1.806 | 0.0293 | | | | 1 | | | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0055 | 0.1340 | 0.0480 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.88 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0368 | 0.1350 | 0.0700 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.87 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0043 | 0.1700 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.42 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0105 | 0.1700 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.42 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0106 | 0.1800 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.29 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0390 | 0.2000 | 0.0400 | 0.2813 | 0.0783 | 0.0193 | 49 | -1.04 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0360 | 0.2050 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.97 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0521 | 0.2067 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.95 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0486 | 0.2100 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.91 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0292 | 0.2250 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.72 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0136 | 0.2300 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.66 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0255 | 0.2300 | 0.0040 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.66 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0422 | 0.2315 | 0.0030 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.64 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0423 | 0.2350 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.59 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0472 | 0.2400 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.53 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0177 | 0.2410 | 0.0040 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.52 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0527 | 0.2425 | 0.0110 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.50 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0086 | 0.2478 | 0.0017 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.43 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0034 | 0.2485 | 0.0550 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.42 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0485 | 0.2545 | 0.0010 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.34 | OK | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 010.60 | Total N, Combustion (0.9%) | 0452 | 0.2550 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.34 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0483 | 0.2610 | 0.0020 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.26 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0389 | 0.2700 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.14 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0324 | 0.2705 | 0.0130 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.14 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0451 | 0.2775 | 0.0770 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.05 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0421 | 0.2800 | 0.0400 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.02 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0482 | 0.2800 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | -0.02 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0325 | 0.2850 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.05 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0023 | 0.3000 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.24 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0230 | 0.3000 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.24 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0523 | 0.3000 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.24 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0547 | 0.3000 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.24 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0501 | 0.3035 | 0.0050 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.28 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0131 | 0.3150 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.43 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0029 | 0.3230 | 0.0040 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.53 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0450 | 0.3300 | 0.0600 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.62 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0354 | 0.3300 | 0.0140 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.62 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0443 | 0.3400 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.75 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0040 | 0.3500 | 0.1000 | 0.2813 | 0.0783 | 0.0193 | 49 | 0.88 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0018 | 0.3670 | 0.0180 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.09 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0231 | 0.3700 | 0.0400 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.13 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0291 | 0.3700 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.13 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0444 | 0.3700 | 0.0200 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.13 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0419 | 0.3730 | 0.0300 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.17 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0377 | 0.3750 | 0.0040 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.20 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0402 | 0.4150 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.71 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0550 | 0.4200 | 0.0000 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.77 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0096 | 0.4450 | 0.0100 | 0.2813 | 0.0783 | 0.0193 | 49 | 2.09 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0042 | 0.4500 | 0.1000 | 0.2813 | 0.0783 | 0.0193 | 49 | 2.15 | OK | 0 |
| 010.60 | Total N, Combustion (0.9%) | 0037 | 0.3775 | 0.1290 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.23 | OK | 1 |
| 010.60 | Total N, Combustion (0.9%) | 0561 | 0.3950 | 0.1500 | 0.2813 | 0.0783 | 0.0193 | 49 | 1.45 | OK | 1 |
| 010.60 | Total N, Combustion (0.9%) | 0555 | < 0.5 | | 0.2813 | 0.0783 | 0.0193 | 49 | | | 5 |
| 010.60 | Total N, Combustion (0.9%) | 0117 | < 0.64 | | 0.2813 | 0.0783 | 0.0193 | 49 | | | 5 |
| 010.99 | Total N, Other (0.9%) | 0493 | 0.2500 | 0.0200 | 0.6620 | 0.3837 | 0.0348 | 13 | -1.07 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0394 | 0.2540 | 0.0040 | 0.6620 | 0.3837 | 0.0348 | 13 | -1.06 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0220 | 0.2600 | 0.0400 | 0.6620 | 0.3837 | 0.0348 | 13 | -1.05 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0513 | 0.2600 | 0.0200 | 0.6620 | 0.3837 | 0.0348 | 13 | -1.05 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0553 | 0.4200 | 0.0400 | 0.6620 | 0.3837 | 0.0348 | 13 | -0.63 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0027 | 0.5975 | 0.0090 | 0.6620 | 0.3837 | 0.0348 | 13 | -0.17 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0476 | 0.7961 | 0.0419 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.35 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0532 | 0.8550 | 0.0700 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.50 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0560 | 0.9010 | 0.0060 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.62 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0481 | 0.9050 | 0.1100 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.63 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0531 | 0.9300 | 0.0200 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.70 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0520 | 0.9400 | 0.0600 | 0.6620 | 0.3837 | 0.0348 | 13 | 0.72 | OK | 0 |
| 010.99 | Total N, Other (0.9%) | 0524 | 1.442 | 0.0120 | 0.6620 | 0.3837 | 0.0348 | 13 | 2.03 | High | 0 |
| 020.10 | Total P2O5, Gravimetric Quinolinium MolybdoP (%) | 0444 | 20.13 | 0.3600 | | | | 2 | | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 020.10 | Total P2O5, Gravimetric Quinolinium MolybdoP (%) | 0493 | 20.30 | 0.1000 | | | | 2 | | | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0553 | 12.95 | 0.5000 | 20.15 | 0.6112 | 0.2153 | 18 | -11.79 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0498 | 16.50 | 0.8000 | 20.15 | 0.6112 | 0.2153 | 18 | -5.98 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0309 | 18.96 | 0.0300 | 20.15 | 0.6112 | 0.2153 | 18 | -1.96 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0027 | 19.36 | 0.1210 | 20.15 | 0.6112 | 0.2153 | 18 | -1.30 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0522 | 19.77 | 0.0100 | 20.15 | 0.6112 | 0.2153 | 18 | -0.64 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0476 | 19.98 | 0.4914 | 20.15 | 0.6112 | 0.2153 | 18 | -0.28 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0371 | 20.25 | 0.1000 | 20.15 | 0.6112 | 0.2153 | 18 | 0.16 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0394 | 20.33 | 0.0080 | 20.15 | 0.6112 | 0.2153 | 18 | 0.29 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0415 | 20.37 | 0.4599 | 20.15 | 0.6112 | 0.2153 | 18 | 0.36 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0493 | 20.40 | 0.0400 | 20.15 | 0.6112 | 0.2153 | 18 | 0.40 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0292 | 20.49 | 0.5700 | 20.15 | 0.6112 | 0.2153 | 18 | 0.54 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0324 | 20.50 | 0.2000 | 20.15 | 0.6112 | 0.2153 | 18 | 0.57 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0231 | 20.51 | 0.0200 | 20.15 | 0.6112 | 0.2153 | 18 | 0.58 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0405 | 20.54 | 0.1400 | 20.15 | 0.6112 | 0.2153 | 18 | 0.63 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0481 | 20.60 | 0.2000 | 20.15 | 0.6112 | 0.2153 | 18 | 0.73 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0169 | 20.63 | 0.0700 | 20.15 | 0.6112 | 0.2153 | 18 | 0.77 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0510 | 20.66 | 0.0952 | 20.15 | 0.6112 | 0.2153 | 18 | 0.84 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0416 | 20.67 | 0.0200 | 20.15 | 0.6112 | 0.2153 | 18 | 0.85 | NA | 0 |
| 020.20 | Total P2O5, Spectrophotometric MolybdovanadoP (%) | 0550 | 21.35 | 2.450 | 20.15 | 0.6112 | 0.2153 | 18 | 1.95 | NA | 1 |
| 020.40 | Total P2O5, Automated (%) | 0035 | 20.34 | 0.2000 | | | | 2 | | | 0 |
| 020.40 | Total P2O5, Automated (%) | 0096 | 20.51 | 0.2700 | | | | 2 | | | 0 |
