

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 125

Sample # 180512

Statistical Summary

Labs Reporting: 94

TSP + Zn

Issue Date : 06/30/2018

| Method Code | Analyte & Method Sample # 180512 | # 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) | Hornitz %RSD |
|-------------|--|----------------------|-----------------------------------|----------|--------|-------------------------------|-----------------------|-----------|---------------------------|--------------|--------------------|--------------------------|--------------|
| 001.99 | Ammoniacal Nitrogen, Other (%) | 2 | 2 | 0.0875 | 0.0035 | | | | | | | | |
| 010.11 | Total Nitrogen, Modified Comprehensive (%) | 1 | | 46.05 | | | | | | | | | |
| 010.60 | Total Nitrogen, Combustion (%) | 7 | 7 | 0.1336 | 0.0599 | 0.1235 | 0.4900 | 0.0420 | 0.0198 | 33.98% | 0.20 | 0.0194 | 5.48% |
| 010.99 | Total Nitrogen, Other (%) | 1 | | 0.1086 | | | | | | | | | |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinolinium .. | 6 | 6 | 45.70 | 0.5182 | 45.70 | | 0.5876 | 0.2999 | 1.29% | | 0.3000 | 2.25% |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric Molyb | 21 | 20 | 45.78 | 0.7586 | 45.72 | | 0.7199 | 0.2012 | 1.57% | | 0.2096 | 2.25% |
| 020.40 | Total Phosphorus as P2O5, Automated (%) | 3 | 3 | 45.56 | 0.1782 | 45.56 | | 0.1782 | 0.1286 | 0.39% | | 0.7333 | 2.25% |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 22 | 22 | 45.40 | 1.832 | 45.40 | | 1.842 | 0.4908 | 4.06% | | 0.6565 | 2.25% |
| 020.99 | Total Phosphorus as P2O5, Other (%) | 3 | 3 | 35.19 | 17.86 | 35.19 | | 17.86 | 12.89 | 50.77% | | 0.5399 | 2.34% |
| 030.20 | Citrate Insoluble Phosphorus as P2O5, Spectrophoto.. | 1 | | 0.1800 | | | | | | | | | |
| 030.40 | Citrate Insoluble Phosphorus as P2O5, Automated, t... | 1 | | 0.1650 | | | | | | | | | |
| 040.20 | Indirect Available Phosphorus as P2O5, Spectrophot... | 1 | | 44.89 | | | | | | | | | |
| 040.40 | Indirect Available Phosphorus as P2O5, Automated (4... | 1 | | 45.38 | | | | | | | | | |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimetric Q... | 7 | 7 | 45.11 | 0.8777 | 45.37 | 0.9875 | 0.2481 | 0.1172 | 0.55% | 0.59 | 0.1339 | 2.25% |
| 041.11 | Direct Available Phosphorus as P2O5, Gravimetric Q... | 4 | 4 | 45.43 | 0.2455 | 45.43 | 0.9886 | 0.2455 | 0.1534 | 0.54% | 0.58 | 0.3244 | 2.25% |
| 041.20 | Direct Available Phosphorus as P2O5, Spectrophotom | 4 | 4 | 45.50 | 0.4141 | 45.50 | 0.9901 | 0.4141 | 0.2588 | 0.91% | 0.97 | 0.2800 | 2.25% |
| 041.21 | Direct Available Phosphorus as P2O5, Spectrophotom | 4 | 4 | 44.18 | 1.557 | 44.18 | 0.9636 | 1.557 | 0.9734 | 3.53% | 3.77 | 0.9250 | 2.26% |
| 041.40 | Direct Available Phosphorus as P2O5, Automated (45' | 1 | | 45.85 | | | | | | | | | |
| 041.50 | Direct Available Phosphorus as P2O5, ICP (45%) | 4 | 4 | 45.65 | 0.9375 | 45.65 | 0.9930 | 0.9375 | 0.5859 | 2.05% | 2.20 | 0.4125 | 2.25% |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Citrate-... | 9 | 9 | 45.59 | 1.468 | 45.69 | 0.9938 | 1.142 | 0.4760 | 2.50% | 2.68 | 0.4440 | 2.25% |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-EDTA .. | 12 | 12 | 45.49 | 0.9347 | 45.51 | 0.9901 | 1.018 | 0.3673 | 2.24% | 2.40 | 0.1824 | 2.25% |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 13 | 13 | 45.20 | 1.065 | 45.21 | 0.9842 | 0.2835 | 0.0983 | 0.63% | 0.67 | 0.1077 | 2.25% |
| 042.99 | Water Soluble OrthoP as P2O5, Other (%) | 1 | | 0.1952 | | | | | | | | | |
| 048.10 | Water Soluble Phosphorus as P2O5, Gravimetric Quin | 1 | | 38.43 | | | | | | | | | |
| 048.20 | Water Soluble Phosphorus as P2O5, Spectrophotome | 1 | | 39.43 | | | | | | | | | |
| 048.40 | Water Soluble Phosphorus as P2O5, Automated (%) | 1 | | 38.88 | | | | | | | | | |
| 048.99 | Water Soluble Phosphorus as P2O5, Other (%) | 1 | | 39.20 | | | | | | | | | |
| 050.51 | Soluble Potassium as K2O, ICP (Citrate) (%) | 2 | 2 | 0.2275 | 0.2015 | | | | | | | | |
| 050.52 | Soluble Potassium as K2O, ICP (Citrate-EDTA) (%) | 3 | 3 | 0.3502 | 0.2118 | 0.3502 | 0.4100 | 0.2118 | 0.1528 | 60.47% | 1.20 | 0.0323 | 4.68% |
| 050.99 | Soluble Potassium as K2O, Other (%) | 9 | 9 | 0.2603 | 0.1450 | 0.2354 | 0.4100 | 0.0967 | 0.0403 | 41.08% | 0.55 | 0.0090 | 4.97% |
| 060.00 | Water (Free), Vacuum Oven (%) | 3 | 3 | 1.622 | 0.2830 | 1.622 | | 0.2830 | 0.2043 | 17.45% | | 0.0173 | 3.72% |

| Method Code | Analyte & Method Sample # 180512 | # 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) | Howitz %RSD |
|-------------|---|-------------------|--------------------------------|----------|--------|-------------------------------|--------------------|-----------|------------------------|--------------|-----------------|-----------------------|-------------|
| 060.30 | Water (Free), AFPC No. 2B (105°C oven for 2 hours,... | 1 | | 2.555 | | | | | | | | | |
| 060.99 | Water (Free), Other (%) | 3 | 3 | 1.515 | 0.2465 | 1.515 | | 0.2465 | 0.1779 | 16.27% | | 0.0601 | 3.76% |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 7 | 6 | 14.54 | 1.010 | 14.54 | 0.9270 | 1.145 | 0.5845 | 7.88% | 2.88 | 0.2517 | 2.67% |
| 101.03 | Acid Soluble Calcium, AA, 965.09, test portion 200... | 1 | | 13.35 | | | | | | | | | |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorganic ... (1... | 22 | 22 | 14.27 | 0.7252 | 14.28 | 0.9138 | 0.7199 | 0.1919 | 5.04% | 1.84 | 0.3749 | 2.68% |
| 101.32 | Acid Soluble Calcium, ICP, test portion 2006.03A-C... | 4 | 4 | 15.42 | 0.8291 | 15.42 | 0.9711 | 0.8291 | 0.5182 | 5.38% | 1.99 | 0.2425 | 2.65% |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 11 | 11 | 14.11 | 0.5386 | 14.11 | 0.9056 | 0.6107 | 0.2302 | 4.33% | 1.57 | 0.1521 | 2.69% |
| 101.70 | Acid Soluble Calcium, Titrimetric (13.5%) | 2 | 2 | 12.41 | 4.015 | | | | | | | | |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 11 | 10 | 14.34 | 1.430 | 14.07 | 0.9033 | 0.9129 | 0.3608 | 6.49% | 2.35 | 0.3222 | 2.69% |
| 121.00 | Acid Soluble Magnesium, AA, inorganic 965.09 (%) | 1 | | 0.5418 | | | | | | | | | |
| 121.03 | Acid Soluble Magnesium, AA, 965.09, test portion 2... | 1 | | 0.7078 | | | | | | | | | |
| 121.30 | Acid Soluble Magnesium, ICP, test portion inorgani... | 7 | 7 | 0.7759 | 0.0701 | 0.7740 | 0.2387 | 0.0750 | 0.0354 | 9.69% | 0.73 | 0.0305 | 4.16% |
| 121.32 | Acid Soluble Magnesium, ICP, test portion 2006.03A... | 1 | | 0.7950 | | | | | | | | | |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 6 | 6 | 0.7347 | 0.0631 | 0.7347 | 0.2367 | 0.0715 | 0.0365 | 9.74% | 0.70 | 0.0098 | 4.19% |
| 121.99 | Acid Soluble Magnesium, Other (%) | 4 | 4 | 0.5801 | 0.2956 | 0.5801 | 0.2290 | 0.2956 | 0.1848 | 50.97% | 3.01 | 0.0939 | 4.34% |
| 143.99 | Elemental Sulfur, Other (%) | 2 | 2 | 0.7763 | 0.0088 | | | | | | | | |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 5 | 5 | 0.7959 | 0.0667 | 0.7959 | 0.2398 | 0.0667 | 0.0373 | 8.38% | 0.65 | 0.0265 | 4.14% |
| 148.99 | Total Sulfur, Other (%) | 3 | 3 | 0.8635 | 0.2163 | 0.8635 | 0.2432 | 0.2163 | 0.1561 | 25.05% | 2.07 | 0.0217 | 4.09% |
| 149.04 | Sulfur - HNO3 soluble, ICP (%) | 3 | 3 | 0.7107 | 0.0207 | 0.7107 | | 0.0207 | 0.0150 | 2.92% | | 0.0096 | 4.21% |
| 151.00 | Acid Soluble Arsenic , AA, test portion 2006.03 m... (p | 2 | 2 | 22.03 | 24.49 | | | | | | | | |
| 151.30 | Acid Soluble Arsenic , ICP (ppm) | 4 | 4 | 17.12 | 5.131 | 17.12 | | 5.131 | 3.207 | 29.96% | | 2.183 | 10.43% |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 5 | 5 | 15.31 | 1.618 | 15.31 | | 1.618 | 0.9044 | 10.56% | | 0.5771 | 10.61% |
| 151.34 | Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm) | 2 | 2 | 16.93 | 3.497 | | | | | | | | |
| 151.99 | Acid Soluble Arsenic , Other (ppm) | 3 | 3 | 18.65 | 4.853 | 18.65 | | 4.853 | 3.502 | 26.03% | | 0.4533 | 10.30% |
| 165.30 | Acid Soluble Boron , ICP, test portion in 982.01 (%) | 3 | 3 | 0.0046 | 0.0047 | 0.0046 | 0.0037 | 0.0047 | 0.0034 | 103.74% | 3.00 | 0.0004 | 9.00% |
| 165.99 | Acid Soluble Boron , Other (%) | 7 | 5 | 0.0077 | 0.0045 | 0.0077 | 0.0042 | 0.0045 | 0.0025 | 58.20% | 2.51 | 0.0004 | 8.32% |
| 181.00 | Acid Soluble Cadmium , AA, test portion 2006.03 m... | 2 | 2 | 103.1 | 5.579 | | | | | | | | |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 10 | 9 | 93.75 | 27.07 | 95.54 | | 26.45 | 11.02 | 27.69% | | 1.212 | 8.05% |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 6 | 6 | 113.5 | 6.109 | 114.4 | | 4.619 | 2.357 | 4.04% | | 3.907 | 7.84% |
| 181.34 | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppn | 2 | 2 | 105.2 | 16.72 | | | | | | | | |
| 181.99 | Acid Soluble Cadmium , Other (ppm) | 3 | 3 | 123.5 | 41.81 | 123.5 | | 41.81 | 30.18 | 33.86% | | 0.4067 | 7.75% |
| 191.00 | Acid Soluble Chromium , AA, test portion 2006.03 ... (| 1 | | 611.6 | | | | | | | | | |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 7 | 7 | 370.3 | 116.7 | 380.5 | | 108.0 | 51.02 | 28.38% | | 19.27 | 6.54% |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 5 | 5 | 465.8 | 17.28 | 465.8 | | 17.28 | 9.657 | 3.71% | | 16.09 | 6.35% |
| 191.34 | Acid Soluble Chromium , ICP, EPA 3050B/6010C (ppi | 2 | 2 | 478.9 | 118.0 | | | | | | | | |
| 191.99 | Acid Soluble Chromium , Other (ppm) | 3 | 3 | 460.3 | 66.56 | 460.3 | | 66.56 | 48.04 | 14.46% | | 6.633 | 6.36% |
| 202.30 | Acid Soluble Cobalt , ICP (ppm) | 3 | 3 | 3.111 | 0.6715 | 3.111 | 1.9333 | 0.6715 | 0.4846 | 21.59% | 0.81 | 0.0253 | 13.48% |
| 202.32 | Acid Soluble Cobalt , ICP, 2006.03 (ppm) | 1 | | 3.340 | | | | | | | | | |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 6 | 5 | 3.230 | 1.289 | 3.230 | 1.9690 | 1.289 | 0.7207 | 39.91% | 1.53 | 0.2150 | 13.41% |
| 202.34 | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm) | 3 | 3 | 3.344 | 1.173 | 3.344 | 2.0032 | 1.173 | 0.8465 | 35.08% | 1.36 | 0.5803 | 13.34% |
| 202.99 | Acid Soluble Cobalt , Other (ppm) | 3 | 3 | 2.941 | 0.1157 | 2.941 | 1.8823 | 0.1157 | 0.0835 | 3.93% | 0.14 | 0.1023 | 13.60% |
| 221.00 | Acid Soluble Copper , AA, inorganic 965.09 (%) | 3 | 3 | 0.0074 | 0.0042 | 0.0074 | 0.0057 | 0.0042 | 0.0030 | 56.51% | 1.69 | 0.0023 | 8.37% |