| 020.50 | Total P2O5, ICP (%) | 0524 | 9.858 | 0.0301 | 20.18 | 1.281 | 0.2675 | 23 | -8.06 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0291 | 16.11 | 0.0100 | 20.18 | 1.281 | 0.2675 | 23 | -3.18 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0451 | 16.37 | 1.120 | 20.18 | 1.281 | 0.2675 | 23 | -2.97 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0501 | 17.65 | 0.3000 | 20.18 | 1.281 | 0.2675 | 23 | -1.97 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0390 | 19.19 | 0.1200 | 20.18 | 1.281 | 0.2675 | 23 | -0.77 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0423 | 19.33 | 0.3600 | 20.18 | 1.281 | 0.2675 | 23 | -0.66 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0472 | 19.89 | 0.1700 | 20.18 | 1.281 | 0.2675 | 23 | -0.23 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0547 | 19.95 | 0.3000 | 20.18 | 1.281 | 0.2675 | 23 | -0.18 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0521 | 20.08 | 0.0000 | 20.18 | 1.281 | 0.2675 | 23 | -0.07 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0368 | 20.14 | 0.1541 | 20.18 | 1.281 | 0.2675 | 23 | -0.03 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0523 | 20.30 | 0.4000 | 20.18 | 1.281 | 0.2675 | 23 | 0.10 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0555 | 20.42 | 0.0200 | 20.18 | 1.281 | 0.2675 | 23 | 0.19 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0389 | 20.47 | 0.0600 | 20.18 | 1.281 | 0.2675 | 23 | 0.23 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0433 | 20.50 | 0.2300 | 20.18 | 1.281 | 0.2675 | 23 | 0.25 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0402 | 20.59 | 0.0900 | 20.18 | 1.281 | 0.2675 | 23 | 0.32 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0444 | 20.83 | 0.0600 | 20.18 | 1.281 | 0.2675 | 23 | 0.51 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0546 | 20.93 | 0.1820 | 20.18 | 1.281 | 0.2675 | 23 | 0.58 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0527 | 20.94 | 0.0242 | 20.18 | 1.281 | 0.2675 | 23 | 0.59 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0483 | 20.96 | 0.2100 | 20.18 | 1.281 | 0.2675 | 23 | 0.61 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0482 | 21.35 | 0.3000 | 20.18 | 1.281 | 0.2675 | 23 | 0.92 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0255 | 21.45 | 0.0710 | 20.18 | 1.281 | 0.2675 | 23 | 1.00 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0042 | 21.65 | 1.500 | 20.18 | 1.281 | 0.2675 | 23 | 1.15 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0422 | 23.34 | 0.4400 | 20.18 | 1.281 | 0.2675 | 23 | 2.47 | NA | 0 |
| 020.50 | Total P2O5, ICP (%) | 0552 | 20.83 | 2.050 | 20.18 | 1.281 | 0.2675 | 23 | 0.51 | NA | 1 |
| 020.99 | Total P2O5, Other (%) | 0515 | 18.08 | 0.8350 | 19.25 | 1.067 | 0.3838 | 4 | -1.10 | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 020.99 | Total P2O5, Other (%) | 0443 | 18.62 | 0.4500 | 19.25 | 1.067 | 0.3838 | 4 | -0.59 | | 0 |
| 020.99 | Total P2O5, Other (%) | 0520 | 20.09 | 0.1800 | 19.25 | 1.067 | 0.3838 | 4 | 0.79 | | 0 |
| 020.99 | Total P2O5, Other (%) | 0513 | 20.22 | 0.0700 | 19.25 | 1.067 | 0.3838 | 4 | 0.91 | | 0 |
| 030.40 | Citrate Insoluble P2O5, Automated, test portion 963.03 A-B (%) | 0096 | 3.990 | 0.0200 | | | | 1 | | | 0 |
| 040.20 | Indirect Available P2O5, Spectrophotometric (17%) | 0561 | 17.24 | 0.1300 | | | | 1 | | | 0 |
| 040.40 | Indirect Available P2O5, Automated (17%) | 0096 | 16.52 | 0.2400 | | | | 1 | | | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0102 | 15.60 | 0.2000 | 16.65 | 0.8443 | 0.3000 | 7 | -1.13 | Low | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0177 | 15.88 | 0.0831 | 16.65 | 0.8443 | 0.3000 | 7 | -0.83 | Low | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0086 | 16.38 | 0.0066 | 16.65 | 0.8443 | 0.3000 | 7 | -0.29 | OK | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0055 | 16.68 | 0.1500 | 16.65 | 0.8443 | 0.3000 | 7 | 0.02 | OK | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0494 | 17.10 | 0.3300 | 16.65 | 0.8443 | 0.3000 | 7 | 0.47 | OK | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0041 | 17.45 | 0.3300 | 16.65 | 0.8443 | 0.3000 | 7 | 0.85 | High | 0 |
| 041.10 | Direct Available P2O5, Gravimetric Quinolinium (17%) | 0009 | 17.50 | 1.000 | 16.65 | 0.8443 | 0.3000 | 7 | 0.91 | High | 0 |
| 041.11 | Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (17%) | 0220 | 15.41 | 0.1000 | 16.97 | 1.354 | 0.0896 | 3 | -1.15 | | 0 |
| 041.11 | Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (17%) | 0513 | 17.61 | 0.0900 | 16.97 | 1.354 | 0.0896 | 3 | 0.47 | | 0 |
| 041.11 | Direct Available P2O5, Gravimetric Quinolinium, Citrate-EDTA Ext.... (17%) | 0485 | 17.88 | 0.0788 | 16.97 | 1.354 | 0.0896 | 3 | 0.68 | | 0 |
| 041.20 | Direct Available P2O5, Spectrophotometric (17%) | 0027 | 15.07 | 0.2500 | | | | 2 | | | 0 |
| 041.20 | Direct Available P2O5, Spectrophotometric (17%) | 0419 | 15.77 | 0.1000 | | | | 2 | | | 0 |
| 041.21 | Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (17%) | 0200 | 12.02 | 0.0800 | 15.64 | 2.595 | 0.0900 | 4 | -1.39 | | 0 |
| 041.21 | Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (17%) | 0106 | 15.54 | 0.2500 | 15.64 | 2.595 | 0.0900 | 4 | -0.04 | | 0 |
| 041.21 | Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (17%) | 0522 | 17.19 | 0.0200 | 15.64 | 2.595 | 0.0900 | 4 | 0.60 | | 0 |
| 041.21 | Direct Available P2O5, Spectrophotometric, Citrate-EDTA Ext. (17%) | 0526 | 17.81 | 0.0100 | 15.64 | 2.595 | 0.0900 | 4 | 0.84 | | 0 |
| 041.40 | Direct Available P2O5, Automated (17%) | 0095 | 15.20 | 0.0800 | | | | 2 | | | 0 |
| 041.40 | Direct Available P2O5, Automated (17%) | 0018 | 17.55 | 0.3000 | | | | 2 | | | 0 |
| 041.50 | Direct Available P2O5, ICP (17%) | 0325 | 15.10 | 0.0000 | 16.63 | 2.141 | 0.1844 | 5 | -0.71 | | 0 |
| 041.50 | Direct Available P2O5, ICP (17%) | 0368 | 15.68 | 0.0691 | 16.63 | 2.141 | 0.1844 | 5 | -0.44 | | 0 |
| 041.50 | Direct Available P2O5, ICP (17%) | 0452 | 15.88 | 0.0100 | 16.63 | 2.141 | 0.1844 | 5 | -0.35 | | 0 |
| 041.50 | Direct Available P2O5, ICP (17%) | 0131 | 16.07 | 0.0430 | 16.63 | 2.141 | 0.1844 | 5 | -0.26 | | 0 |
| 041.50 | Direct Available P2O5, ICP (17%) | 0421 | 20.40 | 0.8000 | 16.63 | 2.141 | 0.1844 | 5 | 1.76 | | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0360 | 14.97 | 0.1700 | 16.20 | 1.286 | 0.2575 | 8 | -0.88 | Low | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0040 | 15.45 | 0.3000 | 16.20 | 1.286 | 0.2575 | 8 | -0.53 | Low | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0043 | 15.50 | 0.0400 | 16.20 | 1.286 | 0.2575 | 8 | -0.50 | OK | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0025 | 15.55 | 0.3000 | 16.20 | 1.286 | 0.2575 | 8 | -0.46 | OK | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0423 | 15.80 | 0.2900 | 16.20 | 1.286 | 0.2575 | 8 | -0.29 | OK | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0377 | 16.55 | 0.0100 | 16.20 | 1.286 | 0.2575 | 8 | 0.25 | OK | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0233 | 17.78 | 0.7500 | 16.20 | 1.286 | 0.2575 | 8 | 1.12 | High | 0 |
| 041.51 | Direct Available P2O5, ICP, Citrate-EDTA Ext. (17%) | 0023 | 18.00 | 0.2000 | 16.20 | 1.286 | 0.2575 | 8 | 1.28 | High | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0486 | 15.15 | 0.3100 | 16.69 | 1.370 | 0.2867 | 13 | -1.13 | Low | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0394 | 15.21 | 0.0010 | 16.69 | 1.370 | 0.2867 | 13 | -1.08 | Low | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0055 | 15.33 | 0.3300 | 16.69 | 1.370 | 0.2867 | 13 | -1.00 | Low | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0177 | 15.35 | 0.0600 | 16.69 | 1.370 | 0.2867 | 13 | -0.98 | Low | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0230 | 15.60 | 0.8000 | 16.69 | 1.370 | 0.2867 | 13 | -0.80 | Low | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0231 | 16.78 | 0.3200 | 16.69 | 1.370 | 0.2867 | 13 | 0.06 | OK | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0472 | 17.09 | 0.0600 | 16.69 | 1.370 | 0.2867 | 13 | 0.29 | OK | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0034 | 17.29 | 0.7250 | 16.69 | 1.370 | 0.2867 | 13 | 0.44 | OK | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0354 | 17.30 | 0.6000 | 16.69 | 1.370 | 0.2867 | 13 | 0.44 | OK | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0073 | 17.60 | 0.1800 | 16.69 | 1.370 | 0.2867 | 13 | 0.66 | High | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0072 | 17.70 | 0.1540 | 16.69 | 1.370 | 0.2867 | 13 | 0.74 | High | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0037 | 18.02 | 0.1170 | 16.69 | 1.370 | 0.2867 | 13 | 0.97 | High | 0 |
| 041.60 | Direct Available P2O5, Citrate-EDTA Ext. (17%) | 0029 | 18.58 | 0.0700 | 16.69 | 1.370 | 0.2867 | 13 | 1.38 | High | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0405 | 16.76 | 0.0400 | 17.07 | 0.1977 | 0.1522 | 9 | -1.43 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0537 | 17.00 | 0.2000 | 17.07 | 0.1977 | 0.1522 | 9 | -0.31 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0533 | 17.01 | 0.1700 | 17.07 | 0.1977 | 0.1522 | 9 | -0.29 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0531 | 17.01 | 0.0600 | 17.07 | 0.1977 | 0.1522 | 9 | -0.27 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0532 | 17.01 | 0.1000 | 17.07 | 0.1977 | 0.1522 | 9 | -0.27 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0560 | 17.07 | 0.2200 | 17.07 | 0.1977 | 0.1522 | 9 | 0.01 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0540 | 17.08 | 0.0900 | 17.07 | 0.1977 | 0.1522 | 9 | 0.04 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0307 | 17.30 | 0.2400 | 17.07 | 0.1977 | 0.1522 | 9 | 1.09 | OK | 0 |
| 041.99 | Direct Available P2O5, Other (17%) | 0536 | 17.55 | 0.2500 | 17.07 | 0.1977 | 0.1522 | 9 | 2.23 | OK | 0 |
| 048.10 | Water Soluble P2O5, Gravimetric Quinolinium (%) | 0444 | 13.97 | 0.7800 | | | | 1 | | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0561 | 13.72 | 0.1300 | 14.04 | 0.2286 | 0.0908 | 5 | -1.26 | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0220 | 13.94 | 0.0700 | 14.04 | 0.2286 | 0.0908 | 5 | -0.42 | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0526 | 14.08 | 0.1522 | 14.04 | 0.2286 | 0.0908 | 5 | 0.14 | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0405 | 14.19 | 0.0500 | 14.04 | 0.2286 | 0.0908 | 5 | 0.54 | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0394 | 14.30 | 0.0520 | 14.04 | 0.2286 | 0.0908 | 5 | 0.99 | | 0 |
| 048.20 | Water Soluble P2O5, Spectrophotometric (%) | 0550 | 15.94 | 2.050 | 14.04 | 0.2286 | 0.0908 | 5 | 7.22 | | 1 |
| 048.40 | Water Soluble P2O5, Automated (%) | 0096 | 13.86 | 0.2400 | | | | 1 | | | 0 |
| 048.50 | Water Soluble P2O5, ICP (%) | 0444 | 14.89 | 0.1700 | | | | 1 | | | 0 |
| 048.99 | Water Soluble P2O5, Other (%) | 0560 | 12.09 | 0.0300 | 13.42 | 1.168 | 0.1333 | 3 | -1.15 | | 0 |
| 048.99 | Water Soluble P2O5, Other (%) | 0520 | 13.95 | 0.3100 | 13.42 | 1.168 | 0.1333 | 3 | 0.45 | | 0 |
| 048.99 | Water Soluble P2O5, Other (%) | 0513 | 14.24 | 0.0600 | 13.42 | 1.168 | 0.1333 | 3 | 0.70 | | 0 |
| 050.00 | Soluble K2O, STPB Oxalate (0.9%) | 0416 | 0.4550 | 0.0500 | 0.8213 | 0.3464 | 0.0325 | 4 | -1.06 | | 0 |
| 050.00 | Soluble K2O, STPB Oxalate (0.9%) | 0522 | 0.6300 | 0.0200 | 0.8213 | 0.3464 | 0.0325 | 4 | -0.55 | | 0 |
| 050.00 | Soluble K2O, STPB Oxalate (0.9%) | 0055 | 0.9700 | 0.0600 | 0.8213 | 0.3464 | 0.0325 | 4 | 0.43 | | 0 |
| 050.00 | Soluble K2O, STPB Oxalate (0.9%) | 0550 | 1.230 | 0.0000 | 0.8213 | 0.3464 | 0.0325 | 4 | 1.18 | | 0 |
| 050.10 | Soluble K2O, STPB Citrate (0.9%) | 0498 | 0.2400 | 0.0000 | | | | 1 | | | 0 |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 0136 | 0.1650 | 0.0100 | 0.2533 | 0.1403 | 0.0062 | 5 | -0.63 | | 0 |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 0157 | 0.1715 | 0.0010 | 0.2533 | 0.1403 | 0.0062 | 5 | -0.58 | | 0 |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 0040 | 0.2000 | 0.0000 | 0.2533 | 0.1403 | 0.0062 | 5 | -0.38 | | 0 |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 0231 | 0.2300 | 0.0200 | 0.2533 | 0.1403 | 0.0062 | 5 | -0.17 | | 0 |
| 050.30 | Soluble K2O, AA (Oxalate) (0.9%) | 0309 | 0.5000 | 0.0000 | 0.2533 | 0.1403 | 0.0062 | 5 | 1.76 | | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0292 | 0.1100 | 0.0200 | 0.2026 | 0.0781 | 0.0134 | 10 | -1.10 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0561 | 0.1300 | 0.0000 | 0.2026 | 0.0781 | 0.0134 | 10 | -0.86 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0419 | 0.1560 | 0.0040 | 0.2026 | 0.0781 | 0.0134 | 10 | -0.56 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0106 | 0.1650 | 0.0100 | 0.2026 | 0.0781 | 0.0134 | 10 | -0.45 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0055 | 0.1785 | 0.0250 | 0.2026 | 0.0781 | 0.0134 | 10 | -0.29 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0422 | 0.1990 | 0.0180 | 0.2026 | 0.0781 | 0.0134 | 10 | -0.04 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0324 | 0.2285 | 0.0090 | 0.2026 | 0.0781 | 0.0134 | 10 | 0.31 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0230 | 0.2445 | 0.0370 | 0.2026 | 0.0781 | 0.0134 | 10 | 0.50 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0444 | 0.2950 | 0.0100 | 0.2026 | 0.0781 | 0.0134 | 10 | 1.10 | OK | 0 |
| 050.50 | Soluble K2O, ICP (Oxalate) (0.9%) | 0390 | 0.3565 | 0.0010 | 0.2026 | 0.0781 | 0.0134 | 10 | 1.83 | OK | 0 |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0452 | 0.1300 | 0.0000 | 0.2083 | 0.0762 | 0.0048 | 5 | -0.90 | | 0 |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0547 | 0.1700 | 0.0000 | 0.2083 | 0.0762 | 0.0048 | 5 | -0.44 | | 0 |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0368 | 0.1764 | 0.0138 | 0.2083 | 0.0762 | 0.0048 | 5 | -0.37 | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0291 | 0.2400 | 0.0000 | 0.2083 | 0.0762 | 0.0048 | 5 | 0.36 | | 0 |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0483 | 0.3250 | 0.0100 | 0.2083 | 0.0762 | 0.0048 | 5 | 1.34 | | 0 |
| 050.51 | Soluble K2O, ICP (Citrate) (0.9%) | 0555 | < 0.5 | | 0.2083 | 0.0762 | 0.0048 | 5 | | | 5 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0377 | 0.1400 | 0.0600 | 0.1551 | 0.0229 | 0.0194 | 5 | -0.58 | | 0 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0486 | 0.1400 | 0.0200 | 0.1551 | 0.0229 | 0.0194 | 5 | -0.58 | | 0 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0043 | 0.1500 | 0.0000 | 0.1551 | 0.0229 | 0.0194 | 5 | -0.19 | | 0 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0354 | 0.1505 | 0.0070 | 0.1551 | 0.0229 | 0.0194 | 5 | -0.18 | | 0 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0423 | 0.1950 | 0.0100 | 0.1551 | 0.0229 | 0.0194 | 5 | 1.52 | | 0 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0023 | 0.5000 | 0.2000 | 0.1551 | 0.0229 | 0.0194 | 5 | 13.15 | | 1 |
| 050.52 | Soluble K2O, ICP (Citrate-EDTA) (0.9%) | 0485 | < 0.3 | | 0.1551 | 0.0229 | 0.0194 | 5 | | | 5 |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 0526 | 0.1064 | 0.0039 | 2.713 | 5.270 | 0.1048 | 5 | -0.49 | | 0 |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 0200 | 0.1200 | 0.0000 | 2.713 | 5.270 | 0.1048 | 5 | -0.49 | | 0 |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 0105 | 0.1950 | 0.0700 | 2.713 | 5.270 | 0.1048 | 5 | -0.48 | | 0 |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 0041 | 1.030 | 0.0600 | 2.713 | 5.270 | 0.1048 | 5 | -0.32 | | 0 |
| 050.60 | Soluble K2O, Flame Photometric (Oxalate) (0.9%) | 0443 | 12.12 | 0.3900 | 2.713 | 5.270 | 0.1048 | 5 | 1.78 | | 0 |
| 050.61 | Soluble K2O, Flame Photometric (Citrate) (0.9%) | 0535 | 0.1490 | 0.0020 | | | | 1 | | | 0 |
| 050.62 | Soluble K2O, Flame Photometric (Citrate-EDTA) (0.9%) | 0535 | 0.1490 | 0.0020 | 0.2785 | 0.1940 | 0.0090 | 3 | -0.67 | | 0 |
| 050.62 | Soluble K2O, Flame Photometric (Citrate-EDTA) (0.9%) | 0513 | 0.1850 | 0.0100 | 0.2785 | 0.1940 | 0.0090 | 3 | -0.48 | | 0 |
| 050.62 | Soluble K2O, Flame Photometric (Citrate-EDTA) (0.9%) | 0018 | 0.5015 | 0.0150 | 0.2785 | 0.1940 | 0.0090 | 3 | 1.15 | | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0476 | 0.1419 | 0.0009 | 0.2090 | 0.0538 | 0.0133 | 22 | -1.25 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0533 | 0.1550 | 0.0100 | 0.2090 | 0.0538 | 0.0133 | 22 | -1.00 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0394 | 0.1560 | 0.0020 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.99 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0421 | 0.1650 | 0.0300 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.82 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0371 | 0.1700 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.73 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0481 | 0.1750 | 0.0100 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.63 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0220 | 0.1800 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.54 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0527 | 0.1805 | 0.0098 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.53 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0524 | 0.1873 | 0.0089 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.40 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0096 | 0.1900 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.35 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0493 | 0.1950 | 0.0100 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.26 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0482 | 0.2000 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.17 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0546 | 0.2010 | 0.0020 | 0.2090 | 0.0538 | 0.0133 | 22 | -0.15 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0521 | 0.2094 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | 0.01 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0255 | 0.2115 | 0.0090 | 0.2090 | 0.0538 | 0.0133 | 22 | 0.05 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0501 | 0.2220 | 0.0380 | 0.2090 | 0.0538 | 0.0133 | 22 | 0.24 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0389 | 0.2500 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | 0.76 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0523 | 0.2500 | 0.1000 | 0.2090 | 0.0538 | 0.0133 | 22 | 0.76 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0325 | 0.4000 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | 3.55 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0402 | 0.5560 | 0.0260 | 0.2090 | 0.0538 | 0.0133 | 22 | 6.45 | OK | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0560 | 0.9065 | 0.0050 | 0.2090 | 0.0538 | 0.0133 | 22 | 12.96 | High | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0532 | 0.9550 | 0.0300 | 0.2090 | 0.0538 | 0.0133 | 22 | 13.86 | High | 0 |
| 050.99 | Soluble K2O, Other (0.9%) | 0552 | 0.4550 | 0.1300 | 0.2090 | 0.0538 | 0.0133 | 22 | 4.57 | OK | 1 |
| 050.99 | Soluble K2O, Other (0.9%) | 0042 | 0.0000 | 0.0000 | 0.2090 | 0.0538 | 0.0133 | 22 | | | 4 |
| 050.99 | Soluble K2O, Other (0.9%) | 0027 | < 0.6 | | 0.2090 | 0.0538 | 0.0133 | 22 | | | 5 |
| 060.00 | Water (Free), Vacuum Oven (%) | 0416 | 1.634 | 0.0008 | | | | 2 | | | 0 |
| 060.00 | Water (Free), Vacuum Oven (%) | 0096 | 1.670 | 0.0400 | | | | 2 | | | 0 |
| 060.30 | Water (Free), AFPC No. 2B (105°C oven for 2 hours, 5g sample) (%) | 0055 | 2.100 | 0.6000 | | | | 1 | | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 060.99 | Water (Free), Other (%) | 0513 | 1.390 | 0.0400 | 1.635 | 0.2548 | 0.0789 | 3 | -0.96 | | 0 |
| 060.99 | Water (Free), Other (%) | 0055 | 1.615 | 0.1900 | 1.635 | 0.2548 | 0.0789 | 3 | -0.08 | | 0 |
| 060.99 | Water (Free), Other (%) | 0510 | 1.899 | 0.0066 | 1.635 | 0.2548 | 0.0789 | 3 | 1.04 | | 0 |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 0513 | 22.54 | 0.0700 | 25.57 | 3.791 | 0.4560 | 5 | -0.80 | | 0 |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 0485 | 22.78 | 0.0600 | 25.57 | 3.791 | 0.4560 | 5 | -0.74 | | 0 |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 0553 | 25.20 | 0.6000 | 25.57 | 3.791 | 0.4560 | 5 | -0.10 | | 0 |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 0029 | 25.43 | 0.5300 | 25.57 | 3.791 | 0.4560 | 5 | -0.04 | | 0 |
| 101.00 | Acid Soluble Ca, AA, inorganic 965.09 (20%) | 0550 | 31.92 | 1.020 | 25.57 | 3.791 | 0.4560 | 5 | 1.67 | | 0 |
| 101.03 | Acid Soluble Ca, AA, 965.09, test portion 2006.03A-C w/dual acid (20%) | 0526 | 18.55 | 0.2890 | | | | 1 | | | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0472 | 19.37 | 0.3300 | 22.68 | 1.355 | 0.2657 | 16 | -2.45 | Low | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0324 | 20.50 | 0.2000 | 22.68 | 1.355 | 0.2657 | 16 | -1.61 | Low | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0102 | 20.63 | 0.0001 | 22.68 | 1.355 | 0.2657 | 16 | -1.51 | Low | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0255 | 21.37 | 0.3410 | 22.68 | 1.355 | 0.2657 | 16 | -0.96 | Low | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0360 | 22.36 | 0.0700 | 22.68 | 1.355 | 0.2657 | 16 | -0.24 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0402 | 22.82 | 0.6600 | 22.68 | 1.355 | 0.2657 | 16 | 0.10 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0354 | 22.85 | 0.5000 | 22.68 | 1.355 | 0.2657 | 16 | 0.13 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0231 | 23.09 | 0.0200 | 22.68 | 1.355 | 0.2657 | 16 | 0.30 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0035 | 23.20 | 0.2000 | 22.68 | 1.355 | 0.2657 | 16 | 0.38 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0433 | 23.28 | 0.1000 | 22.68 | 1.355 | 0.2657 | 16 | 0.44 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0041 | 23.30 | 0.0000 | 22.68 | 1.355 | 0.2657 | 16 | 0.46 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0483 | 23.40 | 0.2000 | 22.68 | 1.355 | 0.2657 | 16 | 0.53 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0096 | 23.41 | 0.7000 | 22.68 | 1.355 | 0.2657 | 16 | 0.54 | OK | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0482 | 23.75 | 0.5000 | 22.68 | 1.355 | 0.2657 | 16 | 0.79 | High | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0291 | 23.92 | 0.0200 | 22.68 | 1.355 | 0.2657 | 16 | 0.92 | High | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0444 | 24.18 | 0.4100 | 22.68 | 1.355 | 0.2657 | 16 | 1.10 | High | 0 |
| 101.30 | Acid Soluble Ca, ICP, test portion inorganic 965.09 (20%) | 0451 | 18.25 | 1.450 | 22.68 | 1.355 | 0.2657 | 16 | -3.27 | Low | 1 |
| 101.32 | Acid Soluble Ca, ICP, test portion 2006.03A-C (20%) | 0521 | 19.40 | 0.0000 | 22.50 | 2.411 | 0.2145 | 4 | -1.28 | | 0 |
| 101.32 | Acid Soluble Ca, ICP, test portion 2006.03A-C (20%) | 0095 | 22.32 | 0.0100 | 22.50 | 2.411 | 0.2145 | 4 | -0.08 | | 0 |
| 101.32 | Acid Soluble Ca, ICP, test portion 2006.03A-C (20%) | 0423 | 23.03 | 0.3600 | 22.50 | 2.411 | 0.2145 | 4 | 0.22 | | 0 |