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|-------------|---|-------------------|--------------------------------|----------|--------|-------------------------------|--------------------|-----------|------------------------|--------------|-----------------|-----------------------|-------------|
| 221.03 | Acid Soluble Copper , AA, 965.09, test portion 20... | 2 | 2 | 0.0049 | 0.0001 | | | | | | | | |
| 221.30 | Acid Soluble Copper , ICP, test portion inorganic... | 11 | 10 | 0.0056 | 0.0024 | 0.0053 | 0.0055 | 0.0021 | 0.0008 | 39.48% | 0.89 | 0.0003 | 8.79% |
| 221.32 | Acid Soluble Copper , ICP, test portion 2006.03A-... | 3 | 3 | 0.0088 | 0.0071 | 0.0088 | 0.0059 | 0.0071 | 0.0051 | 81.09% | 2.83 | 0.0001 | 8.15% |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 8 | 7 | 0.0050 | 0.0004 | 0.0050 | 0.0055 | 0.0002 | 0.0001 | 3.77% | 0.08 | 0.0002 | 8.87% |
| 221.99 | Acid Soluble Copper , Other (%) | 8 | 7 | 0.0095 | 0.0162 | 0.0041 | 0.0054 | 0.0030 | 0.0014 | 73.42% | 1.31 | 0.0002 | 9.13% |
| 241.00 | Acid Soluble Iron , AA, inorganic 965.09 (%) | 2 | 2 | 0.6728 | 0.1241 | | | | | | | | |
| 241.03 | Acid Soluble Iron , AA, 965.09, test portion 2006.... | 1 | | 0.7223 | | | | | | | | | |
| 241.30 | Acid Soluble Iron , ICP, test portion inorganic 96... | 9 | 8 | 0.7753 | 0.0303 | 0.7753 | 0.0825 | 0.0344 | 0.0152 | 4.43% | 0.97 | 0.0292 | 4.16% |
| 241.32 | Acid Soluble Iron , ICP, test portion 2006.03A-C (%) | 2 | 2 | 0.7970 | 0.0134 | | | | | | | | |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 6 | 6 | 0.7078 | 0.0518 | 0.7078 | 0.0758 | 0.0587 | 0.0300 | 8.30% | 1.81 | 0.0236 | 4.21% |
| 241.99 | Acid Soluble Iron , Other (%) | 3 | 3 | 0.5757 | 0.3366 | 0.5757 | 0.0626 | 0.3366 | 0.2429 | 58.46% | 12.53 | 0.0344 | 4.35% |
| 251.00 | Acid Soluble Lead , AA, test portion 2006.03 modi... | 2 | 2 | 13.10 | 16.50 | | | | | | | | |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 8 | 7 | 5.289 | 1.621 | 5.109 | | 1.398 | 0.6605 | 27.36% | | 0.8261 | 12.51% |
| 251.33 | Acid Soluble Lead , ICP, 2017.02 (ppm) | 4 | 4 | 5.361 | 0.8534 | 5.361 | | 0.8534 | 0.5334 | 15.92% | | 0.1885 | 12.42% |
| 251.34 | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm) | 2 | 1 | 1.728 | | | | | | | | | |
| 251.99 | Acid Soluble Lead , Other (ppm) | 3 | 3 | 6.262 | 3.328 | 6.262 | | 3.328 | 2.401 | 53.14% | | 0.2700 | 12.14% |
| 261.12 | Acid Soluble Manganese , AA, inorganic 965.09 (%) | 1 | | 0.0139 | | | | | | | | | |
| 261.15 | Acid Soluble Manganese , AA, 965.09, test portion... | 1 | | 0.0133 | | | | | | | | | |
| 261.30 | Acid Soluble Manganese , ICP, test portion 972.02a (| 4 | 4 | 0.0128 | 0.0032 | 0.0128 | 0.0063 | 0.0032 | 0.0020 | 24.99% | 1.18 | 0.0003 | 7.71% |
| 261.31 | Acid Soluble Manganese , ICP, test portion 972.02b (| 1 | | 0.0200 | | | | | | | | | |
| 261.32 | Acid Soluble Manganese , ICP, test portion inorga... | 3 | 3 | 0.0454 | 0.0648 | 0.0454 | 0.0095 | 0.0648 | 0.0467 | 142.68% | 15.82 | 0.0142 | 6.37% |
| 261.34 | Acid Soluble Manganese , ICP, test portion 2006.0... | 2 | 2 | 0.0161 | 0.0020 | | | | | | | | |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 5 | 4 | 37.87 | 75.72 | 37.87 | 1.0000 | 75.72 | 47.32 | 199.92% | 176.42 | 0.0771 | 2.31% |
| 261.99 | Acid Soluble Manganese , Other (%) | 3 | 3 | 0.0108 | 0.0068 | 0.0108 | 0.0061 | 0.0068 | 0.0049 | 62.86% | 2.60 | 0.0005 | 7.91% |
| 281.30 | Acid Soluble Mercury , ICP (ppm) | 3 | 2 | 3.359 | 4.725 | 3.359 | | 4.725 | 4.176 | 140.64% | | 3.201 | 13.33% |
| 281.99 | Acid Soluble Mercury , Other (ppm) | 2 | 2 | 2.505 | 3.528 | | | | | | | | |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 7 | 7 | 15.23 | 6.629 | 16.08 | 5.8232 | 5.408 | 2.555 | 33.64% | 2.16 | 1.154 | 10.53% |
| 289.32 | Acid Soluble Molybdenum , ICP, 2006.03 (ppm) | 1 | | 15.00 | | | | | | | | | |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 9 | 9 | 17.32 | 2.396 | 17.35 | 6.2039 | 2.344 | 0.9766 | 13.51% | 0.88 | 0.6248 | 10.41% |
| 289.34 | Acid Soluble Molybdenum , ICP, EPA 3050B/6010C (i | 3 | 3 | 18.10 | 5.284 | 18.10 | 6.4299 | 5.284 | 3.814 | 29.20% | 1.91 | 1.782 | 10.35% |
| 289.99 | Acid Soluble Molybdenum , Other (ppm) | 3 | 3 | 10.13 | 8.769 | 10.13 | 4.0380 | 8.769 | 6.328 | 86.59% | 5.06 | 0.0800 | 11.29% |
| 291.00 | Acid Soluble Nickel , AA, test portion 2006.03 mo... | 2 | 2 | 141.2 | 10.68 | | | | | | | | |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 8 | 8 | 123.0 | 26.93 | 123.9 | | 28.40 | 12.55 | 22.92% | | 4.903 | 7.75% |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 6 | 6 | 149.0 | 5.220 | 149.0 | | 5.920 | 3.021 | 3.97% | | 5.668 | 7.53% |
| 291.34 | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm) | 3 | 3 | 161.2 | 24.88 | 161.2 | | 24.88 | 17.96 | 15.43% | | 30.89 | 7.44% |
| 291.99 | Acid Soluble Nickel , Other (ppm) | 4 | 4 | 142.7 | 29.67 | 142.7 | | 29.67 | 18.54 | 20.80% | | 1.127 | 7.58% |
| 301.00 | Acid Soluble Selenium , AA, test portion 2006.03 ... | 2 | 2 | 0.8300 | 0.0707 | | | | | | | | |
| 301.30 | Acid Soluble Selenium , ICP (ppm) | 2 | 2 | 0.7100 | 0.3394 | | | | | | | | |
| 301.33 | Acid Soluble Selenium , ICP, 2017.02 (ppm) | 2 | 1 | 3.342 | | | | | | | | | |
| 301.34 | Acid Soluble Selenium , ICP, EPA 3050B/6010C (ppr | 2 | 0 | 0.0000 | | | | | | | | | |
| 301.99 | Acid Soluble Selenium , Other (ppm) | 3 | 3 | 4.631 | 4.741 | 4.631 | | 4.741 | 3.422 | 102.37% | | 0.1803 | 12.70% |
| 311.32 | Sodium, ICP, 2006.03 test portion (%) | 1 | | 0.0925 | | | | | | | | | |

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|-------------|--|-------------------|--------------------------------|----------|--------|-------------------------------|--------------------|-----------|------------------------|--------------|-----------------|-----------------------|-------------|
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 3 | 3 | 0.1076 | 0.0079 | 0.1076 | 0.0158 | 0.0079 | 0.0057 | 7.37% | 1.17 | 0.0088 | 5.59% |
| 311.99 | Sodium, Other (%) | 3 | 3 | 0.1133 | 0.0189 | 0.1133 | 0.0163 | 0.0189 | 0.0137 | 16.70% | 2.70 | 0.0133 | 5.55% |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 11 | 11 | 0.4716 | 0.0188 | 0.4716 | 0.0522 | 0.0213 | 0.0080 | 4.52% | 0.95 | 0.0125 | 4.48% |
| 321.03 | Acid Soluble Zinc , AA, 965.09, test portion 2006... | 2 | 2 | 0.5041 | 0.0437 | | | | | | | | |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorganic 9... | 24 | 23 | 0.4780 | 0.0471 | 0.4788 | 0.0529 | 0.0371 | 0.0097 | 7.76% | 1.64 | 0.0137 | 4.47% |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.03A-C ... | 5 | 5 | 0.5205 | 0.0539 | 0.5205 | 0.0571 | 0.0539 | 0.0301 | 10.35% | 2.20 | 0.0031 | 4.41% |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 13 | 12 | 0.4653 | 0.0163 | 0.4676 | 0.0518 | 0.0122 | 0.0044 | 2.61% | 0.55 | 0.0082 | 4.48% |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 9 | 9 | 0.4657 | 0.1692 | 0.4789 | 0.0529 | 0.1561 | 0.0650 | 32.59% | 6.88 | 0.0218 | 4.47% |
| 325.00 | Water Soluble Zinc , AA (%) | 4 | 4 | 0.3881 | 0.2620 | 0.3881 | | 0.2620 | 0.1637 | 67.50% | | 0.0263 | 4.61% |
| 325.30 | Water Soluble Zinc , ICP (%) | 2 | 2 | 0.3300 | 0.0636 | | | | | | | | |

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 # 180512

Method Precision Report

TSP + Zn

Issue Date : 06/30/2018

| Method Code | Analyte & Method | # Tests Submitted | # Tests Used in Precision Calcs | Mean | SD | Between Labs sL | Within Labs sr | Reproducibility SR | Between Labs %RSD | Within Labs %rsd | Reproducibility %RSD | sR/sr |
|-------------|---|-------------------|---------------------------------|--------|--------|-----------------|----------------|--------------------|-------------------|------------------|----------------------|-------|
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric MolybdovanadoP (%) | 21 | 19 | 45.71 | 0.7111 | 0.7012 | 0.1669 | 0.7208 | 1.53% | 0.37% | 1.58% | 4.318 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 22 | 22 | 45.40 | 1.832 | 1.778 | 0.6231 | 1.884 | 3.92% | 1.37% | 4.15% | 3.024 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Citrate-EDTA Ext. (45%) | 9 | 9 | 45.59 | 1.468 | 1.444 | 0.3779 | 1.492 | 3.17% | 0.83% | 3.27% | 3.949 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-EDTA Ext. (45%) | 12 | 12 | 45.49 | 0.9347 | 0.9268 | 0.1715 | 0.9426 | 2.04% | 0.38% | 2.07% | 5.497 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 13 | 11 | 45.21 | 0.1971 | 0.1888 | 0.0803 | 0.2051 | 0.42% | 0.18% | 0.45% | 2.555 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 9 | 8 | 0.2173 | 0.0702 | 0.0700 | 0.0085 | 0.0705 | 32.20% | 3.93% | 32.44% | 8.255 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorganic 965.09 (13.5%) | 22 | 21 | 14.27 | 0.7430 | 0.7018 | 0.3453 | 0.7821 | 4.92% | 2.42% | 5.48% | 2.265 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 11 | 11 | 14.11 | 0.5386 | 0.5288 | 0.1442 | 0.5481 | 3.75% | 1.02% | 3.88% | 3.800 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 11 | 9 | 13.95 | 0.7656 | 0.7332 | 0.3115 | 0.7966 | 5.26% | 2.23% | 5.71% | 2.557 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 10 | 9 | 93.75 | 27.07 | 27.06 | 1.137 | 27.09 | 28.87% | 1.21% | 28.89% | 23.81 |
| 221.30 | Acid Soluble Copper , ICP, test portion inorganic 965.09 (%) | 11 | 10 | 0.0056 | 0.0024 | 0.0024 | 0.0003 | 0.0025 | 43.15% | 6.00% | 43.57% | 7.255 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorganic 965.09 (%) | 9 | 8 | 0.7753 | 0.0303 | 0.0239 | 0.0264 | 0.0356 | 3.08% | 3.40% | 4.59% | 1.349 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 9 | 9 | 17.32 | 2.396 | 2.365 | 0.5473 | 2.427 | 13.65% | 3.16% | 14.01% | 4.435 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 11 | 11 | 0.4716 | 0.0188 | 0.0174 | 0.0102 | 0.0201 | 3.68% | 2.17% | 4.27% | 1.968 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorganic 965.09 (0.62%) | 24 | 21 | 0.4827 | 0.0418 | 0.0411 | 0.0113 | 0.0426 | 8.51% | 2.35% | 8.83% | 3.758 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 13 | 11 | 0.4691 | 0.0100 | 0.0081 | 0.0084 | 0.0116 | 1.72% | 1.78% | 2.48% | 1.390 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 9 | 8 | 0.4653 | 0.1809 | 0.1806 | 0.0144 | 0.1812 | 38.82% | 3.09% | 38.95% | 12.59 |

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

magruder fertilizer

check sample program



STRIVING FOR EXCELLENCE IN ANALYSIS

Method Proficiency For All Labs (Lab Values)

Methods: 125

Sample # 180512

Lab Values

Labs Reporting: 94

TSP + Zn

Issue Date : 06/30/2018

| 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 Nitrogen, Other (%) | 0096 | 0.0850 | 0.0500 | | | | 2 | | | 0 |
| 001.99 | Ammoniacal Nitrogen, Other (%) | 0524 | 0.0900 | 0.0400 | | | | 2 | | | 0 |
| 010.11 | Total Nitrogen, Modified Comprehensive (%) | 0536 | 46.05 | 0.1000 | | | | 1 | | | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0354 | 0.0860 | 0.0100 | 0.1235 | 0.0420 | 0.0194 | 7 | -0.81 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0521 | 0.0945 | 0.0000 | 0.1235 | 0.0420 | 0.0194 | 7 | -0.62 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0325 | 0.1000 | 0.0000 | 0.1235 | 0.0420 | 0.0194 | 7 | -0.51 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0389 | 0.1125 | 0.0050 | 0.1235 | 0.0420 | 0.0194 | 7 | -0.24 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0292 | 0.1250 | 0.0100 | 0.1235 | 0.0420 | 0.0194 | 7 | 0.03 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0482 | 0.1600 | 0.0400 | 0.1235 | 0.0420 | 0.0194 | 7 | 0.79 | OK | 0 |
| 010.60 | Total Nitrogen, Combustion (%) | 0472 | 0.2575 | 0.0710 | 0.1235 | 0.0420 | 0.0194 | 7 | 2.89 | OK | 0 |
| 010.99 | Total Nitrogen, Other (%) | 0524 | 0.1086 | 0.0015 | | | | 1 | | | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0157 | 45.00 | 0.2000 | 45.70 | 0.5876 | 0.3000 | 6 | -1.06 | NA | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0444 | 45.39 | 0.5200 | 45.70 | 0.5876 | 0.3000 | 6 | -0.47 | NA | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0105 | 45.67 | 0.1500 | 45.70 | 0.5876 | 0.3000 | 6 | -0.05 | NA | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0049 | 45.74 | 0.0800 | 45.70 | 0.5876 | 0.3000 | 6 | 0.06 | NA | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0493 | 45.85 | 0.1000 | 45.70 | 0.5876 | 0.3000 | 6 | 0.23 | NA | 0 |
| 020.10 | Total Phosphorus as P2O5, Gravimetric Quinoli... (%) | 0114 | 46.56 | 0.7500 | 45.70 | 0.5876 | 0.3000 | 6 | 1.30 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0309 | 44.84 | 0.0800 | 45.72 | 0.7199 | 0.2096 | 20 | -1.22 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0169 | 44.91 | 0.0800 | 45.72 | 0.7199 | 0.2096 | 20 | -1.12 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0405 | 45.07 | 0.2700 | 45.72 | 0.7199 | 0.2096 | 20 | -0.91 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0544 | 45.28 | 0.0400 | 45.72 | 0.7199 | 0.2096 | 20 | -0.61 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0419 | 45.32 | 0.1400 | 45.72 | 0.7199 | 0.2096 | 20 | -0.55 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0522 | 45.32 | 0.0200 | 45.72 | 0.7199 | 0.2096 | 20 | -0.55 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0371 | 45.35 | 0.1000 | 45.72 | 0.7199 | 0.2096 | 20 | -0.51 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0547 | 45.35 | 0.1000 | 45.72 | 0.7199 | 0.2096 | 20 | -0.51 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0027 | 45.38 | 0.6000 | 45.72 | 0.7199 | 0.2096 | 20 | -0.47 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0534 | 45.48 | 0.0600 | 45.72 | 0.7199 | 0.2096 | 20 | -0.33 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0394 | 45.54 | 0.1420 | 45.72 | 0.7199 | 0.2096 | 20 | -0.25 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0231 | 45.67 | 0.0600 | 45.72 | 0.7199 | 0.2096 | 20 | -0.06 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0541 | 45.69 | 0.2600 | 45.72 | 0.7199 | 0.2096 | 20 | -0.04 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0510 | 45.76 | 0.0404 | 45.72 | 0.7199 | 0.2096 | 20 | 0.06 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0292 | 46.06 | 0.0100 | 45.72 | 0.7199 | 0.2096 | 20 | 0.47 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0356 | 46.27 | 0.1500 | 45.72 | 0.7199 | 0.2096 | 20 | 0.76 | 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 | | | | |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0416 | 46.68 | 0.1300 | 45.72 | 0.7199 | 0.2096 | 20 | 1.33 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0324 | 47.10 | 1.000 | 45.72 | 0.7199 | 0.2096 | 20 | 1.92 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0476 | 47.20 | 0.3495 | 45.72 | 0.7199 | 0.2096 | 20 | 2.07 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0516 | 47.37 | 0.5600 | 45.72 | 0.7199 | 0.2096 | 20 | 2.30 | NA | 0 |
| 020.20 | Total Phosphorus as P2O5, Spectrophotometric ... (%) | 0550 | 46.26 | 2.990 | 45.72 | 0.7199 | 0.2096 | 20 | 0.75 | NA | 1 |
| 020.40 | Total Phosphorus as P2O5, Automated (%) | 0105 | 45.40 | 0.0500 | 45.56 | 0.1782 | 0.7333 | 3 | -0.94 | | 0 |
| 020.40 | Total Phosphorus as P2O5, Automated (%) | 0096 | 45.55 | 0.2500 | 45.56 | 0.1782 | 0.7333 | 3 | -0.10 | | 0 |
| 020.40 | Total Phosphorus as P2O5, Automated (%) | 0042 | 45.75 | 1.900 | 45.56 | 0.1782 | 0.7333 | 3 | 1.05 | | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0389 | 42.05 | 0.3000 | 45.40 | 1.842 | 0.6565 | 22 | -1.82 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0234 | 42.11 | 0.9700 | 45.40 | 1.842 | 0.6565 | 22 | -1.79 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0307 | 42.83 | 1.591 | 45.40 | 1.842 | 0.6565 | 22 | -1.39 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0552 | 43.90 | 0.6600 | 45.40 | 1.842 | 0.6565 | 22 | -0.81 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0472 | 44.01 | 0.6200 | 45.40 | 1.842 | 0.6565 | 22 | -0.75 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0422 | 44.32 | 0.6400 | 45.40 | 1.842 | 0.6565 | 22 | -0.58 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0521 | 44.67 | 0.0000 | 45.40 | 1.842 | 0.6565 | 22 | -0.40 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0255 | 44.76 | 0.5260 | 45.40 | 1.842 | 0.6565 | 22 | -0.35 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0444 | 44.98 | 0.3900 | 45.40 | 1.842 | 0.6565 | 22 | -0.23 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0423 | 45.14 | 0.2200 | 45.40 | 1.842 | 0.6565 | 22 | -0.14 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0523 | 45.35 | 0.1000 | 45.40 | 1.842 | 0.6565 | 22 | -0.03 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0527 | 45.56 | 0.2600 | 45.40 | 1.842 | 0.6565 | 22 | 0.09 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0433 | 45.74 | 0.3900 | 45.40 | 1.842 | 0.6565 | 22 | 0.18 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0402 | 45.86 | 1.690 | 45.40 | 1.842 | 0.6565 | 22 | 0.25 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0542 | 45.96 | 0.0500 | 45.40 | 1.842 | 0.6565 | 22 | 0.30 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0546 | 45.97 | 1.030 | 45.40 | 1.842 | 0.6565 | 22 | 0.31 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0291 | 46.69 | 0.0200 | 45.40 | 1.842 | 0.6565 | 22 | 0.70 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0482 | 46.75 | 1.700 | 45.40 | 1.842 | 0.6565 | 22 | 0.73 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0524 | 47.32 | 1.683 | 45.40 | 1.842 | 0.6565 | 22 | 1.05 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0483 | 47.66 | 1.380 | 45.40 | 1.842 | 0.6565 | 22 | 1.23 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0368 | 47.86 | 0.0225 | 45.40 | 1.842 | 0.6565 | 22 | 1.34 | NA | 0 |
| 020.50 | Total Phosphorus as P2O5, ICP (%) | 0451 | 49.39 | 0.2000 | 45.40 | 1.842 | 0.6565 | 22 | 2.17 | NA | 0 |
| 020.99 | Total Phosphorus as P2O5, Other (%) | 0515 | 14.56 | 1.540 | 35.19 | 17.86 | 0.5399 | 3 | -1.15 | | 0 |
| 020.99 | Total Phosphorus as P2O5, Other (%) | 0513 | 45.37 | 0.0200 | 35.19 | 17.86 | 0.5399 | 3 | 0.57 | | 0 |
| 020.99 | Total Phosphorus as P2O5, Other (%) | 0520 | 45.64 | 0.0600 | 35.19 | 17.86 | 0.5399 | 3 | 0.58 | | 0 |
| 030.20 | Citrate Insoluble Phosphorus as P2O5, Spectro... (%) | 0405 | 0.1800 | 0.0000 | | | | 1 | | | 0 |
| 030.40 | Citrate Insoluble Phosphorus as P2O5, Automat... (%) | 0096 | 0.1650 | 0.0500 | | | | 1 | | | 0 |
| 040.20 | Indirect Available Phosphorus as P2O5, Spectr... (45%) | 0405 | 44.89 | 0.2700 | | | | 1 | | | 0 |
| 040.40 | Indirect Available Phosphorus as P2O5, Automa... (45%) | 0096 | 45.38 | 0.3000 | | | | 1 | | | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0041 | 43.15 | 0.0100 | 45.37 | 0.2481 | 0.1339 | 7 | -8.12 | Low | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0102 | 45.20 | 0.0000 | 45.37 | 0.2481 | 0.1339 | 7 | -0.63 | OK | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0177 | 45.38 | 0.2446 | 45.37 | 0.2481 | 0.1339 | 7 | 0.02 | OK | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0040 | 45.40 | 0.0000 | 45.37 | 0.2481 | 0.1339 | 7 | 0.10 | OK | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0494 | 45.41 | 0.4900 | 45.37 | 0.2481 | 0.1339 | 7 | 0.12 | OK | 0 |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0055 | 45.60 | 0.0000 | 45.37 | 0.2481 | 0.1339 | 7 | 0.83 | 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 | | | | |
| 041.10 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0086 | 45.63 | 0.1928 | 45.37 | 0.2481 | 0.1339 | 7 | 0.93 | OK | 0 |
| 041.11 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0522 | 45.08 | 0.6400 | 45.43 | 0.2455 | 0.3244 | 4 | -1.43 | | 0 |
| 041.11 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0513 | 45.48 | 0.0500 | 45.43 | 0.2455 | 0.3244 | 4 | 0.18 | | 0 |
| 041.11 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0485 | 45.52 | 0.1274 | 45.43 | 0.2455 | 0.3244 | 4 | 0.36 | | 0 |
| 041.11 | Direct Available Phosphorus as P2O5, Gravimet... (45%) | 0105 | 45.65 | 0.4800 | 45.43 | 0.2455 | 0.3244 | 4 | 0.89 | | 0 |
| 041.20 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0544 | 45.06 | 0.1300 | 45.50 | 0.4141 | 0.2800 | 4 | -1.08 | | 0 |
| 041.20 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0535 | 45.25 | 0.1000 | 45.50 | 0.4141 | 0.2800 | 4 | -0.61 | | 0 |
| 041.20 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0498 | 45.80 | 0.8000 | 45.50 | 0.4141 | 0.2800 | 4 | 0.72 | | 0 |
| 041.20 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0027 | 45.91 | 0.0900 | 45.50 | 0.4141 | 0.2800 | 4 | 0.97 | | 0 |
| 041.21 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0106 | 41.87 | 3.070 | 44.18 | 1.557 | 0.9250 | 4 | -1.48 | | 0 |
| 041.21 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0522 | 44.64 | 0.4000 | 44.18 | 1.557 | 0.9250 | 4 | 0.30 | | 0 |
| 041.21 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0544 | 45.06 | 0.1300 | 44.18 | 1.557 | 0.9250 | 4 | 0.56 | | 0 |
| 041.21 | Direct Available Phosphorus as P2O5, Spectrop... (45%) | 0535 | 45.15 | 0.1000 | 44.18 | 1.557 | 0.9250 | 4 | 0.62 | | 0 |
| 041.40 | Direct Available Phosphorus as P2O5, Automate... (45%) | 0018 | 45.85 | 0.1000 | | | | 1 | | | 0 |