| 101.32 | Acid Soluble Ca, ICP, test portion 2006.03A-C (20%) | 0394 | 25.24 | 0.4880 | 22.50 | 2.411 | 0.2145 | 4 | 1.14 | | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0555 | 20.81 | 2.174 | 22.54 | 0.9498 | 0.6106 | 16 | -1.81 | Low | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0043 | 20.85 | 0.6800 | 22.54 | 0.9498 | 0.6106 | 16 | -1.77 | Low | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0486 | 21.61 | 0.1500 | 22.54 | 0.9498 | 0.6106 | 16 | -0.98 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0177 | 21.63 | 0.4079 | 22.54 | 0.9498 | 0.6106 | 16 | -0.95 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0055 | 22.25 | 0.1300 | 22.54 | 0.9498 | 0.6106 | 16 | -0.31 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0117 | 22.26 | 0.1880 | 22.54 | 0.9498 | 0.6106 | 16 | -0.29 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0009 | 22.50 | 1.000 | 22.54 | 0.9498 | 0.6106 | 16 | -0.04 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0040 | 22.58 | 0.6600 | 22.54 | 0.9498 | 0.6106 | 16 | 0.05 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0106 | 22.59 | 0.3798 | 22.54 | 0.9498 | 0.6106 | 16 | 0.06 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0494 | 22.73 | 0.5802 | 22.54 | 0.9498 | 0.6106 | 16 | 0.20 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0136 | 23.00 | 2.000 | 22.54 | 0.9498 | 0.6106 | 16 | 0.49 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0037 | 23.03 | 0.4300 | 22.54 | 0.9498 | 0.6106 | 16 | 0.52 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0527 | 23.41 | 0.2400 | 22.54 | 0.9498 | 0.6106 | 16 | 0.92 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0233 | 23.50 | 0.3700 | 22.54 | 0.9498 | 0.6106 | 16 | 1.01 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0546 | 23.52 | 0.0800 | 22.54 | 0.9498 | 0.6106 | 16 | 1.03 | OK | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0421 | 23.75 | 0.3000 | 22.54 | 0.9498 | 0.6106 | 16 | 1.28 | High | 0 |
| 101.33 | Acid Soluble Ca, ICP, 2017.02 (20%) | 0292 | 1.655 | 0.0100 | 22.54 | 0.9498 | 0.6106 | 16 | -21.98 | Low | 2 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 101.70 | Acid Soluble Ca, Titrimetric (20%) | 0510 | 17.61 | 0.1937 | 21.10 | 3.047 | 0.0712 | 3 | -1.15 | | 0 |
| 101.70 | Acid Soluble Ca, Titrimetric (20%) | 0200 | 22.48 | 0.0100 | 21.10 | 3.047 | 0.0712 | 3 | 0.45 | | 0 |
| 101.70 | Acid Soluble Ca, Titrimetric (20%) | 0522 | 23.22 | 0.0100 | 21.10 | 3.047 | 0.0712 | 3 | 0.70 | | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0476 | 6.398 | 0.1431 | 22.47 | 1.905 | 0.2584 | 10 | -7.85 | Low | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0520 | 19.04 | 0.3300 | 22.47 | 1.905 | 0.2584 | 10 | -1.68 | Low | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0481 | 21.75 | 0.0300 | 22.47 | 1.905 | 0.2584 | 10 | -0.35 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0368 | 22.63 | 0.2062 | 22.47 | 1.905 | 0.2584 | 10 | 0.08 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0552 | 22.70 | 1.000 | 22.47 | 1.905 | 0.2584 | 10 | 0.11 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0561 | 23.09 | 0.0500 | 22.47 | 1.905 | 0.2584 | 10 | 0.30 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0027 | 23.41 | 0.1850 | 22.47 | 1.905 | 0.2584 | 10 | 0.46 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0389 | 23.47 | 0.1400 | 22.47 | 1.905 | 0.2584 | 10 | 0.49 | OK | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0523 | 24.05 | 0.5000 | 22.47 | 1.905 | 0.2584 | 10 | 0.77 | High | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0405 | 24.40 | 0.0000 | 22.47 | 1.905 | 0.2584 | 10 | 0.94 | High | 0 |
| 101.99 | Acid Soluble Ca, Other (20%) | 0042 | 21.94 | 4.810 | 22.47 | 1.905 | 0.2584 | 10 | -0.26 | OK | 1 |
| 121.00 | Acid Soluble Mg, AA, inorganic 965.09 (%) | 0553 | 0.5070 | 0.0360 | | | | 1 | | | 0 |
| 121.03 | Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0105 | 0.3025 | 0.0290 | | | | 2 | | | 0 |
| 121.03 | Acid Soluble Mg, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0546 | 0.3657 | 0.0021 | | | | 2 | | | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0451 | 0.1115 | 0.0010 | 0.4298 | 0.0392 | 0.0064 | 7 | -7.35 | Low | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0354 | 0.4150 | 0.0100 | 0.4298 | 0.0392 | 0.0064 | 7 | -0.34 | OK | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0035 | 0.4205 | 0.0010 | 0.4298 | 0.0392 | 0.0064 | 7 | -0.21 | OK | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0390 | 0.4285 | 0.0170 | 0.4298 | 0.0392 | 0.0064 | 7 | -0.03 | OK | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0096 | 0.4350 | 0.0100 | 0.4298 | 0.0392 | 0.0064 | 7 | 0.12 | OK | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0472 | 0.4500 | 0.0000 | 0.4298 | 0.0392 | 0.0064 | 7 | 0.47 | OK | 0 |
| 121.30 | Acid Soluble Mg, ICP, test portion inorganic 965.09 (%) | 0483 | 0.4870 | 0.0060 | 0.4298 | 0.0392 | 0.0064 | 7 | 1.32 | OK | 0 |
| 121.32 | Acid Soluble Mg, ICP, test portion 2006.03A-C (%) | 0423 | 0.3950 | 0.0020 | | | | 2 | | | 0 |
| 121.32 | Acid Soluble Mg, ICP, test portion 2006.03A-C (%) | 0521 | 0.3963 | 0.0000 | | | | 2 | | | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0136 | 0.3450 | 0.0100 | 0.3913 | 0.0422 | 0.0159 | 6 | -0.98 | OK | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0106 | 0.3659 | 0.0213 | 0.3913 | 0.0422 | 0.0159 | 6 | -0.54 | OK | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0515 | 0.3814 | 0.0398 | 0.3913 | 0.0422 | 0.0159 | 6 | -0.21 | OK | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0009 | 0.3850 | 0.0100 | 0.3913 | 0.0422 | 0.0159 | 6 | -0.13 | OK | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0494 | 0.4278 | 0.0092 | 0.3913 | 0.0422 | 0.0159 | 6 | 0.77 | OK | 0 |
| 121.33 | Acid Soluble Mg, ICP, 2017.02 (%) | 0527 | 0.4429 | 0.0051 | 0.3913 | 0.0422 | 0.0159 | 6 | 1.09 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0515 | 0.3456 | 0.0148 | 0.3724 | 0.0272 | 0.0698 | 6 | -0.88 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0524 | 0.3526 | 0.0029 | 0.3724 | 0.0272 | 0.0698 | 6 | -0.65 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0307 | 0.3665 | 0.0010 | 0.3724 | 0.0272 | 0.0698 | 6 | -0.19 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0450 | 0.3700 | 0.1400 | 0.3724 | 0.0272 | 0.0698 | 6 | -0.08 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0552 | 0.3900 | 0.2600 | 0.3724 | 0.0272 | 0.0698 | 6 | 0.58 | OK | 0 |
| 121.99 | Acid Soluble Mg, Other (%) | 0389 | 0.4100 | 0.0000 | 0.3724 | 0.0272 | 0.0698 | 6 | 1.23 | OK | 0 |
| 131.00 | Water Soluble Mg, AA (%) | 0553 | 0.4285 | 0.0290 | | | | 1 | | | 0 |
| 143.00 | Elemental S, Gravimetric Sulfur - carbon disulfide soluble sulfur (%) | 0095 | 0.2150 | 0.0500 | | | | 1 | | | 0 |
| 143.99 | Elemental S, Other (%) | 0472 | 7.765 | 0.1300 | 10.97 | 0.8234 | 0.0434 | 6 | -3.46 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0390 | 10.80 | 0.0300 | 10.97 | 0.8234 | 0.0434 | 6 | -0.18 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0368 | 10.88 | 0.0804 | 10.97 | 0.8234 | 0.0434 | 6 | -0.10 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0481 | 11.00 | 0.0000 | 10.97 | 0.8234 | 0.0434 | 6 | 0.04 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0291 | 11.64 | 0.0100 | 10.97 | 0.8234 | 0.0434 | 6 | 0.72 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0389 | 11.76 | 0.0100 | 10.97 | 0.8234 | 0.0434 | 6 | 0.85 | NA | 0 |
| 143.99 | Elemental S, Other (%) | 0255 | 11.07 | 0.3800 | 10.97 | 0.8234 | 0.0434 | 6 | 0.12 | NA | 1 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|---|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0444 | 5.790 | 0.0800 | 11.45 | 0.3170 | 0.1197 | 11 | -16.70 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0200 | 11.19 | 0.0800 | 11.45 | 0.3170 | 0.1197 | 11 | -0.76 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0106 | 11.26 | 0.0800 | 11.45 | 0.3170 | 0.1197 | 11 | -0.55 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0095 | 11.28 | 0.0800 | 11.45 | 0.3170 | 0.1197 | 11 | -0.49 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0476 | 11.34 | 0.2120 | 11.45 | 0.3170 | 0.1197 | 11 | -0.31 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0522 | 11.35 | 0.0100 | 11.45 | 0.3170 | 0.1197 | 11 | -0.30 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0485 | 11.57 | 0.0842 | 11.45 | 0.3170 | 0.1197 | 11 | 0.37 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0405 | 11.64 | 0.1400 | 11.45 | 0.3170 | 0.1197 | 11 | 0.57 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0561 | 11.70 | 0.1300 | 11.45 | 0.3170 | 0.1197 | 11 | 0.73 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0550 | 11.70 | 0.1200 | 11.45 | 0.3170 | 0.1197 | 11 | 0.75 | NA | 0 |
| 145.00 | Sulfate S, HCl soluble, Gravimetric Sulfur - sulfate form (%) | 0498 | 11.95 | 0.3000 | 11.45 | 0.3170 | 0.1197 | 11 | 1.48 | NA | 0 |
| 145.99 | Sulfate S, HCl soluble, Other (%) | 0444 | 9.605 | 0.1100 | | | | 1 | | | 0 |
| 148.00 | Total S, Combustion (11%) | 0493 | 11.20 | 0.1000 | 11.46 | 0.2962 | 0.2919 | 9 | -0.80 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0419 | 11.25 | 0.5700 | 11.46 | 0.2962 | 0.2919 | 9 | -0.66 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0555 | 11.25 | 0.3570 | 11.46 | 0.2962 | 0.2919 | 9 | -0.63 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0157 | 11.30 | 0.2000 | 11.46 | 0.2962 | 0.2919 | 9 | -0.48 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0131 | 11.42 | 0.0700 | 11.46 | 0.2962 | 0.2919 | 9 | -0.13 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0025 | 11.45 | 0.2600 | 11.46 | 0.2962 | 0.2919 | 9 | -0.02 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0029 | 11.47 | 0.4500 | 11.46 | 0.2962 | 0.2919 | 9 | 0.03 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0136 | 11.87 | 0.2200 | 11.46 | 0.2962 | 0.2919 | 9 | 1.29 | OK | 0 |
| 148.00 | Total S, Combustion (11%) | 0451 | 12.70 | 0.4000 | 11.46 | 0.2962 | 0.2919 | 9 | 3.88 | High | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0444 | 11.04 | 0.0700 | 11.45 | 0.2537 | 0.2137 | 10 | -1.51 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0231 | 11.20 | 0.2000 | 11.45 | 0.2537 | 0.2137 | 10 | -0.91 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0105 | 11.25 | 0.1600 | 11.45 | 0.2537 | 0.2137 | 10 | -0.73 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0233 | 11.47 | 0.0900 | 11.45 | 0.2537 | 0.2137 | 10 | 0.06 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0230 | 11.48 | 0.0600 | 11.45 | 0.2537 | 0.2137 | 10 | 0.12 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0095 | 11.50 | 0.0300 | 11.45 | 0.2537 | 0.2137 | 10 | 0.17 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0324 | 11.50 | 0.8000 | 11.45 | 0.2537 | 0.2137 | 10 | 0.19 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0029 | 11.53 | 0.0300 | 11.45 | 0.2537 | 0.2137 | 10 | 0.28 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0055 | 11.67 | 0.0800 | 11.45 | 0.2537 | 0.2137 | 10 | 0.81 | OK | 0 |
| 148.01 | Total S, Gravimetric - sulfate and elemental (11%) | 0526 | 12.11 | 0.6165 | 11.45 | 0.2537 | 0.2137 | 10 | 2.41 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0292 | 0.9050 | 0.0100 | 11.04 | 0.7386 | 0.2044 | 19 | -13.73 | Low | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0515 | 8.250 | 0.0956 | 11.04 | 0.7386 | 0.2044 | 19 | -3.78 | Low | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0402 | 10.01 | 0.0100 | 11.04 | 0.7386 | 0.2044 | 19 | -1.41 | Low | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0043 | 10.37 | 0.1400 | 11.04 | 0.7386 | 0.2044 | 19 | -0.91 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0486 | 10.50 | 0.1300 | 11.04 | 0.7386 | 0.2044 | 19 | -0.74 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0444 | 10.56 | 0.2700 | 11.04 | 0.7386 | 0.2044 | 19 | -0.66 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0117 | 10.78 | 0.3080 | 11.04 | 0.7386 | 0.2044 | 19 | -0.35 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0040 | 11.05 | 0.1000 | 11.04 | 0.7386 | 0.2044 | 19 | 0.01 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0421 | 11.20 | 0.4000 | 11.04 | 0.7386 | 0.2044 | 19 | 0.21 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0177 | 11.22 | 0.1948 | 11.04 | 0.7386 | 0.2044 | 19 | 0.23 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0494 | 11.31 | 0.4363 | 11.04 | 0.7386 | 0.2044 | 19 | 0.36 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0037 | 11.41 | 0.3960 | 11.04 | 0.7386 | 0.2044 | 19 | 0.50 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0546 | 11.43 | 0.2840 | 11.04 | 0.7386 | 0.2044 | 19 | 0.52 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0023 | 11.45 | 0.1000 | 11.04 | 0.7386 | 0.2044 | 19 | 0.55 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0527 | 11.63 | 0.0871 | 11.04 | 0.7386 | 0.2044 | 19 | 0.80 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0102 | 11.65 | 0.0000 | 11.04 | 0.7386 | 0.2044 | 19 | 0.82 | OK | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0394 | 11.71 | 0.0320 | 11.04 | 0.7386 | 0.2044 | 19 | 0.90 | OK | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0233 | 11.81 | 0.0900 | 11.04 | 0.7386 | 0.2044 | 19 | 1.03 | High | 0 |