| 041.50 | Direct Available Phosphorus as P2O5, ICP (45%) | 0007 | 44.65 | 1.300 | 45.65 | 0.9375 | 0.4125 | 4 | -1.07 | | 0 |
| 041.50 | Direct Available Phosphorus as P2O5, ICP (45%) | 0325 | 45.05 | 0.1000 | 45.65 | 0.9375 | 0.4125 | 4 | -0.64 | | 0 |
| 041.50 | Direct Available Phosphorus as P2O5, ICP (45%) | 0070 | 46.40 | 0.2000 | 45.65 | 0.9375 | 0.4125 | 4 | 0.80 | | 0 |
| 041.50 | Direct Available Phosphorus as P2O5, ICP (45%) | 0452 | 46.50 | 0.0500 | 45.65 | 0.9375 | 0.4125 | 4 | 0.90 | | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0423 | 42.53 | 0.0500 | 45.69 | 1.142 | 0.4440 | 9 | -2.56 | Low | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0117 | 45.17 | 0.8400 | 45.69 | 1.142 | 0.4440 | 9 | -0.42 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0368 | 45.35 | 0.6959 | 45.69 | 1.142 | 0.4440 | 9 | -0.27 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0360 | 45.37 | 0.0000 | 45.69 | 1.142 | 0.4440 | 9 | -0.26 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0494 | 45.40 | 0.7100 | 45.69 | 1.142 | 0.4440 | 9 | -0.24 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0072 | 45.76 | 0.1300 | 45.69 | 1.142 | 0.4440 | 9 | 0.05 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0025 | 45.78 | 0.6700 | 45.69 | 1.142 | 0.4440 | 9 | 0.07 | OK | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0043 | 47.00 | 0.4900 | 45.69 | 1.142 | 0.4440 | 9 | 1.06 | High | 0 |
| 041.51 | Direct Available Phosphorus as P2O5, ICP, Cit... (45%) | 0233 | 47.94 | 0.4100 | 45.69 | 1.142 | 0.4440 | 9 | 1.82 | High | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0472 | 43.75 | 0.3000 | 45.51 | 1.018 | 0.1824 | 12 | -1.72 | Low | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0486 | 44.15 | 0.1300 | 45.51 | 1.018 | 0.1824 | 12 | -1.34 | Low | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0177 | 44.74 | 0.2947 | 45.51 | 1.018 | 0.1824 | 12 | -0.75 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0037 | 45.30 | 0.0900 | 45.51 | 1.018 | 0.1824 | 12 | -0.21 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0231 | 45.35 | 0.3000 | 45.51 | 1.018 | 0.1824 | 12 | -0.15 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0105 | 45.48 | 0.0200 | 45.51 | 1.018 | 0.1824 | 12 | -0.03 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0034 | 45.55 | 0.0240 | 45.51 | 1.018 | 0.1824 | 12 | 0.05 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0055 | 45.64 | 0.0900 | 45.51 | 1.018 | 0.1824 | 12 | 0.13 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0072 | 46.23 | 0.1100 | 45.51 | 1.018 | 0.1824 | 12 | 0.71 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0073 | 46.32 | 0.5700 | 45.51 | 1.018 | 0.1824 | 12 | 0.79 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0029 | 46.45 | 0.2600 | 45.51 | 1.018 | 0.1824 | 12 | 0.93 | OK | 0 |
| 041.60 | Direct Available Phosphorus as P2O5, Citrate-... (45%) | 0354 | 46.90 | 0.0000 | 45.51 | 1.018 | 0.1824 | 12 | 1.37 | High | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0230 | 42.60 | 0.2000 | 45.21 | 0.2835 | 0.1077 | 13 | -9.20 | Low | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0519 | 44.82 | 0.0300 | 45.21 | 0.2835 | 0.1077 | 13 | -1.39 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0405 | 45.02 | 0.1200 | 45.21 | 0.2835 | 0.1077 | 13 | -0.66 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0533 | 45.11 | 0.0300 | 45.21 | 0.2835 | 0.1077 | 13 | -0.36 | 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 | | | | |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0532 | 45.15 | 0.1100 | 45.21 | 0.2835 | 0.1077 | 13 | -0.22 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0531 | 45.18 | 0.0300 | 45.21 | 0.2835 | 0.1077 | 13 | -0.12 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0539 | 45.23 | 0.0500 | 45.21 | 0.2835 | 0.1077 | 13 | 0.06 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0535 | 45.25 | 0.1000 | 45.21 | 0.2835 | 0.1077 | 13 | 0.15 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0538 | 45.25 | 0.1000 | 45.21 | 0.2835 | 0.1077 | 13 | 0.15 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0537 | 45.33 | 0.2401 | 45.21 | 0.2835 | 0.1077 | 13 | 0.43 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0536 | 45.43 | 0.1500 | 45.21 | 0.2835 | 0.1077 | 13 | 0.76 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0549 | 45.55 | 0.1000 | 45.21 | 0.2835 | 0.1077 | 13 | 1.21 | OK | 0 |
| 041.99 | Direct Available Phosphorus as P2O5, Other (45%) | 0545 | 47.74 | 0.1400 | 45.21 | 0.2835 | 0.1077 | 13 | 8.93 | High | 0 |
| 042.99 | Water Soluble OrthoP as P2O5, Other (%) | 0510 | 0.1952 | 0.0354 | | | | 1 | | | 0 |
| 048.10 | Water Soluble Phosphorus as P2O5, Gravimetric... (%) | 0444 | 38.43 | 0.5000 | | | | 1 | | | 0 |
| 048.20 | Water Soluble Phosphorus as P2O5, Spectrophot... (%) | 0394 | 39.43 | 0.2010 | | | | 1 | | | 0 |
| 048.40 | Water Soluble Phosphorus as P2O5, Automated (%) | 0096 | 38.88 | 0.0900 | | | | 1 | | | 0 |
| 048.99 | Water Soluble Phosphorus as P2O5, Other (%) | 0513 | 39.20 | 0.1000 | | | | 1 | | | 0 |
| 050.51 | Soluble Potassium as K2O, ICP (Citrate) (%) | 0547 | 0.0850 | 0.0100 | | | | 2 | | | 0 |
| 050.51 | Soluble Potassium as K2O, ICP (Citrate) (%) | 0483 | 0.3700 | 0.0000 | | | | 2 | | | 0 |
| 050.52 | Soluble Potassium as K2O, ICP (Citrate-EDTA) (%) | 0354 | 0.1545 | 0.0090 | 0.3502 | 0.2118 | 0.0323 | 3 | -0.92 | | 0 |
| 050.52 | Soluble Potassium as K2O, ICP (Citrate-EDTA) (%) | 0423 | 0.3210 | 0.0180 | 0.3502 | 0.2118 | 0.0323 | 3 | -0.14 | | 0 |
| 050.52 | Soluble Potassium as K2O, ICP (Citrate-EDTA) (%) | 0494 | 0.5750 | 0.0700 | 0.3502 | 0.2118 | 0.0323 | 3 | 1.06 | | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0325 | 0.1000 | 0.0000 | 0.2354 | 0.0967 | 0.0090 | 9 | -1.29 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0096 | 0.1800 | 0.0000 | 0.2354 | 0.0967 | 0.0090 | 9 | -0.53 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0542 | 0.1800 | 0.0200 | 0.2354 | 0.0967 | 0.0090 | 9 | -0.53 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0527 | 0.2150 | 0.0100 | 0.2354 | 0.0967 | 0.0090 | 9 | -0.19 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0524 | 0.2152 | 0.0064 | 0.2354 | 0.0967 | 0.0090 | 9 | -0.19 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0521 | 0.2394 | 0.0000 | 0.2354 | 0.0967 | 0.0090 | 9 | 0.04 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0482 | 0.2700 | 0.0200 | 0.2354 | 0.0967 | 0.0090 | 9 | 0.33 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0389 | 0.3385 | 0.0150 | 0.2354 | 0.0967 | 0.0090 | 9 | 0.98 | OK | 0 |
| 050.99 | Soluble Potassium as K2O, Other (%) | 0552 | 0.6050 | 0.0100 | 0.2354 | 0.0967 | 0.0090 | 9 | 3.53 | OK | 0 |
| 060.00 | Water (Free), Vacuum Oven (%) | 0007 | 1.295 | 0.0100 | 1.622 | 0.2830 | 0.0173 | 3 | -1.15 | | 0 |
| 060.00 | Water (Free), Vacuum Oven (%) | 0416 | 1.780 | 0.0220 | 1.622 | 0.2830 | 0.0173 | 3 | 0.56 | | 0 |
| 060.00 | Water (Free), Vacuum Oven (%) | 0096 | 1.790 | 0.0200 | 1.622 | 0.2830 | 0.0173 | 3 | 0.59 | | 0 |
| 060.30 | Water (Free), AFPC No. 2B (105°C oven for 2 h... (%) | 0513 | 2.555 | 0.0100 | | | | 1 | | | 0 |
| 060.99 | Water (Free), Other (%) | 0513 | 1.230 | 0.0200 | 1.515 | 0.2465 | 0.0601 | 3 | -1.15 | | 0 |
| 060.99 | Water (Free), Other (%) | 0055 | 1.650 | 0.1000 | 1.515 | 0.2465 | 0.0601 | 3 | 0.55 | | 0 |
| 060.99 | Water (Free), Other (%) | 0510 | 1.664 | 0.0604 | 1.515 | 0.2465 | 0.0601 | 3 | 0.60 | | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0485 | 13.03 | 0.0100 | 14.54 | 1.145 | 0.2517 | 6 | -1.18 | Low | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0513 | 13.57 | 0.0400 | 14.54 | 1.145 | 0.2517 | 6 | -0.76 | Low | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0029 | 14.77 | 0.1200 | 14.54 | 1.145 | 0.2517 | 6 | 0.18 | OK | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0040 | 15.04 | 0.2600 | 14.54 | 1.145 | 0.2517 | 6 | 0.39 | OK | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0105 | 15.34 | 0.4800 | 14.54 | 1.145 | 0.2517 | 6 | 0.62 | OK | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0157 | 15.50 | 0.6000 | 14.54 | 1.145 | 0.2517 | 6 | 0.75 | High | 0 |
| 101.00 | Acid Soluble Calcium, AA, inorganic 965.09 (13.5%) | 0550 | 14.58 | 2.020 | 14.54 | 1.145 | 0.2517 | 6 | 0.03 | OK | 1 |
| 101.03 | Acid Soluble Calcium, AA, 965.09, test portio... (13.5%) | 0498 | 13.35 | 0.1000 | | | | 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 | | | | |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0307 | 12.72 | 1.346 | 14.28 | 0.7199 | 0.3749 | 22 | -2.17 | Low | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0102 | 13.13 | 0.0818 | 14.28 | 0.7199 | 0.3749 | 22 | -1.60 | Low | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0324 | 13.35 | 0.3000 | 14.28 | 0.7199 | 0.3749 | 22 | -1.29 | Low | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0255 | 13.60 | 0.1950 | 14.28 | 0.7199 | 0.3749 | 22 | -0.94 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0231 | 13.78 | 0.0700 | 14.28 | 0.7199 | 0.3749 | 22 | -0.70 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0360 | 13.91 | 0.1800 | 14.28 | 0.7199 | 0.3749 | 22 | -0.51 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0486 | 14.01 | 0.3000 | 14.28 | 0.7199 | 0.3749 | 22 | -0.37 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0073 | 14.06 | 0.4000 | 14.28 | 0.7199 | 0.3749 | 22 | -0.30 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0234 | 14.08 | 0.0500 | 14.28 | 0.7199 | 0.3749 | 22 | -0.28 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0096 | 14.18 | 0.1900 | 14.28 | 0.7199 | 0.3749 | 22 | -0.14 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0402 | 14.23 | 0.0300 | 14.28 | 0.7199 | 0.3749 | 22 | -0.07 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0482 | 14.25 | 1.500 | 14.28 | 0.7199 | 0.3749 | 22 | -0.04 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0049 | 14.26 | 0.4850 | 14.28 | 0.7199 | 0.3749 | 22 | -0.02 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0433 | 14.48 | 0.1000 | 14.28 | 0.7199 | 0.3749 | 22 | 0.28 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0419 | 14.56 | 0.2100 | 14.28 | 0.7199 | 0.3749 | 22 | 0.39 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0444 | 14.57 | 0.4000 | 14.28 | 0.7199 | 0.3749 | 22 | 0.41 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0354 | 14.80 | 1.200 | 14.28 | 0.7199 | 0.3749 | 22 | 0.73 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0041 | 14.85 | 0.9000 | 14.28 | 0.7199 | 0.3749 | 22 | 0.80 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0472 | 14.85 | 0.1000 | 14.28 | 0.7199 | 0.3749 | 22 | 0.80 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0451 | 15.17 | 0.0700 | 14.28 | 0.7199 | 0.3749 | 22 | 1.24 | OK | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0452 | 15.59 | 0.1400 | 14.28 | 0.7199 | 0.3749 | 22 | 1.83 | High | 0 |
| 101.30 | Acid Soluble Calcium, ICP, test portion inorg... (13.5%) | 0483 | 15.60 | 0.0000 | 14.28 | 0.7199 | 0.3749 | 22 | 1.84 | High | 0 |