| 148.07 | Total S, ICP, test portion as in 2017.02 (11%) | 0483 | 11.90 | 0.8000 | 11.04 | 0.7386 | 0.2044 | 19 | 1.16 | High | 0 |
| 148.99 | Total S, Other (11%) | 0371 | 8.430 | 0.0000 | 11.01 | 0.9463 | 0.1175 | 12 | -2.72 | Low | 0 |
| 148.99 | Total S, Other (11%) | 0307 | 10.12 | 0.1900 | 11.01 | 0.9463 | 0.1175 | 12 | -0.94 | Low | 0 |
| 148.99 | Total S, Other (11%) | 0520 | 10.32 | 0.0500 | 11.01 | 0.9463 | 0.1175 | 12 | -0.73 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0523 | 10.49 | 0.1500 | 11.01 | 0.9463 | 0.1175 | 12 | -0.55 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0450 | 10.50 | 0.2000 | 11.01 | 0.9463 | 0.1175 | 12 | -0.53 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0560 | 11.11 | 0.0600 | 11.01 | 0.9463 | 0.1175 | 12 | 0.11 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0096 | 11.13 | 0.4100 | 11.01 | 0.9463 | 0.1175 | 12 | 0.13 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0433 | 11.16 | 0.0200 | 11.01 | 0.9463 | 0.1175 | 12 | 0.16 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0354 | 11.35 | 0.1000 | 11.01 | 0.9463 | 0.1175 | 12 | 0.36 | OK | 0 |
| 148.99 | Total S, Other (11%) | 0405 | 11.96 | 0.1400 | 11.01 | 0.9463 | 0.1175 | 12 | 1.01 | High | 0 |
| 148.99 | Total S, Other (11%) | 0220 | 12.17 | 0.0900 | 11.01 | 0.9463 | 0.1175 | 12 | 1.22 | High | 0 |
| 148.99 | Total S, Other (11%) | 0482 | 12.20 | 0.0000 | 11.01 | 0.9463 | 0.1175 | 12 | 1.26 | High | 0 |
| 149.04 | S - HNO3 soluble, ICP (%) | 0524 | 10.52 | 0.4343 | 11.09 | 0.4972 | 0.1911 | 4 | -1.14 | | 0 |
| 149.04 | S - HNO3 soluble, ICP (%) | 0423 | 10.87 | 0.0700 | 11.09 | 0.4972 | 0.1911 | 4 | -0.44 | | 0 |
| 149.04 | S - HNO3 soluble, ICP (%) | 0501 | 11.30 | 0.2600 | 11.09 | 0.4972 | 0.1911 | 4 | 0.43 | | 0 |
| 149.04 | S - HNO3 soluble, ICP (%) | 0521 | 11.66 | 0.0000 | 11.09 | 0.4972 | 0.1911 | 4 | 1.15 | | 0 |
| 151.00 | Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm) | 0498 | 1.550 | 0.1000 | | | | 1 | | | 0 |
| 151.00 | Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | < 0.08 | | | | | 1 | | | 5 |
| 151.00 | Acid Soluble As, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | < 50 | | | | | 1 | | | 5 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0096 | 3.100 | 0.0000 | 6.998 | 2.930 | 0.3841 | 6 | -1.18 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0450 | 4.400 | 0.8000 | 6.998 | 2.930 | 0.3841 | 6 | -0.79 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0523 | 7.820 | 0.0200 | 6.998 | 2.930 | 0.3841 | 6 | 0.25 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0255 | 8.818 | 0.4680 | 6.998 | 2.930 | 0.3841 | 6 | 0.55 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0501 | 8.820 | 0.1000 | 6.998 | 2.930 | 0.3841 | 6 | 0.55 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0524 | 9.031 | 0.9165 | 6.998 | 2.930 | 0.3841 | 6 | 0.62 | NA | 0 |
| 151.30 | Acid Soluble As, ICP (ppm) | 0555 | < 0.5 | | 6.998 | 2.930 | 0.3841 | 6 | | | 5 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0527 | 3.129 | 0.0976 | 6.166 | 2.857 | 0.5566 | 5 | -0.93 | | 0 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0515 | 3.861 | 0.8860 | 6.166 | 2.857 | 0.5566 | 5 | -0.70 | | 0 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0220 | 5.550 | 0.1000 | 6.166 | 2.857 | 0.5566 | 5 | -0.19 | | 0 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0037 | 9.111 | 1.139 | 6.166 | 2.857 | 0.5566 | 5 | 0.90 | | 0 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0494 | 9.178 | 0.5605 | 6.166 | 2.857 | 0.5566 | 5 | 0.92 | | 0 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0009 | < 10 | | 6.166 | 2.857 | 0.5566 | 5 | | | 5 |
| 151.33 | Acid Soluble As, ICP, 2017.02 (ppm) | 0117 | < 10 | | 6.166 | 2.857 | 0.5566 | 5 | | | 5 |
| 151.34 | Acid Soluble As, ICP, EPA 3050B/6010C (ppm) | 0515 | 4.027 | 1.798 | | | | 2 | | | 0 |
| 151.34 | Acid Soluble As, ICP, EPA 3050B/6010C (ppm) | 0368 | 9.600 | 1.400 | | | | 2 | | | 0 |
| 151.99 | Acid Soluble As, Other (ppm) | 0520 | 0.4450 | 0.0100 | 4.819 | 3.819 | 0.6550 | 5 | -1.15 | | 0 |
| 151.99 | Acid Soluble As, Other (ppm) | 0481 | 2.375 | 0.1500 | 4.819 | 3.819 | 0.6550 | 5 | -0.64 | | 0 |
| 151.99 | Acid Soluble As, Other (ppm) | 0405 | 5.000 | 2.000 | 4.819 | 3.819 | 0.6550 | 5 | 0.05 | | 0 |
| 151.99 | Acid Soluble As, Other (ppm) | 0476 | 5.776 | 0.1150 | 4.819 | 3.819 | 0.6550 | 5 | 0.25 | | 0 |
| 151.99 | Acid Soluble As, Other (ppm) | 0009 | 10.50 | 1.000 | 4.819 | 3.819 | 0.6550 | 5 | 1.49 | | 0 |
| 165.30 | Acid Soluble B, ICP, test portion in 982.01 (%) | 0136 | 0.0020 | 0.0000 | 0.0112 | 0.0160 | 0.0035 | 4 | -0.57 | | 0 |
| 165.30 | Acid Soluble B, ICP, test portion in 982.01 (%) | 0106 | 0.0022 | 0.0018 | 0.0112 | 0.0160 | 0.0035 | 4 | -0.56 | | 0 |
| 165.30 | Acid Soluble B, ICP, test portion in 982.01 (%) | 0389 | 0.0055 | 0.0022 | 0.0112 | 0.0160 | 0.0035 | 4 | -0.36 | | 0 |
| 165.30 | Acid Soluble B, ICP, test portion in 982.01 (%) | 0354 | 0.0350 | 0.0100 | 0.0112 | 0.0160 | 0.0035 | 4 | 1.49 | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 165.99 | Acid Soluble B, Other (%) | 0546 | 0.0024 | 0.0000 | 0.0062 | 0.0048 | 0.0005 | 7 | -0.72 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0009 | 0.0029 | 0.0001 | 0.0062 | 0.0048 | 0.0005 | 7 | -0.64 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0524 | 0.0032 | 0.0001 | 0.0062 | 0.0048 | 0.0005 | 7 | -0.58 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0423 | 0.0034 | 0.0006 | 0.0062 | 0.0048 | 0.0005 | 7 | -0.53 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0527 | 0.0091 | 0.0016 | 0.0062 | 0.0048 | 0.0005 | 7 | 0.55 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0472 | 0.0100 | 0.0000 | 0.0062 | 0.0048 | 0.0005 | 7 | 0.72 | OK | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0483 | 0.0125 | 0.0010 | 0.0062 | 0.0048 | 0.0005 | 7 | 1.20 | High | 0 |
| 165.99 | Acid Soluble B, Other (%) | 0552 | 0.0000 | 0.0000 | 0.0062 | 0.0048 | 0.0005 | 7 | | | 4 |
| 181.00 | Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | 12.37 | 1.484 | 14.13 | 1.666 | 2.335 | 3 | -1.06 | | 0 |
| 181.00 | Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm) | 0498 | 14.35 | 0.9000 | 14.13 | 1.666 | 2.335 | 3 | 0.13 | | 0 |
| 181.00 | Acid Soluble Cd, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 15.68 | 4.620 | 14.13 | 1.666 | 2.335 | 3 | 0.93 | | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0255 | 7.687 | 0.0260 | 10.42 | 2.544 | 0.7675 | 11 | -1.08 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0096 | 7.950 | 1.900 | 10.42 | 2.544 | 0.7675 | 11 | -0.97 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0444 | 8.170 | 0.0800 | 10.42 | 2.544 | 0.7675 | 11 | -0.89 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0523 | 9.665 | 0.0300 | 10.42 | 2.544 | 0.7675 | 11 | -0.30 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0450 | 10.05 | 1.700 | 10.42 | 2.544 | 0.7675 | 11 | -0.15 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0389 | 10.08 | 0.4300 | 10.42 | 2.544 | 0.7675 | 11 | -0.14 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0035 | 10.13 | 1.740 | 10.42 | 2.544 | 0.7675 | 11 | -0.12 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0524 | 10.29 | 0.2660 | 10.42 | 2.544 | 0.7675 | 11 | -0.05 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0394 | 12.60 | 0.2000 | 10.42 | 2.544 | 0.7675 | 11 | 0.86 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0482 | 13.80 | 1.400 | 10.42 | 2.544 | 0.7675 | 11 | 1.33 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0501 | 16.54 | 0.6700 | 10.42 | 2.544 | 0.7675 | 11 | 2.40 | NA | 0 |
| 181.30 | Acid Soluble Cd, ICP (ppm) | 0555 | < 0.5 | | 10.42 | 2.544 | 0.7675 | 11 | | | 5 |
| 181.32 | Acid Soluble Cd, ICP, 2006.03 (ppm) | 0419 | 11.65 | 0.1800 | | | | 1 | | | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0515 | 10.61 | 1.600 | 14.04 | 1.480 | 0.4906 | 7 | -2.10 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0009 | 13.00 | 0.0000 | 14.04 | 1.480 | 0.4906 | 7 | -0.64 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0220 | 13.90 | 0.0000 | 14.04 | 1.480 | 0.4906 | 7 | -0.09 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0117 | 14.21 | 0.3620 | 14.04 | 1.480 | 0.4906 | 7 | 0.10 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0037 | 14.50 | 0.2110 | 14.04 | 1.480 | 0.4906 | 7 | 0.28 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0527 | 15.27 | 0.4436 | 14.04 | 1.480 | 0.4906 | 7 | 0.75 | NA | 0 |
| 181.33 | Acid Soluble Cd, ICP, 2017.02 (ppm) | 0494 | 15.61 | 0.8176 | 14.04 | 1.480 | 0.4906 | 7 | 0.96 | NA | 0 |
| 181.34 | Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm) | 0515 | 9.518 | 0.3110 | | | | 2 | | | 0 |
| 181.34 | Acid Soluble Cd, ICP, EPA 3050B/6010C (ppm) | 0368 | 13.75 | 1.700 | | | | 2 | | | 0 |
| 181.99 | Acid Soluble Cd, Other (ppm) | 0520 | 9.610 | 1.520 | 12.96 | 2.830 | 0.4356 | 5 | -1.18 | | 0 |
| 181.99 | Acid Soluble Cd, Other (ppm) | 0476 | 11.22 | 0.1580 | 12.96 | 2.830 | 0.4356 | 5 | -0.61 | | 0 |
| 181.99 | Acid Soluble Cd, Other (ppm) | 0481 | 12.35 | 0.1000 | 12.96 | 2.830 | 0.4356 | 5 | -0.21 | | 0 |
| 181.99 | Acid Soluble Cd, Other (ppm) | 0009 | 15.00 | 0.0000 | 12.96 | 2.830 | 0.4356 | 5 | 0.72 | | 0 |
| 181.99 | Acid Soluble Cd, Other (ppm) | 0405 | 16.60 | 0.4000 | 12.96 | 2.830 | 0.4356 | 5 | 1.29 | | 0 |
| 190.00 | Water Soluble Cl, Titrimetric (%) | 0105 | 0.1400 | 0.0800 | | | | 1 | | | 0 |
| 190.99 | Water Soluble Cl, Other (%) | 0513 | 0.0750 | 0.0100 | | | | 1 | | | 0 |
| 191.00 | Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 76.54 | 0.3800 | 112.2 | 32.59 | 2.527 | 3 | -1.09 | | 0 |
| 191.00 | Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm) | 0498 | 119.6 | 6.300 | 112.2 | 32.59 | 2.527 | 3 | 0.23 | | 0 |
| 191.00 | Acid Soluble Cr, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | 140.4 | 0.9012 | 112.2 | 32.59 | 2.527 | 3 | 0.87 | | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0444 | 86.89 | 1.570 | 116.5 | 27.53 | 5.958 | 10 | -1.00 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0035 | 92.80 | 6.000 | 116.5 | 27.53 | 5.958 | 10 | -0.80 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0482 | 96.90 | 12.20 | 116.5 | 27.53 | 5.958 | 10 | -0.66 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0394 | 103.5 | 1.000 | 116.5 | 27.53 | 5.958 | 10 | -0.44 | NA | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0389 | 103.5 | 9.320 | 116.5 | 27.53 | 5.958 | 10 | -0.44 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0450 | 109.5 | 17.00 | 116.5 | 27.53 | 5.958 | 10 | -0.24 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0501 | 136.2 | 2.110 | 116.5 | 27.53 | 5.958 | 10 | 0.67 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0096 | 137.4 | 1.400 | 116.5 | 27.53 | 5.958 | 10 | 0.71 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0561 | 140.3 | 1.100 | 116.5 | 27.53 | 5.958 | 10 | 0.80 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0524 | 1,102 | 7.877 | 116.5 | 27.53 | 5.958 | 10 | 33.31 | NA | 0 |
| 191.30 | Acid Soluble Cr, ICP (ppm) | 0555 | < 0.5 | | 116.5 | 27.53 | 5.958 | 10 | | | 5 |
| 191.32 | Acid Soluble Cr, ICP, 2006.03 (ppm) | 0419 | 112.5 | 2.400 | | | | 1 | | | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0009 | 130.0 | 0.0000 | 137.2 | 3.211 | 1.609 | 7 | -2.04 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0220 | 135.5 | 0.3000 | 137.2 | 3.211 | 1.609 | 7 | -0.50 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0117 | 136.2 | 3.090 | 137.2 | 3.211 | 1.609 | 7 | -0.30 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0037 | 137.0 | 2.822 | 137.2 | 3.211 | 1.609 | 7 | -0.05 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0515 | 139.5 | 2.051 | 137.2 | 3.211 | 1.609 | 7 | 0.64 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0494 | 140.0 | 1.214 | 137.2 | 3.211 | 1.609 | 7 | 0.77 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0527 | 140.0 | 1.784 | 137.2 | 3.211 | 1.609 | 7 | 0.79 | NA | 0 |
| 191.33 | Acid Soluble Cr, ICP, 2017.02 (ppm) | 0136 | 116.5 | 11.00 | 137.2 | 3.211 | 1.609 | 7 | -5.84 | NA | 1 |
| 191.34 | Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm) | 0515 | 122.6 | 3.573 | | | | 2 | | | 0 |
| 191.34 | Acid Soluble Cr, ICP, EPA 3050B/6010C (ppm) | 0368 | 123.0 | 2.000 | | | | 2 | | | 0 |
| 191.99 | Acid Soluble Cr, Other (ppm) | 0520 | 98.79 | 7.140 | 131.3 | 24.12 | 3.563 | 5 | -1.35 | | 0 |
| 191.99 | Acid Soluble Cr, Other (ppm) | 0476 | 113.8 | 4.873 | 131.3 | 24.12 | 3.563 | 5 | -0.73 | | 0 |
| 191.99 | Acid Soluble Cr, Other (ppm) | 0009 | 140.0 | 0.0000 | 131.3 | 24.12 | 3.563 | 5 | 0.36 | | 0 |
| 191.99 | Acid Soluble Cr, Other (ppm) | 0405 | 147.5 | 3.000 | 131.3 | 24.12 | 3.563 | 5 | 0.67 | | 0 |
| 191.99 | Acid Soluble Cr, Other (ppm) | 0481 | 156.3 | 2.800 | 131.3 | 24.12 | 3.563 | 5 | 1.04 | | 0 |
| 202.00 | Acid Soluble Co, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | 14.79 | 0.0000 | | | | 1 | | | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0561 | 3.250 | 0.1000 | 6.029 | 2.192 | 0.2262 | 7 | -1.15 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0482 | 4.600 | 0.6000 | 6.029 | 2.192 | 0.2262 | 7 | -0.59 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0524 | 4.936 | 0.3632 | 6.029 | 2.192 | 0.2262 | 7 | -0.45 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0035 | 6.460 | 0.4000 | 6.029 | 2.192 | 0.2262 | 7 | 0.18 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0096 | 6.870 | 0.0000 | 6.029 | 2.192 | 0.2262 | 7 | 0.35 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0523 | 6.940 | 0.1000 | 6.029 | 2.192 | 0.2262 | 7 | 0.38 | OK | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0389 | 9.150 | 0.0200 | 6.029 | 2.192 | 0.2262 | 7 | 1.29 | High | 0 |
| 202.30 | Acid Soluble Co, ICP (ppm) | 0555 | < 0.5 | | 6.029 | 2.192 | 0.2262 | 7 | | | 5 |
| 202.32 | Acid Soluble Co, ICP, 2006.03 (ppm) | 0419 | 3.615 | 0.2500 | | | | 2 | | | 0 |
| 202.32 | Acid Soluble Co, ICP, 2006.03 (ppm) | 0423 | 8.070 | 0.0800 | | | | 2 | | | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0515 | 5.900 | 1.380 | 8.133 | 1.966 | 0.6060 | 8 | -1.04 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0546 | 6.284 | 0.1048 | 8.133 | 1.966 | 0.6060 | 8 | -0.86 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0220 | 7.200 | 0.4000 | 8.133 | 1.966 | 0.6060 | 8 | -0.43 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0527 | 7.323 | 1.071 | 8.133 | 1.966 | 0.6060 | 8 | -0.38 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0009 | 8.450 | 0.3000 | 8.133 | 1.966 | 0.6060 | 8 | 0.15 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0037 | 9.220 | 0.0570 | 8.133 | 1.966 | 0.6060 | 8 | 0.51 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0494 | 10.19 | 1.432 | 8.133 | 1.966 | 0.6060 | 8 | 0.96 | OK | 0 |
| 202.33 | Acid Soluble Co, ICP, 2017.02 (ppm) | 0117 | 10.50 | 0.1040 | 8.133 | 1.966 | 0.6060 | 8 | 1.10 | OK | 0 |
| 202.34 | Acid Soluble Co, ICP, EPA 3050B/6010C (ppm) | 0515 | 4.086 | 0.3590 | 6.047 | 1.829 | 0.2030 | 3 | -1.07 | | 0 |
| 202.34 | Acid Soluble Co, ICP, EPA 3050B/6010C (ppm) | 0368 | 6.350 | 0.1000 | 6.047 | 1.829 | 0.2030 | 3 | 0.17 | | 0 |
| 202.34 | Acid Soluble Co, ICP, EPA 3050B/6010C (ppm) | 0501 | 7.705 | 0.1500 | 6.047 | 1.829 | 0.2030 | 3 | 0.91 | | 0 |
| 202.99 | Acid Soluble Co, Other (ppm) | 0255 | 4.847 | 0.7410 | 8.161 | 2.775 | 0.3080 | 4 | -1.01 | | 0 |
| 202.99 | Acid Soluble Co, Other (ppm) | 0476 | 7.297 | 0.0910 | 8.161 | 2.775 | 0.3080 | 4 | -0.26 | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 202.99 | Acid Soluble Co, Other (ppm) | 0009 | 9.100 | 0.0000 | 8.161 | 2.775 | 0.3080 | 4 | 0.29 | | 0 |
| 202.99 | Acid Soluble Co, Other (ppm) | 0405 | 11.40 | 0.4000 | 8.161 | 2.775 | 0.3080 | 4 | 0.99 | | 0 |
| 202.99 | Acid Soluble Co, Other (ppm) | 0520 | < 0.04 | | 8.161 | 2.775 | 0.3080 | 4 | | | 5 |
| 202.99 | Acid Soluble Co, Other (ppm) | 0481 | < 20 | | 8.161 | 2.775 | 0.3080 | 4 | | | 5 |
| 221.00 | Acid Soluble Cu, AA, inorganic 965.09 (%) | 0498 | 0.0010 | 0.0000 | 0.0015 | 0.0004 | 0.0005 | 4 | -1.08 | | 0 |
| 221.00 | Acid Soluble Cu, AA, inorganic 965.09 (%) | 0535 | 0.0013 | 0.0001 | 0.0015 | 0.0004 | 0.0005 | 4 | -0.51 | | 0 |
| 221.00 | Acid Soluble Cu, AA, inorganic 965.09 (%) | 0553 | 0.0017 | 0.0001 | 0.0015 | 0.0004 | 0.0005 | 4 | 0.40 | | 0 |
| 221.00 | Acid Soluble Cu, AA, inorganic 965.09 (%) | 0550 | 0.0020 | 0.0018 | 0.0015 | 0.0004 | 0.0005 | 4 | 1.19 | | 0 |
| 221.03 | Acid Soluble Cu, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0526 | < 0.0045 | | | | | 0 | | | 5 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0096 | 0.0002 | 0.0000 | 0.0011 | 0.0009 | 0.0001 | 4 | -0.83 | | 0 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0483 | 0.0008 | 0.0001 | 0.0011 | 0.0009 | 0.0001 | 4 | -0.29 | | 0 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0041 | 0.0010 | 0.0000 | 0.0011 | 0.0009 | 0.0001 | 4 | -0.05 | | 0 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0402 | 0.0023 | 0.0003 | 0.0011 | 0.0009 | 0.0001 | 4 | 1.17 | | 0 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0255 | 0.0000 | 0.0000 | 0.0011 | 0.0009 | 0.0001 | 4 | | | 4 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0552 | 0.0000 | 0.0000 | 0.0011 | 0.0009 | 0.0001 | 4 | | | 4 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0035 | < 0.0004 | | 0.0011 | 0.0009 | 0.0001 | 4 | | | 5 |
| 221.30 | Acid Soluble Cu, ICP, test portion inorganic 965.09 (%) | 0354 | < 0.01 | | 0.0011 | 0.0009 | 0.0001 | 4 | | | 5 |
| 221.32 | Acid Soluble Cu, ICP, test portion 2006.03A-C (%) | 0095 | 0.0007 | 0.0000 | | | | 2 | | | 0 |
| 221.32 | Acid Soluble Cu, ICP, test portion 2006.03A-C (%) | 0043 | 10.74 | 0.0100 | | | | 2 | | | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0106 | 0.0005 | 0.0003 | 0.0007 | 0.0001 | 0.0001 | 7 | -2.78 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0220 | 0.0007 | 0.0000 | 0.0007 | 0.0001 | 0.0001 | 7 | -0.21 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0527 | 0.0007 | 0.0000 | 0.0007 | 0.0001 | 0.0001 | 7 | -0.21 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0546 | 0.0007 | 0.0000 | 0.0007 | 0.0001 | 0.0001 | 7 | -0.21 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0494 | 0.0008 | 0.0003 | 0.0007 | 0.0001 | 0.0001 | 7 | 0.31 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0515 | 0.0008 | 0.0001 | 0.0007 | 0.0001 | 0.0001 | 7 | 0.31 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0037 | 0.0010 | 0.0000 | 0.0007 | 0.0001 | 0.0001 | 7 | 2.89 | OK | 0 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0117 | < 0.0005 | | 0.0007 | 0.0001 | 0.0001 | 7 | | | 5 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0009 | < 0.0025 | | 0.0007 | 0.0001 | 0.0001 | 7 | | | 5 |
| 221.33 | Acid Soluble Cu, ICP, 2017.02 (%) | 0555 | < 0.5 | | 0.0007 | 0.0001 | 0.0001 | 7 | | | 5 |
| 221.99 | Acid Soluble Cu, Other (%) | 0476 | 0.0004 | 0.0000 | 0.0009 | 0.0007 | 0.0000 | 5 | -0.65 | | 0 |
| 221.99 | Acid Soluble Cu, Other (%) | 0524 | 0.0005 | 0.0000 | 0.0009 | 0.0007 | 0.0000 | 5 | -0.52 | | 0 |
| 221.99 | Acid Soluble Cu, Other (%) | 0389 | 0.0006 | 0.0000 | 0.0009 | 0.0007 | 0.0000 | 5 | -0.39 | | 0 |
| 221.99 | Acid Soluble Cu, Other (%) | 0515 | 0.0010 | 0.0001 | 0.0009 | 0.0007 | 0.0000 | 5 | 0.08 | | 0 |
| 221.99 | Acid Soluble Cu, Other (%) | 0523 | 0.0020 | 0.0000 | 0.0009 | 0.0007 | 0.0000 | 5 | 1.48 | | 0 |
| 221.99 | Acid Soluble Cu, Other (%) | 0368 | 6.300 | 3.800 | 0.0009 | 0.0007 | 0.0000 | 5 | 8404.42 | | 2 |
| 221.99 | Acid Soluble Cu, Other (%) | 0009 | < 0.0008 | | 0.0009 | 0.0007 | 0.0000 | 5 | | | 5 |
| 221.99 | Acid Soluble Cu, Other (%) | 0481 | < 0.001 | | 0.0009 | 0.0007 | 0.0000 | 5 | | | 5 |
| 221.99 | Acid Soluble Cu, Other (%) | 0027 | < 0.003 | | 0.0009 | 0.0007 | 0.0000 | 5 | | | 5 |
| 221.99 | Acid Soluble Cu, Other (%) | 0405 | < 0.5 | | 0.0009 | 0.0007 | 0.0000 | 5 | | | 5 |
| 241.00 | Acid Soluble Fe, AA, inorganic 965.09 (%) | 0531 | 0.1943 | 0.0214 | 0.2401 | 0.0413 | 0.0145 | 3 | -1.11 | | 0 |
| 241.00 | Acid Soluble Fe, AA, inorganic 965.09 (%) | 0535 | 0.2515 | 0.0030 | 0.2401 | 0.0413 | 0.0145 | 3 | 0.28 | | 0 |
| 241.00 | Acid Soluble Fe, AA, inorganic 965.09 (%) | 0553 | 0.2745 | 0.0190 | 0.2401 | 0.0413 | 0.0145 | 3 | 0.83 | | 0 |
| 241.03 | Acid Soluble Fe, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0105 | 0.2165 | 0.0470 | | | | 1 | | | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0096 | 0.2400 | 0.0000 | 0.2621 | 0.0214 | 0.0074 | 8 | -0.94 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0035 | 0.2455 | 0.0190 | 0.2621 | 0.0214 | 0.0074 | 8 | -0.71 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0354 | 0.2500 | 0.0200 | 0.2621 | 0.0214 | 0.0074 | 8 | -0.52 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0402 | 0.2501 | 0.0022 | 0.2621 | 0.0214 | 0.0074 | 8 | -0.51 | OK | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0483 | 0.2670 | 0.0080 | 0.2621 | 0.0214 | 0.0074 | 8 | 0.21 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0472 | 0.2700 | 0.0000 | 0.2621 | 0.0214 | 0.0074 | 8 | 0.34 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0482 | 0.2800 | 0.0000 | 0.2621 | 0.0214 | 0.0074 | 8 | 0.77 | OK | 0 |
| 241.30 | Acid Soluble Fe, ICP, test portion inorganic 965.09 (%) | 0552 | 0.3550 | 0.0100 | 0.2621 | 0.0214 | 0.0074 | 8 | 3.97 | High | 0 |
| 241.32 | Acid Soluble Fe, ICP, test portion 2006.03A-C (%) | 0521 | 0.2192 | 0.0000 | | | | 2 | | | 0 |
| 241.32 | Acid Soluble Fe, ICP, test portion 2006.03A-C (%) | 0423 | 0.2490 | 0.0040 | | | | 2 | | | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0106 | 0.2300 | 0.0071 | 0.2654 | 0.0201 | 0.0041 | 6 | -1.57 | Low | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0546 | 0.2561 | 0.0008 | 0.2654 | 0.0201 | 0.0041 | 6 | -0.41 | OK | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0009 | 0.2650 | 0.0100 | 0.2654 | 0.0201 | 0.0041 | 6 | -0.02 | OK | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0527 | 0.2750 | 0.0004 | 0.2654 | 0.0201 | 0.0041 | 6 | 0.42 | OK | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0494 | 0.2772 | 0.0039 | 0.2654 | 0.0201 | 0.0041 | 6 | 0.52 | OK | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0515 | 0.2841 | 0.0022 | 0.2654 | 0.0201 | 0.0041 | 6 | 0.83 | OK | 0 |