| 101.32 | Acid Soluble Calcium, ICP, test portion 2006... (13.5%) | 0521 | 14.29 | 0.0000 | 15.42 | 0.8291 | 0.2425 | 4 | -1.36 | | 0 |
| 101.32 | Acid Soluble Calcium, ICP, test portion 2006... (13.5%) | 0394 | 15.40 | 0.6000 | 15.42 | 0.8291 | 0.2425 | 4 | -0.03 | | 0 |
| 101.32 | Acid Soluble Calcium, ICP, test portion 2006... (13.5%) | 0043 | 15.76 | 0.3300 | 15.42 | 0.8291 | 0.2425 | 4 | 0.40 | | 0 |
| 101.32 | Acid Soluble Calcium, ICP, test portion 2006... (13.5%) | 0423 | 16.24 | 0.0400 | 15.42 | 0.8291 | 0.2425 | 4 | 0.99 | | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0055 | 13.33 | 0.2200 | 14.11 | 0.6107 | 0.1521 | 11 | -1.20 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0494 | 13.56 | 0.3606 | 14.11 | 0.6107 | 0.1521 | 11 | -0.85 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0106 | 13.65 | 0.0310 | 14.11 | 0.6107 | 0.1521 | 11 | -0.71 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0177 | 13.81 | 0.0487 | 14.11 | 0.6107 | 0.1521 | 11 | -0.47 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0292 | 13.88 | 0.0200 | 14.11 | 0.6107 | 0.1521 | 11 | -0.36 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0527 | 14.05 | 0.3560 | 14.11 | 0.6107 | 0.1521 | 11 | -0.10 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0233 | 14.22 | 0.1800 | 14.11 | 0.6107 | 0.1521 | 11 | 0.17 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0117 | 14.26 | 0.3300 | 14.11 | 0.6107 | 0.1521 | 11 | 0.22 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0422 | 14.75 | 0.0700 | 14.11 | 0.6107 | 0.1521 | 11 | 0.97 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0546 | 14.76 | 0.0500 | 14.11 | 0.6107 | 0.1521 | 11 | 0.98 | OK | 0 |
| 101.33 | Acid Soluble Calcium, ICP, 2017.02 (13.5%) | 0037 | 14.99 | 0.0070 | 14.11 | 0.6107 | 0.1521 | 11 | 1.34 | OK | 0 |
| 101.70 | Acid Soluble Calcium, Titrimetric (13.5%) | 0476 | 9.572 | 0.0238 | | | | 2 | | | 0 |
| 101.70 | Acid Soluble Calcium, Titrimetric (13.5%) | 0544 | 15.25 | 0.0200 | | | | 2 | | | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0501 | 13.30 | 0.2000 | 14.07 | 0.9129 | 0.3222 | 10 | -0.78 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0389 | 13.44 | 0.7600 | 14.07 | 0.9129 | 0.3222 | 10 | -0.64 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0523 | 13.48 | 0.4000 | 14.07 | 0.9129 | 0.3222 | 10 | -0.60 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0519 | 13.51 | 0.0300 | 14.07 | 0.9129 | 0.3222 | 10 | -0.57 | 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 | | | | |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0508 | 13.58 | 0.2900 | 14.07 | 0.9129 | 0.3222 | 10 | -0.50 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0042 | 13.83 | 0.6300 | 14.07 | 0.9129 | 0.3222 | 10 | -0.25 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0552 | 14.27 | 0.6900 | 14.07 | 0.9129 | 0.3222 | 10 | 0.20 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0368 | 14.40 | 0.1020 | 14.07 | 0.9129 | 0.3222 | 10 | 0.34 | OK | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0291 | 15.72 | 0.0200 | 14.07 | 0.9129 | 0.3222 | 10 | 1.69 | High | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0520 | 17.85 | 0.1000 | 14.07 | 0.9129 | 0.3222 | 10 | 3.86 | High | 0 |
| 101.99 | Acid Soluble Calcium, Other (13.5%) | 0541 | 20.13 | 2.650 | 14.07 | 0.9129 | 0.3222 | 10 | 6.17 | High | 1 |
| 121.00 | Acid Soluble Magnesium, AA, inorganic 965.09 (%) | 0105 | 0.5418 | 0.0239 | | | | 1 | | | 0 |
| 121.03 | Acid Soluble Magnesium, AA, 965.09, test port... (%) | 0105 | 0.7078 | 0.0374 | | | | 1 | | | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0041 | 0.7150 | 0.0100 | 0.7740 | 0.0750 | 0.0305 | 7 | -0.71 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0482 | 0.7150 | 0.0300 | 0.7740 | 0.0750 | 0.0305 | 7 | -0.71 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0096 | 0.7420 | 0.0360 | 0.7740 | 0.0750 | 0.0305 | 7 | -0.39 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0354 | 0.7550 | 0.0300 | 0.7740 | 0.0750 | 0.0305 | 7 | -0.23 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0049 | 0.7595 | 0.0452 | 0.7740 | 0.0750 | 0.0305 | 7 | -0.17 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0472 | 0.8450 | 0.0100 | 0.7740 | 0.0750 | 0.0305 | 7 | 0.86 | OK | 0 |
| 121.30 | Acid Soluble Magnesium, ICP, test portion ino... (%) | 0483 | 0.9000 | 0.0520 | 0.7740 | 0.0750 | 0.0305 | 7 | 1.52 | OK | 0 |
| 121.32 | Acid Soluble Magnesium, ICP, test portion 200... (%) | 0423 | 0.7950 | 0.0100 | | | | 1 | | | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0515 | 0.6438 | 0.0113 | 0.7347 | 0.0715 | 0.0098 | 6 | -1.13 | OK | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0106 | 0.6742 | 0.0134 | 0.7347 | 0.0715 | 0.0098 | 6 | -0.75 | OK | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0527 | 0.7530 | 0.0000 | 0.7347 | 0.0715 | 0.0098 | 6 | 0.23 | OK | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0494 | 0.7608 | 0.0159 | 0.7347 | 0.0715 | 0.0098 | 6 | 0.32 | OK | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0025 | 0.7636 | 0.0075 | 0.7347 | 0.0715 | 0.0098 | 6 | 0.36 | OK | 0 |
| 121.33 | Acid Soluble Magnesium, ICP, 2017.02 (%) | 0117 | 0.8130 | 0.0109 | 0.7347 | 0.0715 | 0.0098 | 6 | 0.97 | OK | 0 |
| 121.99 | Acid Soluble Magnesium, Other (%) | 0389 | 0.1885 | 0.0010 | 0.5801 | 0.2956 | 0.0939 | 4 | -1.32 | | 0 |
| 121.99 | Acid Soluble Magnesium, Other (%) | 0515 | 0.5401 | 0.2721 | 0.5801 | 0.2956 | 0.0939 | 4 | -0.14 | | 0 |
| 121.99 | Acid Soluble Magnesium, Other (%) | 0524 | 0.7117 | 0.0024 | 0.5801 | 0.2956 | 0.0939 | 4 | 0.45 | | 0 |
| 121.99 | Acid Soluble Magnesium, Other (%) | 0552 | 0.8800 | 0.1000 | 0.5801 | 0.2956 | 0.0939 | 4 | 1.01 | | 0 |
| 143.99 | Elemental Sulfur, Other (%) | 0472 | 0.7700 | 0.0000 | | | | 2 | | | 0 |
| 143.99 | Elemental Sulfur, Other (%) | 0389 | 0.7825 | 0.0010 | | | | 2 | | | 0 |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 0117 | 0.7195 | 0.0178 | 0.7959 | 0.0667 | 0.0265 | 5 | -1.15 | | 0 |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 0494 | 0.7294 | 0.0021 | 0.7959 | 0.0667 | 0.0265 | 5 | -1.00 | | 0 |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 0527 | 0.8250 | 0.0040 | 0.7959 | 0.0667 | 0.0265 | 5 | 0.44 | | 0 |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 0515 | 0.8425 | 0.1004 | 0.7959 | 0.0667 | 0.0265 | 5 | 0.70 | | 0 |
| 148.07 | Total Sulfur, ICP, test portion as in 2017.02 (%) | 0483 | 0.8630 | 0.0080 | 0.7959 | 0.0667 | 0.0265 | 5 | 1.01 | | 0 |
| 148.99 | Total Sulfur, Other (%) | 0096 | 0.7055 | 0.0150 | 0.8635 | 0.2163 | 0.0217 | 3 | -0.73 | | 0 |
| 148.99 | Total Sulfur, Other (%) | 0354 | 0.7750 | 0.0100 | 0.8635 | 0.2163 | 0.0217 | 3 | -0.41 | | 0 |
| 148.99 | Total Sulfur, Other (%) | 0482 | 1.110 | 0.0400 | 0.8635 | 0.2163 | 0.0217 | 3 | 1.14 | | 0 |
| 149.04 | Sulfur - HNO3 soluble, ICP (%) | 0521 | 0.6974 | 0.0000 | 0.7107 | 0.0207 | 0.0096 | 3 | -0.64 | | 0 |
| 149.04 | Sulfur - HNO3 soluble, ICP (%) | 0423 | 0.7000 | 0.0200 | 0.7107 | 0.0207 | 0.0096 | 3 | -0.51 | | 0 |
| 149.04 | Sulfur - HNO3 soluble, ICP (%) | 0524 | 0.7346 | 0.0087 | 0.7107 | 0.0207 | 0.0096 | 3 | 1.15 | | 0 |
| 151.00 | Acid Soluble Arsenic , AA, test portion 2006... (ppm) | 0550 | 4.715 | 7.310 | | | | 2 | | | 0 |
| 151.00 | Acid Soluble Arsenic , AA, test portion 2006... (ppm) | 0498 | 39.35 | 3.900 | | | | 2 | | | 0 |
| 151.30 | Acid Soluble Arsenic , ICP (ppm) | 0096 | 13.15 | 3.300 | 17.12 | 5.131 | 2.183 | 4 | -0.77 | | 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 | | | | |
| 151.30 | Acid Soluble Arsenic , ICP (ppm) | 0255 | 14.20 | 0.1300 | 17.12 | 5.131 | 2.183 | 4 | -0.57 | | 0 |
| 151.30 | Acid Soluble Arsenic , ICP (ppm) | 0501 | 16.65 | 0.3000 | 17.12 | 5.131 | 2.183 | 4 | -0.09 | | 0 |
| 151.30 | Acid Soluble Arsenic , ICP (ppm) | 0541 | 24.50 | 5.000 | 17.12 | 5.131 | 2.183 | 4 | 1.44 | | 0 |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 0515 | 13.57 | 0.2370 | 15.31 | 1.618 | 0.5771 | 5 | -1.08 | | 0 |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 0117 | 13.64 | 0.3500 | 15.31 | 1.618 | 0.5771 | 5 | -1.04 | | 0 |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 0527 | 15.91 | 0.0760 | 15.31 | 1.618 | 0.5771 | 5 | 0.37 | | 0 |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 0494 | 16.38 | 1.497 | 15.31 | 1.618 | 0.5771 | 5 | 0.66 | | 0 |
| 151.33 | Acid Soluble Arsenic , ICP, 2017.02 (ppm) | 0037 | 17.08 | 0.7250 | 15.31 | 1.618 | 0.5771 | 5 | 1.09 | | 0 |
| 151.34 | Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm) | 0515 | 14.45 | 0.9480 | | | | 2 | | | 0 |
| 151.34 | Acid Soluble Arsenic , ICP, EPA 3050B/6010C (ppm) | 0368 | 19.40 | 1.400 | | | | 2 | | | 0 |
| 151.99 | Acid Soluble Arsenic , Other (ppm) | 0476 | 14.54 | 0.1500 | 18.65 | 4.853 | 0.4533 | 3 | -0.85 | | 0 |
| 151.99 | Acid Soluble Arsenic , Other (ppm) | 0519 | 17.41 | 0.0100 | 18.65 | 4.853 | 0.4533 | 3 | -0.26 | | 0 |
| 151.99 | Acid Soluble Arsenic , Other (ppm) | 0520 | 24.00 | 1.200 | 18.65 | 4.853 | 0.4533 | 3 | 1.10 | | 0 |
| 165.30 | Acid Soluble Boron , ICP, test portion in 98... (%) | 0106 | 0.0013 | 0.0012 | 0.0046 | 0.0047 | 0.0004 | 3 | -0.69 | | 0 |
| 165.30 | Acid Soluble Boron , ICP, test portion in 98... (%) | 0521 | 0.0024 | 0.0000 | 0.0046 | 0.0047 | 0.0004 | 3 | -0.46 | | 0 |
| 165.30 | Acid Soluble Boron , ICP, test portion in 98... (%) | 0354 | 0.0100 | 0.0000 | 0.0046 | 0.0047 | 0.0004 | 3 | 1.15 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0524 | 0.0026 | 0.0002 | 0.0077 | 0.0045 | 0.0004 | 5 | -0.99 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0423 | 0.0033 | 0.0001 | 0.0077 | 0.0045 | 0.0004 | 5 | -0.87 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0472 | 0.0100 | 0.0000 | 0.0077 | 0.0045 | 0.0004 | 5 | 0.45 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0527 | 0.0100 | 0.0000 | 0.0077 | 0.0045 | 0.0004 | 5 | 0.45 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0483 | 0.0126 | 0.0019 | 0.0077 | 0.0045 | 0.0004 | 5 | 0.95 | | 0 |
| 165.99 | Acid Soluble Boron , Other (%) | 0552 | 0.2500 | 0.2200 | 0.0077 | 0.0045 | 0.0004 | 5 | 47.32 | | 1 |
| 165.99 | Acid Soluble Boron , Other (%) | 0515 | 0.0000 | 0.0000 | 0.0077 | 0.0045 | 0.0004 | 5 | | | 4 |
| 181.00 | Acid Soluble Cadmium , AA, test portion 2006... (ppm) | 0550 | 99.11 | 28.56 | | | | 2 | | | 0 |
| 181.00 | Acid Soluble Cadmium , AA, test portion 2006... (ppm) | 0498 | 107.0 | 2.000 | | | | 2 | | | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0389 | 39.73 | 0.3000 | 95.54 | 26.45 | 1.212 | 9 | -1.95 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0523 | 71.47 | 0.0100 | 95.54 | 26.45 | 1.212 | 9 | -0.84 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0444 | 75.16 | 1.290 | 95.54 | 26.45 | 1.212 | 9 | -0.71 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0255 | 88.28 | 1.334 | 95.54 | 26.45 | 1.212 | 9 | -0.25 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0096 | 110.1 | 1.400 | 95.54 | 26.45 | 1.212 | 9 | 0.51 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0394 | 110.5 | 1.000 | 95.54 | 26.45 | 1.212 | 9 | 0.52 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0482 | 113.0 | 2.000 | 95.54 | 26.45 | 1.212 | 9 | 0.61 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0524 | 116.4 | 3.576 | 95.54 | 26.45 | 1.212 | 9 | 0.73 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0501 | 119.1 | 0.0000 | 95.54 | 26.45 | 1.212 | 9 | 0.82 | NA | 0 |