| 241.33 | Acid Soluble Fe, ICP, 2017.02 (%) | 0136 | 0.2500 | 0.0600 | 0.2654 | 0.0201 | 0.0041 | 6 | -0.68 | OK | 1 |
| 241.99 | Acid Soluble Fe, Other (%) | 0524 | 0.2148 | 0.0047 | 0.2412 | 0.0236 | 0.0017 | 3 | -1.12 | | 0 |
| 241.99 | Acid Soluble Fe, Other (%) | 0515 | 0.2488 | 0.0004 | 0.2412 | 0.0236 | 0.0017 | 3 | 0.32 | | 0 |
| 241.99 | Acid Soluble Fe, Other (%) | 0389 | 0.2600 | 0.0000 | 0.2412 | 0.0236 | 0.0017 | 3 | 0.80 | | 0 |
| 241.99 | Acid Soluble Fe, Other (%) | 0027 | < 0.005 | | 0.2412 | 0.0236 | 0.0017 | 3 | | | 5 |
| 251.00 | Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | 9.221 | 1.192 | | | | 2 | | | 0 |
| 251.00 | Acid Soluble Pb, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 21.31 | 1.461 | | | | 2 | | | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0255 | 1.628 | 0.0450 | 2.577 | 0.9956 | 0.1789 | 10 | -0.89 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0096 | 1.700 | 0.2000 | 2.577 | 0.9956 | 0.1789 | 10 | -0.82 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0450 | 1.750 | 0.5000 | 2.577 | 0.9956 | 0.1789 | 10 | -0.77 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0444 | 1.910 | 0.0800 | 2.577 | 0.9956 | 0.1789 | 10 | -0.62 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0389 | 2.068 | 0.0310 | 2.577 | 0.9956 | 0.1789 | 10 | -0.48 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0394 | 2.650 | 0.4800 | 2.577 | 0.9956 | 0.1789 | 10 | 0.07 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0524 | 3.073 | 0.0925 | 2.577 | 0.9956 | 0.1789 | 10 | 0.46 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0501 | 3.430 | 0.0400 | 2.577 | 0.9956 | 0.1789 | 10 | 0.80 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0482 | 3.730 | 0.2800 | 2.577 | 0.9956 | 0.1789 | 10 | 1.08 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0523 | 3.830 | 0.0400 | 2.577 | 0.9956 | 0.1789 | 10 | 1.17 | NA | 0 |
| 251.30 | Acid Soluble Pb, ICP (ppm) | 0555 | < 0.5 | | 2.577 | 0.9956 | 0.1789 | 10 | | | 5 |
| 251.32 | Acid Soluble Pb, ICP, 2006.03 (ppm) | 0419 | 2.175 | 0.9500 | | | | 1 | | | 0 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0515 | 2.854 | 1.028 | 3.467 | 0.5794 | 0.5879 | 4 | -0.90 | | 0 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0037 | 3.340 | 0.4220 | 3.467 | 0.5794 | 0.5879 | 4 | -0.19 | | 0 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0527 | 3.423 | 0.0012 | 3.467 | 0.5794 | 0.5879 | 4 | -0.06 | | 0 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0220 | 4.250 | 0.9000 | 3.467 | 0.5794 | 0.5879 | 4 | 1.15 | | 0 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0009 | < 5 | | 3.467 | 0.5794 | 0.5879 | 4 | | | 5 |
| 251.33 | Acid Soluble Pb, ICP, 2017.02 (ppm) | 0117 | < 5 | | 3.467 | 0.5794 | 0.5879 | 4 | | | 5 |
| 251.34 | Acid Soluble Pb, ICP, EPA 3050B/6010C (ppm) | 0368 | < 0.5 | | | | | 0 | | | 5 |
| 251.99 | Acid Soluble Pb, Other (ppm) | 0481 | 2.100 | 0.0000 | 2.868 | 1.199 | 0.3305 | 4 | -0.64 | | 0 |
| 251.99 | Acid Soluble Pb, Other (ppm) | 0520 | 2.240 | 0.0600 | 2.868 | 1.199 | 0.3305 | 4 | -0.52 | | 0 |
| 251.99 | Acid Soluble Pb, Other (ppm) | 0476 | 2.481 | 0.1620 | 2.868 | 1.199 | 0.3305 | 4 | -0.32 | | 0 |
| 251.99 | Acid Soluble Pb, Other (ppm) | 0405 | 4.650 | 1.100 | 2.868 | 1.199 | 0.3305 | 4 | 1.49 | | 0 |
| 251.99 | Acid Soluble Pb, Other (ppm) | 0009 | < 10 | | 2.868 | 1.199 | 0.3305 | 4 | | | 5 |
| 261.00 | Acid Soluble Mn, AA, Mn2+ only (%) | 0553 | 0.0067 | 0.0009 | | | | 1 | | | 0 |
| 261.12 | Acid Soluble Mn, AA, inorganic 965.09 (%) | 0531 | 0.0029 | 0.0003 | | | | 2 | | | 0 |
| 261.12 | Acid Soluble Mn, AA, inorganic 965.09 (%) | 0535 | 0.0033 | 0.0001 | | | | 2 | | | 0 |
| 261.15 | Acid Soluble Mn, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0105 | 0.0039 | 0.0003 | | | | 1 | | | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 261.30 | Acid Soluble Mn, ICP, test portion 972.02a (%) | 0096 | 0.0034 | 0.0001 | | | | 2 | | | 0 |
| 261.30 | Acid Soluble Mn, ICP, test portion 972.02a (%) | 0035 | 0.0040 | 0.0002 | | | | 2 | | | 0 |
| 261.30 | Acid Soluble Mn, ICP, test portion 972.02a (%) | 0354 | < 0.01 | | | | | 2 | | | 5 |
| 261.32 | Acid Soluble Mn, ICP, test portion inorganic 965.09 (%) | 0552 | 0.1650 | 0.0900 | | | | 1 | | | 0 |
| 261.34 | Acid Soluble Mn, ICP, test portion 2006.03A-C (%) | 0423 | 0.0045 | 0.0010 | | | | 1 | | | 0 |
| 261.35 | Acid Soluble Mn, ICP, 2017.02 (%) | 0106 | 0.0018 | 0.0004 | 0.0034 | 0.0011 | 0.0002 | 4 | -1.41 | | 0 |
| 261.35 | Acid Soluble Mn, ICP, 2017.02 (%) | 0546 | 0.0034 | 0.0000 | 0.0034 | 0.0011 | 0.0002 | 4 | 0.00 | | 0 |
| 261.35 | Acid Soluble Mn, ICP, 2017.02 (%) | 0009 | 0.0041 | 0.0001 | 0.0034 | 0.0011 | 0.0002 | 4 | 0.57 | | 0 |
| 261.35 | Acid Soluble Mn, ICP, 2017.02 (%) | 0527 | 0.0044 | 0.0003 | 0.0034 | 0.0011 | 0.0002 | 4 | 0.83 | | 0 |
| 261.99 | Acid Soluble Mn, Other (%) | 0515 | 0.0022 | 0.0015 | 0.0032 | 0.0009 | 0.0006 | 3 | -1.15 | | 0 |
| 261.99 | Acid Soluble Mn, Other (%) | 0389 | 0.0037 | 0.0000 | 0.0032 | 0.0009 | 0.0006 | 3 | 0.58 | | 0 |
| 261.99 | Acid Soluble Mn, Other (%) | 0524 | 0.0037 | 0.0002 | 0.0032 | 0.0009 | 0.0006 | 3 | 0.58 | | 0 |
| 281.00 | Acid Soluble Hg, AA (ppm) | 0550 | 0.0023 | 0.0005 | | | | 1 | | | 0 |
| 281.00 | Acid Soluble Hg, AA (ppm) | 0117 | < 0.2 | | | | | 1 | | | 5 |
| 281.00 | Acid Soluble Hg, AA (ppm) | 0526 | < 60 | | | | | 1 | | | 5 |
| 281.30 | Acid Soluble Hg, ICP (ppm) | 0501 | 0.0325 | 0.0090 | | | | 1 | | | 0 |
| 281.30 | Acid Soluble Hg, ICP (ppm) | 0450 | 0.0000 | 0.0000 | | | | 1 | | | 4 |
| 281.30 | Acid Soluble Hg, ICP (ppm) | 0515 | 0.0000 | 0.0000 | | | | 1 | | | 4 |
| 281.30 | Acid Soluble Hg, ICP (ppm) | 0527 | < 0.0001 | | | | | 1 | | | 5 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0561 | 0.0025 | 0.0010 | 4.812 | 9.559 | 0.0254 | 4 | -0.43 | | 0 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0368 | 0.0148 | 0.0004 | 4.812 | 9.559 | 0.0254 | 4 | -0.43 | | 0 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0220 | 0.0800 | 0.0000 | 4.812 | 9.559 | 0.0254 | 4 | -0.42 | | 0 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0035 | 19.15 | 0.1000 | 4.812 | 9.559 | 0.0254 | 4 | 1.27 | | 0 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0520 | < 0.007 | | 4.812 | 9.559 | 0.0254 | 4 | | | 5 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0405 | < 0.01 | | 4.812 | 9.559 | 0.0254 | 4 | | | 5 |
| 281.99 | Acid Soluble Hg, Other (ppm) | 0481 | < 0.5 | | 4.812 | 9.559 | 0.0254 | 4 | | | 5 |
| 289.00 | Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 5.280 | 0.2800 | | | | 1 | | | 0 |
| 289.00 | Acid Soluble Mo, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | < 0.021 | | | | | 1 | | | 5 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0433 | 0.0240 | 0.0000 | 3.243 | 2.313 | 0.1608 | 7 | -1.26 | Low | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0096 | 2.450 | 0.3000 | 3.243 | 2.313 | 0.1608 | 7 | -0.31 | OK | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0524 | 2.810 | 0.3269 | 3.243 | 2.313 | 0.1608 | 7 | -0.17 | OK | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0035 | 2.860 | 0.2400 | 3.243 | 2.313 | 0.1608 | 7 | -0.15 | OK | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0389 | 3.243 | 0.1540 | 3.243 | 2.313 | 0.1608 | 7 | 0.00 | OK | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0255 | 4.668 | 0.0050 | 3.243 | 2.313 | 0.1608 | 7 | 0.56 | OK | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0561 | 6.650 | 0.1000 | 3.243 | 2.313 | 0.1608 | 7 | 1.33 | High | 0 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0027 | < 0.003 | | 3.243 | 2.313 | 0.1608 | 7 | | | 5 |
| 289.30 | Acid Soluble Mo, ICP (ppm) | 0555 | < 0.5 | | 3.243 | 2.313 | 0.1608 | 7 | | | 5 |
| 289.32 | Acid Soluble Mo, ICP, 2006.03 (ppm) | 0419 | 2.755 | 0.0100 | | | | 1 | | | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0106 | 0.0004 | 0.0000 | 3.679 | 0.9424 | 0.1353 | 7 | -3.53 | Low | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0220 | 2.900 | 0.6000 | 3.679 | 0.9424 | 0.1353 | 7 | -0.75 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0546 | 3.473 | 0.0236 | 3.679 | 0.9424 | 0.1353 | 7 | -0.20 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0423 | 4.120 | 0.0600 | 3.679 | 0.9424 | 0.1353 | 7 | 0.42 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0117 | 4.204 | 0.0760 | 3.679 | 0.9424 | 0.1353 | 7 | 0.50 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0527 | 4.383 | 0.0374 | 3.679 | 0.9424 | 0.1353 | 7 | 0.68 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0037 | 4.407 | 0.1500 | 3.679 | 0.9424 | 0.1353 | 7 | 0.70 | OK | 0 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0515 | 0.9862 | 1.293 | 3.679 | 0.9424 | 0.1353 | 7 | -2.58 | Low | 1 |
| 289.33 | Acid Soluble Mo, ICP, 2017.02 (ppm) | 0009 | < 4 | | 3.679 | 0.9424 | 0.1353 | 7 | | | 5 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 289.34 | Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm) | 0515 | 4.188 | 2.603 | | | | 2 | | | 0 |
| 289.34 | Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm) | 0501 | 4.590 | 0.0600 | | | | 2 | | | 0 |
| 289.34 | Acid Soluble Mo, ICP, EPA 3050B/6010C (ppm) | 0368 | < 0.1 | | | | | 2 | | | 5 |
| 289.99 | Acid Soluble Mo, Other (ppm) | 0476 | 3.752 | 0.1480 | 4.127 | 0.3254 | 0.1693 | 3 | -1.15 | | 0 |
| 289.99 | Acid Soluble Mo, Other (ppm) | 0009 | 4.300 | 0.2000 | 4.127 | 0.3254 | 0.1693 | 3 | 0.53 | | 0 |
| 289.99 | Acid Soluble Mo, Other (ppm) | 0405 | 4.330 | 0.1600 | 4.127 | 0.3254 | 0.1693 | 3 | 0.62 | | 0 |
| 289.99 | Acid Soluble Mo, Other (ppm) | 0520 | < 0.04 | | 4.127 | 0.3254 | 0.1693 | 3 | | | 5 |
| 289.99 | Acid Soluble Mo, Other (ppm) | 0481 | < 50 | | 4.127 | 0.3254 | 0.1693 | 3 | | | 5 |
| 291.00 | Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 11.09 | 0.2800 | | | | 2 | | | 0 |
| 291.00 | Acid Soluble Ni, AA, test portion 2006.03 modified w/dual acid (ppm) | 0498 | 14.55 | 0.5000 | | | | 2 | | | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0444 | 5.545 | 0.8100 | 9.032 | 2.060 | 0.6990 | 9 | -1.56 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0035 | 7.785 | 0.2700 | 9.032 | 2.060 | 0.6990 | 9 | -0.56 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0524 | 7.974 | 0.8212 | 9.032 | 2.060 | 0.6990 | 9 | -0.47 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0482 | 8.400 | 1.400 | 9.032 | 2.060 | 0.6990 | 9 | -0.28 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0096 | 8.650 | 0.1000 | 9.032 | 2.060 | 0.6990 | 9 | -0.17 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0394 | 9.725 | 0.2100 | 9.032 | 2.060 | 0.6990 | 9 | 0.31 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0450 | 10.00 | 2.000 | 9.032 | 2.060 | 0.6990 | 9 | 0.43 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0389 | 10.69 | 0.4800 | 9.032 | 2.060 | 0.6990 | 9 | 0.74 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0561 | 12.20 | 0.2000 | 9.032 | 2.060 | 0.6990 | 9 | 1.42 | NA | 0 |
| 291.30 | Acid Soluble Ni, ICP (ppm) | 0555 | < 0.5 | | 9.032 | 2.060 | 0.6990 | 9 | | | 5 |
| 291.32 | Acid Soluble Ni, ICP, 2006.03 (ppm) | 0419 | 10.20 | 0.1000 | | | | 1 | | | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0136 | 9.260 | 1.020 | 12.02 | 2.445 | 0.5651 | 7 | -1.02 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0515 | 9.574 | 1.012 | 12.02 | 2.445 | 0.5651 | 7 | -0.90 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0220 | 12.00 | 0.2000 | 12.02 | 2.445 | 0.5651 | 7 | -0.01 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0037 | 12.46 | 0.0530 | 12.02 | 2.445 | 0.5651 | 7 | 0.16 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0009 | 12.50 | 1.000 | 12.02 | 2.445 | 0.5651 | 7 | 0.18 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0527 | 12.66 | 0.2446 | 12.02 | 2.445 | 0.5651 | 7 | 0.24 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0494 | 15.73 | 0.4264 | 12.02 | 2.445 | 0.5651 | 7 | 1.37 | NA | 0 |
| 291.33 | Acid Soluble Ni, ICP, 2017.02 (ppm) | 0117 | 10.67 | 4.211 | 12.02 | 2.445 | 0.5651 | 7 | -0.50 | NA | 1 |
| 291.34 | Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm) | 0515 | 9.162 | 0.1360 | 11.15 | 2.007 | 0.7887 | 3 | -0.99 | | 0 |
| 291.34 | Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm) | 0368 | 11.10 | 2.000 | 11.15 | 2.007 | 0.7887 | 3 | -0.02 | | 0 |
| 291.34 | Acid Soluble Ni, ICP, EPA 3050B/6010C (ppm) | 0501 | 13.18 | 0.2300 | 11.15 | 2.007 | 0.7887 | 3 | 1.01 | | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0255 | 6.759 | 0.2250 | 9.922 | 3.070 | 0.2267 | 6 | -0.92 | NA | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0476 | 7.097 | 0.9050 | 9.922 | 3.070 | 0.2267 | 6 | -0.82 | NA | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0520 | 8.975 | 0.2300 | 9.922 | 3.070 | 0.2267 | 6 | -0.27 | NA | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0481 | 11.20 | 0.0000 | 9.922 | 3.070 | 0.2267 | 6 | 0.37 | NA | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0405 | 12.50 | 0.0000 | 9.922 | 3.070 | 0.2267 | 6 | 0.75 | NA | 0 |
| 291.99 | Acid Soluble Ni, Other (ppm) | 0009 | 13.00 | 0.0000 | 9.922 | 3.070 | 0.2267 | 6 | 0.89 | NA | 0 |
| 301.00 | Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm) | 0550 | 0.9767 | 0.1026 | | | | 1 | | | 0 |
| 301.00 | Acid Soluble Se, AA, test portion 2006.03 modified w/dual acid (ppm) | 0526 | < 0.23 | | | | | 1 | | | 5 |
| 301.30 | Acid Soluble Se, ICP (ppm) | 0524 | 18.77 | 1.300 | 29.41 | 14.57 | 1.373 | 3 | -0.73 | | 0 |
| 301.30 | Acid Soluble Se, ICP (ppm) | 0523 | 23.45 | 0.0400 | 29.41 | 14.57 | 1.373 | 3 | -0.41 | | 0 |
| 301.30 | Acid Soluble Se, ICP (ppm) | 0501 | 46.01 | 2.780 | 29.41 | 14.57 | 1.373 | 3 | 1.14 | | 0 |
| 301.30 | Acid Soluble Se, ICP (ppm) | 0555 | < 0.5 | | 29.41 | 14.57 | 1.373 | 3 | | | 5 |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0220 | 17.90 | 0.2000 | 27.28 | 8.914 | 0.9597 | 6 | -0.94 | NA | 0 |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0515 | 21.29 | 2.101 | 27.28 | 8.914 | 0.9597 | 6 | -0.60 | NA | 0 |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0117 | 26.16 | 0.5660 | 27.28 | 8.914 | 0.9597 | 6 | -0.11 | NA | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|--|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0037 | 28.66 | 1.185 | 27.28 | 8.914 | 0.9597 | 6 | 0.14 | NA | 0 |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0233 | 29.04 | 1.630 | 27.28 | 8.914 | 0.9597 | 6 | 0.17 | NA | 0 |
| 301.33 | Acid Soluble Se, ICP, 2017.02 (ppm) | 0527 | 42.92 | 0.0761 | 27.28 | 8.914 | 0.9597 | 6 | 1.56 | NA | 0 |
| 301.34 | Acid Soluble Se, ICP, EPA 3050B/6010C (ppm) | 0515 | 21.16 | 1.156 | | | | 2 | | | 0 |
| 301.34 | Acid Soluble Se, ICP, EPA 3050B/6010C (ppm) | 0368 | 76.30 | 28.80 | | | | 2 | | | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0520 | 4.035 | 0.7900 | 36.85 | 23.73 | 1.544 | 6 | -1.23 | NA | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0481 | 27.10 | 0.4000 | 36.85 | 23.73 | 1.544 | 6 | -0.37 | NA | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0405 | 28.50 | 1.000 | 36.85 | 23.73 | 1.544 | 6 | -0.31 | NA | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0009 | 48.00 | 2.000 | 36.85 | 23.73 | 1.544 | 6 | 0.42 | NA | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0476 | 52.69 | 0.1240 | 36.85 | 23.73 | 1.544 | 6 | 0.59 | NA | 0 |
| 301.99 | Acid Soluble Se, Other (ppm) | 0255 | 60.77 | 4.952 | 36.85 | 23.73 | 1.544 | 6 | 0.90 | NA | 0 |
| 311.32 | Sodium, ICP, 2006.03 test portion (%) | 0521 | 0.5368 | 0.0000 | | | | 1 | | | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0035 | 0.5000 | 0.0020 | 0.5220 | 0.0186 | 0.0091 | 6 | -1.05 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0423 | 0.5120 | 0.0120 | 0.5220 | 0.0186 | 0.0091 | 6 | -0.48 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0494 | 0.5161 | 0.0170 | 0.5220 | 0.0186 | 0.0091 | 6 | -0.28 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0527 | 0.5262 | 0.0200 | 0.5220 | 0.0186 | 0.0091 | 6 | 0.20 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0009 | 0.5300 | 0.0000 | 0.5220 | 0.0186 | 0.0091 | 6 | 0.38 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0546 | 0.5475 | 0.0035 | 0.5220 | 0.0186 | 0.0091 | 6 | 1.22 | OK | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0136 | 0.5150 | 0.1100 | 0.5220 | 0.0186 | 0.0091 | 6 | -0.33 | OK | 1 |
| 311.99 | Sodium, Other (%) | 0482 | 0.5450 | 0.0100 | 0.5500 | 0.0050 | 0.0067 | 3 | -1.00 | | 0 |
| 311.99 | Sodium, Other (%) | 0354 | 0.5500 | 0.0000 | 0.5500 | 0.0050 | 0.0067 | 3 | 0.00 | | 0 |
| 311.99 | Sodium, Other (%) | 0096 | 0.5550 | 0.0100 | 0.5500 | 0.0050 | 0.0067 | 3 | 1.00 | | 0 |
| 321.00 | Acid Soluble Zn, AA, inorganic 965.09 (%) | 0531 | 0.0175 | 0.0014 | 0.0209 | 0.0036 | 0.0019 | 4 | -0.96 | | 0 |
| 321.00 | Acid Soluble Zn, AA, inorganic 965.09 (%) | 0535 | 0.0189 | 0.0003 | 0.0209 | 0.0036 | 0.0019 | 4 | -0.58 | | 0 |
| 321.00 | Acid Soluble Zn, AA, inorganic 965.09 (%) | 0550 | 0.0219 | 0.0029 | 0.0209 | 0.0036 | 0.0019 | 4 | 0.26 | | 0 |
| 321.00 | Acid Soluble Zn, AA, inorganic 965.09 (%) | 0553 | 0.0255 | 0.0030 | 0.0209 | 0.0036 | 0.0019 | 4 | 1.29 | | 0 |
| 321.02 | Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C (%) | 0498 | 0.0200 | 0.0000 | | | | 1 | | | 0 |
| 321.03 | Acid Soluble Zn, AA, 965.09, test portion 2006.03A-C w/dual acid (%) | 0105 | 0.0171 | 0.0003 | | | | 1 | | | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0255 | 0.0060 | 0.0000 | 0.0190 | 0.0066 | 0.0012 | 10 | -1.95 | Low | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0444 | 0.0140 | 0.0000 | 0.0190 | 0.0066 | 0.0012 | 10 | -0.75 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0450 | 0.0153 | 0.0055 | 0.0190 | 0.0066 | 0.0012 | 10 | -0.56 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0035 | 0.0155 | 0.0010 | 0.0190 | 0.0066 | 0.0012 | 10 | -0.52 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0483 | 0.0187 | 0.0018 | 0.0190 | 0.0066 | 0.0012 | 10 | -0.04 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0324 | 0.0198 | 0.0020 | 0.0190 | 0.0066 | 0.0012 | 10 | 0.13 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0472 | 0.0200 | 0.0000 | 0.0190 | 0.0066 | 0.0012 | 10 | 0.16 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0096 | 0.0227 | 0.0007 | 0.0190 | 0.0066 | 0.0012 | 10 | 0.56 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0402 | 0.0258 | 0.0005 | 0.0190 | 0.0066 | 0.0012 | 10 | 1.02 | OK | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0482 | 0.0300 | 0.0000 | 0.0190 | 0.0066 | 0.0012 | 10 | 1.67 | High | 0 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0041 | 0.0220 | 0.0080 | 0.0190 | 0.0066 | 0.0012 | 10 | 0.46 | OK | 1 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0552 | 0.0000 | 0.0000 | 0.0190 | 0.0066 | 0.0012 | 10 | | | 4 |
| 321.30 | Acid Soluble Zn, ICP, test portion inorganic 965.09 (%) | 0354 | < 0.01 | | 0.0190 | 0.0066 | 0.0012 | 10 | | | 5 |
| 321.32 | Acid Soluble Zn, ICP, test portion 2006.03A-C (%) | 0423 | 0.0175 | 0.0010 | 0.0199 | 0.0027 | 0.0013 | 3 | -0.88 | | 0 |
| 321.32 | Acid Soluble Zn, ICP, test portion 2006.03A-C (%) | 0394 | 0.0194 | 0.0003 | 0.0199 | 0.0027 | 0.0013 | 3 | -0.20 | | 0 |
| 321.32 | Acid Soluble Zn, ICP, test portion 2006.03A-C (%) | 0095 | 0.0229 | 0.0027 | 0.0199 | 0.0027 | 0.0013 | 3 | 1.09 | | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0106 | 0.0132 | 0.0002 | 0.0171 | 0.0027 | 0.0006 | 11 | -1.46 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0136 | 0.0140 | 0.0020 | 0.0171 | 0.0027 | 0.0006 | 11 | -1.16 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0117 | 0.0160 | 0.0017 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.43 | OK | 0 |

| Method Code | Analyte Name and Method (Units) | Lab Code | Lab Data | | Method Values | | | # Tests | Magruder CS Z Score | Method IA Status | Flag |
|-------------|-----------------------------------|----------|----------|--------|---------------|--------|--------|---------|---------------------|------------------|------|
| | | | Value | Range | Rob Mean | Rob SD | R-bar | | | | |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0546 | 0.0162 | 0.0001 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.35 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0527 | 0.0169 | 0.0003 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.09 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0009 | 0.0170 | 0.0000 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.04 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0043 | 0.0170 | 0.0000 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.04 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0220 | 0.0179 | 0.0002 | 0.0171 | 0.0027 | 0.0006 | 11 | 0.30 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0037 | 0.0191 | 0.0007 | 0.0171 | 0.0027 | 0.0006 | 11 | 0.74 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0494 | 0.0199 | 0.0011 | 0.0171 | 0.0027 | 0.0006 | 11 | 1.04 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0233 | 0.0213 | 0.0003 | 0.0171 | 0.0027 | 0.0006 | 11 | 1.56 | OK | 0 |
| 321.33 | Acid Soluble Zn, ICP, 2017.02 (%) | 0515 | 0.0163 | 0.0042 | 0.0171 | 0.0027 | 0.0006 | 11 | -0.30 | OK | 1 |
| 321.99 | Acid Soluble Zn, Other (%) | 0027 | 0.0040 | 0.0000 | 0.0151 | 0.0046 | 0.0032 | 8 | -2.22 | Low | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0523 | 0.0115 | 0.0030 | 0.0151 | 0.0046 | 0.0032 | 8 | -0.72 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0501 | 0.0128 | 0.0200 | 0.0151 | 0.0046 | 0.0032 | 8 | -0.46 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0476 | 0.0148 | 0.0004 | 0.0151 | 0.0046 | 0.0032 | 8 | -0.06 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0515 | 0.0175 | 0.0011 | 0.0151 | 0.0046 | 0.0032 | 8 | 0.47 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0389 | 0.0175 | 0.0010 | 0.0151 | 0.0046 | 0.0032 | 8 | 0.48 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0481 | 0.0180 | 0.0000 | 0.0151 | 0.0046 | 0.0032 | 8 | 0.58 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0524 | 0.0205 | 0.0003 | 0.0151 | 0.0046 | 0.0032 | 8 | 1.07 | OK | 0 |
| 321.99 | Acid Soluble Zn, Other (%) | 0368 | 173.5 | 19.00 | 0.0151 | 0.0046 | 0.0032 | 8 | 34703.58 | High | 2 |
| 321.99 | Acid Soluble Zn, Other (%) | 0405 | < 1 | | 0.0151 | 0.0046 | 0.0032 | 8 | | | 5 |
| 325.00 | Water Soluble Zn, AA (%) | 0027 | < 0.005 | | | | | 0 | | | 5 |
| 325.30 | Water Soluble Zn, ICP (%) | 0555 | < 0.5 | | | | | 0 | | | 5 |

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, 3 = removed from stats, 4 = rejected due to 0s submitted and 5 = LOD. 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 grey and included for information only. IA Status describes where your result is relative to the Assigned Value ± IA. Red indicates Higher or Lower, Green indicates within the IA range. Method 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.