| 181.30 | Acid Soluble Cadmium , ICP (ppm) | 0541 | 118.0 | 22.00 | 95.54 | 26.45 | 1.212 | 9 | 0.78 | NA | 1 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0515 | 101.9 | 4.434 | 114.4 | 4.619 | 3.907 | 6 | -2.42 | NA | 0 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0037 | 113.4 | 2.595 | 114.4 | 4.619 | 3.907 | 6 | -0.20 | NA | 0 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0117 | 113.5 | 1.000 | 114.4 | 4.619 | 3.907 | 6 | -0.17 | NA | 0 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0233 | 116.3 | 3.100 | 114.4 | 4.619 | 3.907 | 6 | 0.36 | NA | 0 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0494 | 116.3 | 11.89 | 114.4 | 4.619 | 3.907 | 6 | 0.36 | NA | 0 |
| 181.33 | Acid Soluble Cadmium , ICP, 2017.02 (ppm) | 0527 | 119.5 | 0.4250 | 114.4 | 4.619 | 3.907 | 6 | 0.99 | NA | 0 |
| 181.34 | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm) | 0368 | 93.35 | 12.50 | | | | 2 | | | 0 |
| 181.34 | Acid Soluble Cadmium , ICP, EPA 3050B/6010C (ppm) | 0515 | 117.0 | 23.61 | | | | 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 | | | | |
| 181.99 | Acid Soluble Cadmium , Other (ppm) | 0476 | 93.45 | 0.7000 | 123.5 | 41.81 | 0.4067 | 3 | -0.72 | | 0 |
| 181.99 | Acid Soluble Cadmium , Other (ppm) | 0519 | 105.8 | 0.0200 | 123.5 | 41.81 | 0.4067 | 3 | -0.42 | | 0 |
| 181.99 | Acid Soluble Cadmium , Other (ppm) | 0520 | 171.3 | 0.5000 | 123.5 | 41.81 | 0.4067 | 3 | 1.14 | | 0 |
| 191.00 | Acid Soluble Chromium , AA, test portion 200... (ppm) | 0550 | 611.6 | 163.3 | | | | 1 | | | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0389 | 147.6 | 0.6000 | 380.5 | 108.0 | 19.27 | 7 | -1.95 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0523 | 306.6 | 7.500 | 380.5 | 108.0 | 19.27 | 7 | -0.62 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0444 | 359.5 | 33.00 | 380.5 | 108.0 | 19.27 | 7 | -0.18 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0482 | 379.5 | 29.00 | 380.5 | 108.0 | 19.27 | 7 | -0.01 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0541 | 462.0 | 54.00 | 380.5 | 108.0 | 19.27 | 7 | 0.68 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0501 | 462.1 | 5.400 | 380.5 | 108.0 | 19.27 | 7 | 0.68 | NA | 0 |
| 191.30 | Acid Soluble Chromium , ICP (ppm) | 0096 | 475.1 | 5.400 | 380.5 | 108.0 | 19.27 | 7 | 0.79 | NA | 0 |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 0515 | 436.6 | 20.28 | 465.8 | 17.28 | 16.09 | 5 | -1.69 | | 0 |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 0494 | 466.8 | 39.38 | 465.8 | 17.28 | 16.09 | 5 | 0.05 | | 0 |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 0037 | 469.1 | 9.288 | 465.8 | 17.28 | 16.09 | 5 | 0.19 | | 0 |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 0527 | 475.9 | 5.214 | 465.8 | 17.28 | 16.09 | 5 | 0.58 | | 0 |
| 191.33 | Acid Soluble Chromium , ICP, 2017.02 (ppm) | 0117 | 480.9 | 6.300 | 465.8 | 17.28 | 16.09 | 5 | 0.87 | | 0 |
| 191.34 | Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm) | 0368 | 395.5 | 45.00 | | | | 2 | | | 0 |
| 191.34 | Acid Soluble Chromium , ICP, EPA 3050B/6010C... (ppm) | 0515 | 562.3 | 245.4 | | | | 2 | | | 0 |
| 191.99 | Acid Soluble Chromium , Other (ppm) | 0476 | 399.3 | 2.000 | 460.3 | 66.56 | 6.633 | 3 | -0.92 | | 0 |
| 191.99 | Acid Soluble Chromium , Other (ppm) | 0520 | 450.3 | 15.50 | 460.3 | 66.56 | 6.633 | 3 | -0.15 | | 0 |
| 191.99 | Acid Soluble Chromium , Other (ppm) | 0519 | 531.3 | 2.400 | 460.3 | 66.56 | 6.633 | 3 | 1.07 | | 0 |
| 202.30 | Acid Soluble Cobalt , ICP (ppm) | 0523 | 2.502 | 0.0000 | 3.111 | 0.6715 | 0.0253 | 3 | -0.91 | | 0 |
| 202.30 | Acid Soluble Cobalt , ICP (ppm) | 0482 | 3.000 | 0.0000 | 3.111 | 0.6715 | 0.0253 | 3 | -0.17 | | 0 |
| 202.30 | Acid Soluble Cobalt , ICP (ppm) | 0524 | 3.831 | 0.0760 | 3.111 | 0.6715 | 0.0253 | 3 | 1.07 | | 0 |
| 202.32 | Acid Soluble Cobalt , ICP, 2006.03 (ppm) | 0423 | 3.340 | 0.2000 | | | | 1 | | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0550 | 1.210 | 0.0200 | 3.230 | 1.289 | 0.2150 | 5 | -1.37 | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0546 | 2.830 | 0.1600 | 3.230 | 1.289 | 0.2150 | 5 | -0.27 | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0527 | 3.608 | 0.1070 | 3.230 | 1.289 | 0.2150 | 5 | 0.26 | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0037 | 3.952 | 0.3390 | 3.230 | 1.289 | 0.2150 | 5 | 0.49 | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0494 | 4.551 | 0.4490 | 3.230 | 1.289 | 0.2150 | 5 | 0.89 | | 0 |
| 202.33 | Acid Soluble Cobalt , ICP, 2017.02 (ppm) | 0515 | 0.0773 | 0.1545 | 3.230 | 1.289 | 0.2150 | 5 | | | 4 |
| 202.34 | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm) | 0515 | 2.082 | 0.8410 | 3.344 | 1.173 | 0.5803 | 3 | -1.08 | | 0 |
| 202.34 | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm) | 0368 | 3.550 | 0.7000 | 3.344 | 1.173 | 0.5803 | 3 | 0.18 | | 0 |
| 202.34 | Acid Soluble Cobalt , ICP, EPA 3050B/6010C (ppm) | 0501 | 4.400 | 0.2000 | 3.344 | 1.173 | 0.5803 | 3 | 0.90 | | 0 |
| 202.99 | Acid Soluble Cobalt , Other (ppm) | 0255 | 2.808 | 0.0970 | 2.941 | 0.1157 | 0.1023 | 3 | -1.15 | | 0 |
| 202.99 | Acid Soluble Cobalt , Other (ppm) | 0476 | 3.000 | 0.2000 | 2.941 | 0.1157 | 0.1023 | 3 | 0.51 | | 0 |
| 202.99 | Acid Soluble Cobalt , Other (ppm) | 0519 | 3.015 | 0.0100 | 2.941 | 0.1157 | 0.1023 | 3 | 0.64 | | 0 |
| 221.00 | Acid Soluble Copper , AA, inorganic 965.09 (%) | 0105 | 0.0049 | 0.0010 | 0.0074 | 0.0042 | 0.0023 | 3 | -0.60 | | 0 |
| 221.00 | Acid Soluble Copper , AA, inorganic 965.09 (%) | 0533 | 0.0051 | 0.0001 | 0.0074 | 0.0042 | 0.0023 | 3 | -0.56 | | 0 |
| 221.00 | Acid Soluble Copper , AA, inorganic 965.09 (%) | 0550 | 0.0122 | 0.0058 | 0.0074 | 0.0042 | 0.0023 | 3 | 1.15 | | 0 |
| 221.03 | Acid Soluble Copper , AA, 965.09, test porti... (%) | 0105 | 0.0049 | 0.0001 | | | | 2 | | | 0 |
| 221.03 | Acid Soluble Copper , AA, 965.09, test porti... (%) | 0498 | 0.0050 | 0.0000 | | | | 2 | | | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0255 | 0.0025 | 0.0010 | 0.0053 | 0.0021 | 0.0003 | 10 | -1.25 | 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 | | | | |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0444 | 0.0042 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.50 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0049 | 0.0044 | 0.0005 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.43 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0096 | 0.0046 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.32 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0041 | 0.0050 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.15 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0433 | 0.0050 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.15 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0483 | 0.0052 | 0.0002 | 0.0053 | 0.0021 | 0.0003 | 10 | -0.06 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0402 | 0.0055 | 0.0010 | 0.0053 | 0.0021 | 0.0003 | 10 | 0.07 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0354 | 0.0100 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | 2.06 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0482 | 0.0100 | 0.0000 | 0.0053 | 0.0021 | 0.0003 | 10 | 2.06 | OK | 0 |
| 221.30 | Acid Soluble Copper , ICP, test portion inor... (%) | 0552 | 0.1050 | 0.0100 | 0.0053 | 0.0021 | 0.0003 | 10 | 44.02 | High | 2 |
| 221.32 | Acid Soluble Copper , ICP, test portion 2006... (%) | 0521 | 0.0040 | 0.0000 | 0.0088 | 0.0071 | 0.0001 | 3 | -0.67 | | 0 |
| 221.32 | Acid Soluble Copper , ICP, test portion 2006... (%) | 0423 | 0.0054 | 0.0002 | 0.0088 | 0.0071 | 0.0001 | 3 | -0.48 | | 0 |
| 221.32 | Acid Soluble Copper , ICP, test portion 2006... (%) | 0394 | 0.0170 | 0.0000 | 0.0088 | 0.0071 | 0.0001 | 3 | 1.15 | | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0515 | 0.0044 | 0.0005 | 0.0050 | 0.0002 | 0.0002 | 7 | -3.20 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0037 | 0.0050 | 0.0001 | 0.0050 | 0.0002 | 0.0002 | 7 | -0.33 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0233 | 0.0050 | 0.0001 | 0.0050 | 0.0002 | 0.0002 | 7 | -0.33 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0527 | 0.0050 | 0.0000 | 0.0050 | 0.0002 | 0.0002 | 7 | -0.10 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0106 | 0.0051 | 0.0003 | 0.0050 | 0.0002 | 0.0002 | 7 | 0.14 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0546 | 0.0052 | 0.0001 | 0.0050 | 0.0002 | 0.0002 | 7 | 0.62 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0117 | 0.0057 | 0.0001 | 0.0050 | 0.0002 | 0.0002 | 7 | 3.01 | OK | 0 |
| 221.33 | Acid Soluble Copper , ICP, 2017.02 (%) | 0494 | 51.05 | 3.085 | 0.0050 | 0.0002 | 0.0002 | 7 | 243714.43 | High | 2 |
| 221.99 | Acid Soluble Copper , Other (%) | 0389 | 0.0010 | 0.0000 | 0.0041 | 0.0030 | 0.0002 | 7 | -0.93 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0519 | 0.0010 | 0.0000 | 0.0041 | 0.0030 | 0.0002 | 7 | -0.93 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0476 | 0.0036 | 0.0000 | 0.0041 | 0.0030 | 0.0002 | 7 | -0.16 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0368 | 0.0045 | 0.0003 | 0.0041 | 0.0030 | 0.0002 | 7 | 0.09 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0524 | 0.0048 | 0.0001 | 0.0041 | 0.0030 | 0.0002 | 7 | 0.18 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0541 | 0.0055 | 0.0010 | 0.0041 | 0.0030 | 0.0002 | 7 | 0.40 | OK | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0501 | 0.0460 | 0.0000 | 0.0041 | 0.0030 | 0.0002 | 7 | 12.44 | High | 0 |
| 221.99 | Acid Soluble Copper , Other (%) | 0515 | 0.0034 | 0.0036 | 0.0041 | 0.0030 | 0.0002 | 7 | -0.22 | OK | 1 |
| 241.00 | Acid Soluble Iron , AA, inorganic 965.09 (%) | 0535 | 0.5850 | 0.0100 | | | | 2 | | | 0 |
| 241.00 | Acid Soluble Iron , AA, inorganic 965.09 (%) | 0105 | 0.7605 | 0.0530 | | | | 2 | | | 0 |
| 241.03 | Acid Soluble Iron , AA, 965.09, test portion ... (%) | 0105 | 0.7223 | 0.0504 | | | | 1 | | | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0096 | 0.7375 | 0.0210 | 0.7753 | 0.0344 | 0.0292 | 8 | -1.00 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0402 | 0.7470 | 0.0060 | 0.7753 | 0.0344 | 0.0292 | 8 | -0.75 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0472 | 0.7550 | 0.0100 | 0.7753 | 0.0344 | 0.0292 | 8 | -0.54 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0354 | 0.7650 | 0.0300 | 0.7753 | 0.0344 | 0.0292 | 8 | -0.27 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0049 | 0.7690 | 0.0254 | 0.7753 | 0.0344 | 0.0292 | 8 | -0.17 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0041 | 0.8000 | 0.0800 | 0.7753 | 0.0344 | 0.0292 | 8 | 0.66 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0483 | 0.8135 | 0.0110 | 0.7753 | 0.0344 | 0.0292 | 8 | 1.02 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0482 | 0.8150 | 0.0500 | 0.7753 | 0.0344 | 0.0292 | 8 | 1.06 | OK | 0 |
| 241.30 | Acid Soluble Iron , ICP, test portion inorgan... (%) | 0552 | 1.205 | 0.5300 | 0.7753 | 0.0344 | 0.0292 | 8 | 11.43 | High | 1 |
| 241.32 | Acid Soluble Iron , ICP, test portion 2006.03... (%) | 0423 | 0.7875 | 0.0030 | | | | 2 | | | 0 |
| 241.32 | Acid Soluble Iron , ICP, test portion 2006.03... (%) | 0521 | 0.8065 | 0.0000 | | | | 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 | | | | |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0515 | 0.6234 | 0.0118 | 0.7078 | 0.0587 | 0.0236 | 6 | -1.28 | Low | 0 |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0106 | 0.6685 | 0.0092 | 0.7078 | 0.0587 | 0.0236 | 6 | -0.60 | OK | 0 |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0025 | 0.7144 | 0.0305 | 0.7078 | 0.0587 | 0.0236 | 6 | 0.10 | OK | 0 |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0117 | 0.7375 | 0.0020 | 0.7078 | 0.0587 | 0.0236 | 6 | 0.45 | OK | 0 |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0527 | 0.7510 | 0.0300 | 0.7078 | 0.0587 | 0.0236 | 6 | 0.66 | OK | 0 |
| 241.33 | Acid Soluble Iron , ICP, 2017.02 (%) | 0494 | 0.7520 | 0.0582 | 0.7078 | 0.0587 | 0.0236 | 6 | 0.67 | OK | 0 |
| 241.99 | Acid Soluble Iron , Other (%) | 0389 | 0.1880 | 0.0000 | 0.5757 | 0.3366 | 0.0344 | 3 | -1.15 | | 0 |
| 241.99 | Acid Soluble Iron , Other (%) | 0515 | 0.7462 | 0.1006 | 0.5757 | 0.3366 | 0.0344 | 3 | 0.51 | | 0 |
| 241.99 | Acid Soluble Iron , Other (%) | 0524 | 0.7929 | 0.0025 | 0.5757 | 0.3366 | 0.0344 | 3 | 0.65 | | 0 |
| 251.00 | Acid Soluble Lead , AA, test portion 2006.03... (ppm) | 0498 | 1.430 | 0.0200 | | | | 2 | | | 0 |
| 251.00 | Acid Soluble Lead , AA, test portion 2006.03... (ppm) | 0550 | 24.77 | 25.13 | | | | 2 | | | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0255 | 3.805 | 0.1990 | 5.109 | 1.398 | 0.8261 | 7 | -0.84 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0444 | 3.810 | 0.0000 | 5.109 | 1.398 | 0.8261 | 7 | -0.84 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0394 | 4.550 | 0.1000 | 5.109 | 1.398 | 0.8261 | 7 | -0.36 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0524 | 4.844 | 0.1540 | 5.109 | 1.398 | 0.8261 | 7 | -0.17 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0096 | 5.600 | 2.200 | 5.109 | 1.398 | 0.8261 | 7 | 0.32 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0501 | 5.950 | 0.3000 | 5.109 | 1.398 | 0.8261 | 7 | 0.54 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0482 | 8.465 | 2.830 | 5.109 | 1.398 | 0.8261 | 7 | 2.17 | NA | 0 |
| 251.30 | Acid Soluble Lead , ICP (ppm) | 0541 | 56.00 | 54.00 | 5.109 | 1.398 | 0.8261 | 7 | 32.92 | NA | 1 |
| 251.33 | Acid Soluble Lead , ICP, 2017.02 (ppm) | 0037 | 4.360 | 0.2910 | 5.361 | 0.8534 | 0.1885 | 4 | -1.17 | | 0 |
| 251.33 | Acid Soluble Lead , ICP, 2017.02 (ppm) | 0515 | 4.944 | 0.1930 | 5.361 | 0.8534 | 0.1885 | 4 | -0.49 | | 0 |
| 251.33 | Acid Soluble Lead , ICP, 2017.02 (ppm) | 0527 | 6.045 | 0.0660 | 5.361 | 0.8534 | 0.1885 | 4 | 0.80 | | 0 |
| 251.33 | Acid Soluble Lead , ICP, 2017.02 (ppm) | 0494 | 6.096 | 0.2040 | 5.361 | 0.8534 | 0.1885 | 4 | 0.86 | | 0 |
| 251.34 | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm) | 0515 | 1.728 | 1.075 | | | | 1 | | | 0 |
| 251.34 | Acid Soluble Lead , ICP, EPA 3050B/6010C (ppm) | 0368 | 0.0000 | 0.0000 | | | | 1 | | | 4 |
| 251.99 | Acid Soluble Lead , Other (ppm) | 0476 | 4.190 | 0.4000 | 6.262 | 3.328 | 0.2700 | 3 | -0.62 | | 0 |
| 251.99 | Acid Soluble Lead , Other (ppm) | 0519 | 4.495 | 0.0100 | 6.262 | 3.328 | 0.2700 | 3 | -0.53 | | 0 |
| 251.99 | Acid Soluble Lead , Other (ppm) | 0520 | 10.10 | 0.4000 | 6.262 | 3.328 | 0.2700 | 3 | 1.15 | | 0 |
| 261.12 | Acid Soluble Manganese , AA, inorganic 965.09 (%) | 0105 | 0.0139 | 0.0005 | | | | 1 | | | 0 |
| 261.15 | Acid Soluble Manganese , AA, 965.09, test po... (%) | 0105 | 0.0133 | 0.0007 | | | | 1 | | | 0 |
| 261.30 | Acid Soluble Manganese , ICP, test portion 9... (%) | 0354 | 0.0100 | 0.0000 | 0.0128 | 0.0032 | 0.0003 | 4 | -0.87 | | 0 |
| 261.30 | Acid Soluble Manganese , ICP, test portion 9... (%) | 0472 | 0.0100 | 0.0000 | 0.0128 | 0.0032 | 0.0003 | 4 | -0.87 | | 0 |
| 261.30 | Acid Soluble Manganese , ICP, test portion 9... (%) | 0041 | 0.0155 | 0.0010 | 0.0128 | 0.0032 | 0.0003 | 4 | 0.86 | | 0 |
| 261.30 | Acid Soluble Manganese , ICP, test portion 9... (%) | 0096 | 0.0156 | 0.0003 | 0.0128 | 0.0032 | 0.0003 | 4 | 0.87 | | 0 |
| 261.31 | Acid Soluble Manganese , ICP, test portion 9... (%) | 0482 | 0.0200 | 0.0000 | | | | 1 | | | 0 |
| 261.32 | Acid Soluble Manganese , ICP, test portion i... (%) | 0483 | 0.0039 | 0.0012 | 0.0454 | 0.0648 | 0.0142 | 3 | -0.64 | | 0 |
| 261.32 | Acid Soluble Manganese , ICP, test portion i... (%) | 0049 | 0.0123 | 0.0013 | 0.0454 | 0.0648 | 0.0142 | 3 | -0.51 | | 0 |
| 261.32 | Acid Soluble Manganese , ICP, test portion i... (%) | 0552 | 0.1200 | 0.0400 | 0.0454 | 0.0648 | 0.0142 | 3 | 1.15 | | 0 |
| 261.34 | Acid Soluble Manganese , ICP, test portion 2... (%) | 0521 | 0.0147 | 0.0000 | | | | 2 | | | 0 |
| 261.34 | Acid Soluble Manganese , ICP, test portion 2... (%) | 0423 | 0.0176 | 0.0001 | | | | 2 | | | 0 |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 0106 | 0.0125 | 0.0003 | 37.87 | 75.72 | 0.0771 | 4 | -0.50 | | 0 |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 0117 | 0.0151 | 0.0000 | 37.87 | 75.72 | 0.0771 | 4 | -0.50 | | 0 |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 0527 | 0.0155 | 0.0010 | 37.87 | 75.72 | 0.0771 | 4 | -0.50 | | 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 | | | | |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 0494 | 151.4 | 0.3072 | 37.87 | 75.72 | 0.0771 | 4 | 1.50 | | 0 |
| 261.35 | Acid Soluble Manganese , ICP, 2017.02 (%) | 0515 | 0.0000 | 0.0000 | 37.87 | 75.72 | 0.0771 | 4 | | | 4 |
| 261.99 | Acid Soluble Manganese , Other (%) | 0389 | 0.0030 | 0.0000 | 0.0108 | 0.0068 | 0.0005 | 3 | -1.15 | | 0 |
| 261.99 | Acid Soluble Manganese , Other (%) | 0524 | 0.0139 | 0.0000 | 0.0108 | 0.0068 | 0.0005 | 3 | 0.46 | | 0 |
| 261.99 | Acid Soluble Manganese , Other (%) | 0515 | 0.0154 | 0.0014 | 0.0108 | 0.0068 | 0.0005 | 3 | 0.68 | | 0 |
| 281.30 | Acid Soluble Mercury , ICP (ppm) | 0527 | 0.0185 | 0.0010 | | | | 2 | | | 0 |
| 281.30 | Acid Soluble Mercury , ICP (ppm) | 0541 | 6.700 | 6.400 | | | | 2 | | | 0 |
| 281.30 | Acid Soluble Mercury , ICP (ppm) | 0515 | 0.0000 | 0.0000 | | | | 2 | | | 4 |
| 281.99 | Acid Soluble Mercury , Other (ppm) | 0519 | 0.0100 | 0.0000 | | | | 2 | | | 0 |
| 281.99 | Acid Soluble Mercury , Other (ppm) | 0096 | 5.000 | 1.000 | | | | 2 | | | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0521 | 2.004 | 0.0000 | 16.08 | 5.408 | 1.154 | 7 | -2.35 | Low | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0049 | 13.55 | 1.590 | 16.08 | 5.408 | 1.154 | 7 | -0.42 | OK | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0433 | 14.19 | 0.0800 | 16.08 | 5.408 | 1.154 | 7 | -0.32 | OK | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0524 | 15.76 | 0.0150 | 16.08 | 5.408 | 1.154 | 7 | -0.05 | OK | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0541 | 18.50 | 3.000 | 16.08 | 5.408 | 1.154 | 7 | 0.41 | OK | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0096 | 20.90 | 2.600 | 16.08 | 5.408 | 1.154 | 7 | 0.81 | OK | 0 |
| 289.30 | Acid Soluble Molybdenum , ICP (ppm) | 0255 | 21.68 | 0.7910 | 16.08 | 5.408 | 1.154 | 7 | 0.94 | OK | 0 |
| 289.32 | Acid Soluble Molybdenum , ICP, 2006.03 (ppm) | 0394 | 15.00 | 0.0000 | | | | 1 | | | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0515 | 12.97 | 1.050 | 17.35 | 2.344 | 0.6248 | 9 | -1.72 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0494 | 15.37 | 0.0413 | 17.35 | 2.344 | 0.6248 | 9 | -0.78 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0117 | 16.72 | 0.4700 | 17.35 | 2.344 | 0.6248 | 9 | -0.25 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0546 | 16.73 | 1.230 | 17.35 | 2.344 | 0.6248 | 9 | -0.24 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0423 | 17.21 | 0.3600 | 17.35 | 2.344 | 0.6248 | 9 | -0.05 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0037 | 17.69 | 0.2770 | 17.35 | 2.344 | 0.6248 | 9 | 0.13 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0233 | 18.58 | 1.160 | 17.35 | 2.344 | 0.6248 | 9 | 0.49 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0527 | 19.13 | 0.0350 | 17.35 | 2.344 | 0.6248 | 9 | 0.70 | OK | 0 |
| 289.33 | Acid Soluble Molybdenum , ICP, 2017.02 (ppm) | 0106 | 21.50 | 1.000 | 17.35 | 2.344 | 0.6248 | 9 | 1.64 | OK | 0 |
| 289.34 | Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm) | 0515 | 12.65 | 1.846 | 18.10 | 5.284 | 1.782 | 3 | -1.03 | | 0 |
| 289.34 | Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm) | 0501 | 18.45 | 0.7000 | 18.10 | 5.284 | 1.782 | 3 | 0.07 | | 0 |
| 289.34 | Acid Soluble Molybdenum , ICP, EPA 3050B/601... (ppm) | 0368 | 23.20 | 2.800 | 18.10 | 5.284 | 1.782 | 3 | 0.97 | | 0 |
| 289.99 | Acid Soluble Molybdenum , Other (ppm) | 0519 | 0.0100 | 0.0000 | 10.13 | 8.769 | 0.0800 | 3 | -1.15 | | 0 |
| 289.99 | Acid Soluble Molybdenum , Other (ppm) | 0476 | 14.82 | 0.1400 | 10.13 | 8.769 | 0.0800 | 3 | 0.54 | | 0 |
| 289.99 | Acid Soluble Molybdenum , Other (ppm) | 0520 | 15.55 | 0.1000 | 10.13 | 8.769 | 0.0800 | 3 | 0.62 | | 0 |
| 291.00 | Acid Soluble Nickel , AA, test portion 2006.... (ppm) | 0550 | 133.7 | 17.89 | | | | 2 | | | 0 |
| 291.00 | Acid Soluble Nickel , AA, test portion 2006.... (ppm) | 0498 | 148.8 | 0.6000 | | | | 2 | | | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0523 | 73.81 | 0.2100 | 123.9 | 28.40 | 4.903 | 8 | -1.61 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0482 | 109.5 | 7.000 | 123.9 | 28.40 | 4.903 | 8 | -0.46 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0444 | 111.0 | 10.00 | 123.9 | 28.40 | 4.903 | 8 | -0.42 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0521 | 116.8 | 0.0000 | 123.9 | 28.40 | 4.903 | 8 | -0.23 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0394 | 121.0 | 2.000 | 123.9 | 28.40 | 4.903 | 8 | -0.09 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0541 | 148.0 | 18.00 | 123.9 | 28.40 | 4.903 | 8 | 0.78 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0096 | 150.1 | 1.800 | 123.9 | 28.40 | 4.903 | 8 | 0.84 | NA | 0 |
| 291.30 | Acid Soluble Nickel , ICP (ppm) | 0524 | 153.5 | 0.2102 | 123.9 | 28.40 | 4.903 | 8 | 0.95 | 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 | | | | |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0515 | 140.3 | 6.716 | 149.0 | 5.920 | 5.668 | 6 | -1.31 | NA | 0 |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0494 | 146.2 | 18.62 | 149.0 | 5.920 | 5.668 | 6 | -0.43 | NA | 0 |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0037 | 148.3 | 2.996 | 149.0 | 5.920 | 5.668 | 6 | -0.12 | NA | 0 |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0117 | 152.8 | 2.600 | 149.0 | 5.920 | 5.668 | 6 | 0.56 | NA | 0 |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0233 | 153.0 | 1.800 | 149.0 | 5.920 | 5.668 | 6 | 0.59 | NA | 0 |
| 291.33 | Acid Soluble Nickel , ICP, 2017.02 (ppm) | 0527 | 153.7 | 1.270 | 149.0 | 5.920 | 5.668 | 6 | 0.70 | NA | 0 |
| 291.34 | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm) | 0368 | 138.0 | 4.000 | 161.2 | 24.88 | 30.89 | 3 | -0.93 | | 0 |
| 291.34 | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm) | 0501 | 158.2 | 1.100 | 161.2 | 24.88 | 30.89 | 3 | -0.12 | | 0 |
| 291.34 | Acid Soluble Nickel , ICP, EPA 3050B/6010C (ppm) | 0515 | 187.5 | 87.57 | 161.2 | 24.88 | 30.89 | 3 | 1.06 | | 0 |
| 291.99 | Acid Soluble Nickel , Other (ppm) | 0255 | 115.2 | 3.349 | 142.7 | 29.67 | 1.127 | 4 | -0.93 | | 0 |
| 291.99 | Acid Soluble Nickel , Other (ppm) | 0476 | 121.3 | 0.6000 | 142.7 | 29.67 | 1.127 | 4 | -0.72 | | 0 |
| 291.99 | Acid Soluble Nickel , Other (ppm) | 0519 | 156.2 | 0.4600 | 142.7 | 29.67 | 1.127 | 4 | 0.46 | | 0 |
| 291.99 | Acid Soluble Nickel , Other (ppm) | 0520 | 178.0 | 0.1000 | 142.7 | 29.67 | 1.127 | 4 | 1.19 | | 0 |
| 301.00 | Acid Soluble Selenium , AA, test portion 200... (ppm) | 0498 | 0.7800 | 0.1000 | | | | 2 | | | 0 |
| 301.00 | Acid Soluble Selenium , AA, test portion 200... (ppm) | 0550 | 0.8800 | 1.540 | | | | 2 | | | 0 |
| 301.30 | Acid Soluble Selenium , ICP (ppm) | 0524 | 0.4700 | 0.0800 | | | | 2 | | | 0 |
| 301.30 | Acid Soluble Selenium , ICP (ppm) | 0541 | 0.9500 | 0.9000 | | | | 2 | | | 0 |
| 301.33 | Acid Soluble Selenium , ICP, 2017.02 (ppm) | 0527 | 3.342 | 0.1890 | | | | 1 | | | 0 |
| 301.33 | Acid Soluble Selenium , ICP, 2017.02 (ppm) | 0515 | 0.0000 | 0.0000 | | | | 1 | | | 4 |
| 301.34 | Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm) | 0368 | 0.0000 | 0.0000 | | | | 0 | | | 4 |
| 301.34 | Acid Soluble Selenium , ICP, EPA 3050B/6010C... (ppm) | 0515 | 0.0000 | 0.0000 | | | | 0 | | | 4 |
| 301.99 | Acid Soluble Selenium , Other (ppm) | 0519 | 0.0100 | 0.0000 | 4.631 | 4.741 | 0.1803 | 3 | -0.97 | | 0 |
| 301.99 | Acid Soluble Selenium , Other (ppm) | 0476 | 4.400 | 0.2000 | 4.631 | 4.741 | 0.1803 | 3 | -0.05 | | 0 |
| 301.99 | Acid Soluble Selenium , Other (ppm) | 0255 | 9.484 | 0.3410 | 4.631 | 4.741 | 0.1803 | 3 | 1.02 | | 0 |
| 311.32 | Sodium, ICP, 2006.03 test portion (%) | 0521 | 0.0925 | 0.0000 | | | | 1 | | | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0117 | 0.1003 | 0.0133 | 0.1076 | 0.0079 | 0.0088 | 3 | -0.92 | | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0527 | 0.1065 | 0.0090 | 0.1076 | 0.0079 | 0.0088 | 3 | -0.14 | | 0 |
| 311.33 | Sodium, ICP, test portion as in 2017.02 (%) | 0423 | 0.1160 | 0.0040 | 0.1076 | 0.0079 | 0.0088 | 3 | 1.06 | | 0 |
| 311.99 | Sodium, Other (%) | 0482 | 0.1000 | 0.0000 | 0.1133 | 0.0189 | 0.0133 | 3 | -0.70 | | 0 |
| 311.99 | Sodium, Other (%) | 0096 | 0.1050 | 0.0100 | 0.1133 | 0.0189 | 0.0133 | 3 | -0.44 | | 0 |
| 311.99 | Sodium, Other (%) | 0354 | 0.1350 | 0.0300 | 0.1133 | 0.0189 | 0.0133 | 3 | 1.14 | | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0531 | 0.4435 | 0.0170 | 0.4716 | 0.0213 | 0.0125 | 11 | -1.23 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0533 | 0.4525 | 0.0050 | 0.4716 | 0.0213 | 0.0125 | 11 | -0.84 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0535 | 0.4550 | 0.0100 | 0.4716 | 0.0213 | 0.0125 | 11 | -0.73 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0513 | 0.4560 | 0.0280 | 0.4716 | 0.0213 | 0.0125 | 11 | -0.69 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0516 | 0.4643 | 0.0155 | 0.4716 | 0.0213 | 0.0125 | 11 | -0.32 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0040 | 0.4750 | 0.0080 | 0.4716 | 0.0213 | 0.0125 | 11 | 0.15 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0169 | 0.4800 | 0.0080 | 0.4716 | 0.0213 | 0.0125 | 11 | 0.37 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0550 | 0.4800 | 0.0200 | 0.4716 | 0.0213 | 0.0125 | 11 | 0.37 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0105 | 0.4848 | 0.0100 | 0.4716 | 0.0213 | 0.0125 | 11 | 0.58 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0485 | 0.4936 | 0.0155 | 0.4716 | 0.0213 | 0.0125 | 11 | 0.96 | OK | 0 |
| 321.00 | Acid Soluble Zinc , AA, inorganic 965.09 (0.62%) | 0029 | 0.5032 | 0.0004 | 0.4716 | 0.0213 | 0.0125 | 11 | 1.39 | OK | 0 |
| 321.03 | Acid Soluble Zinc , AA, 965.09, test portion... (0.62%) | 0105 | 0.4733 | 0.0159 | | | | 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 | | | | |
| 321.03 | Acid Soluble Zinc , AA, 965.09, test portion... (0.62%) | 0498 | 0.5350 | 0.0100 | | | | 2 | | | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0102 | 0.3642 | 0.0002 | 0.4788 | 0.0371 | 0.0137 | 23 | -3.09 | Low | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0230 | 0.3935 | 0.0130 | 0.4788 | 0.0371 | 0.0137 | 23 | -2.30 | Low | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0324 | 0.4315 | 0.0130 | 0.4788 | 0.0371 | 0.0137 | 23 | -1.27 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0255 | 0.4395 | 0.0070 | 0.4788 | 0.0371 | 0.0137 | 23 | -1.06 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0452 | 0.4400 | 0.0000 | 0.4788 | 0.0371 | 0.0137 | 23 | -1.04 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0231 | 0.4550 | 0.0100 | 0.4788 | 0.0371 | 0.0137 | 23 | -0.64 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0234 | 0.4600 | 0.0200 | 0.4788 | 0.0371 | 0.0137 | 23 | -0.51 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0444 | 0.4600 | 0.0000 | 0.4788 | 0.0371 | 0.0137 | 23 | -0.51 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0360 | 0.4740 | 0.0020 | 0.4788 | 0.0371 | 0.0137 | 23 | -0.13 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0292 | 0.4800 | 0.0000 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.03 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0472 | 0.4800 | 0.0000 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.03 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0482 | 0.4800 | 0.0200 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.03 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0096 | 0.4888 | 0.0117 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.27 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0307 | 0.4950 | 0.0540 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.44 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0552 | 0.4950 | 0.0300 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.44 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0049 | 0.4965 | 0.0313 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.48 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0433 | 0.4990 | 0.0060 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.54 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0041 | 0.5000 | 0.0200 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.57 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0354 | 0.5000 | 0.0200 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.57 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0371 | 0.5000 | 0.0000 | 0.4788 | 0.0371 | 0.0137 | 23 | 0.57 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0483 | 0.5230 | 0.0160 | 0.4788 | 0.0371 | 0.0137 | 23 | 1.19 | OK | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0291 | 0.5550 | 0.0100 | 0.4788 | 0.0371 | 0.0137 | 23 | 2.05 | High | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0402 | 0.5850 | 0.0300 | 0.4788 | 0.0371 | 0.0137 | 23 | 2.86 | High | 0 |
| 321.30 | Acid Soluble Zinc , ICP, test portion inorga... (0.62%) | 0422 | 0.4300 | 0.0800 | 0.4788 | 0.0371 | 0.0137 | 23 | -1.31 | OK | 1 |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.0... (0.62%) | 0542 | 0.4637 | 0.0033 | 0.5205 | 0.0539 | 0.0031 | 5 | -1.06 | | 0 |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.0... (0.62%) | 0043 | 0.5030 | 0.0000 | 0.5205 | 0.0539 | 0.0031 | 5 | -0.33 | | 0 |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.0... (0.62%) | 0394 | 0.5050 | 0.0100 | 0.5205 | 0.0539 | 0.0031 | 5 | -0.29 | | 0 |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.0... (0.62%) | 0521 | 0.5220 | 0.0000 | 0.5205 | 0.0539 | 0.0031 | 5 | 0.03 | | 0 |
| 321.32 | Acid Soluble Zinc , ICP, test portion 2006.0... (0.62%) | 0423 | 0.6090 | 0.0020 | 0.5205 | 0.0539 | 0.0031 | 5 | 1.64 | | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0106 | 0.4232 | 0.0000 | 0.4676 | 0.0122 | 0.0082 | 12 | -3.64 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0177 | 0.4471 | 0.0111 | 0.4676 | 0.0122 | 0.0082 | 12 | -1.69 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0034 | 0.4600 | 0.0120 | 0.4676 | 0.0122 | 0.0082 | 12 | -0.63 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0037 | 0.4630 | 0.0220 | 0.4676 | 0.0122 | 0.0082 | 12 | -0.38 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0117 | 0.4680 | 0.0011 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.03 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0546 | 0.4685 | 0.0010 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.07 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0055 | 0.4700 | 0.0000 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.19 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0486 | 0.4700 | 0.0200 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.19 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0527 | 0.4735 | 0.0050 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.48 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0025 | 0.4766 | 0.0003 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.73 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0233 | 0.4816 | 0.0103 | 0.4676 | 0.0122 | 0.0082 | 12 | 1.14 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0494 | 0.4819 | 0.0160 | 0.4676 | 0.0122 | 0.0082 | 12 | 1.17 | OK | 0 |
| 321.33 | Acid Soluble Zinc , ICP, 2017.02 (0.62%) | 0515 | 0.4761 | 0.1161 | 0.4676 | 0.0122 | 0.0082 | 12 | 0.69 | OK | 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 | | | | |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0389 | 0.1190 | 0.0000 | 0.4789 | 0.1561 | 0.0218 | 9 | -2.13 | Low | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0476 | 0.3950 | 0.0100 | 0.4789 | 0.1561 | 0.0218 | 9 | -0.50 | Low | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0368 | 0.4210 | 0.0464 | 0.4789 | 0.1561 | 0.0218 | 9 | -0.34 | Low | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0524 | 0.4518 | 0.0088 | 0.4789 | 0.1561 | 0.0218 | 9 | -0.16 | OK | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0523 | 0.4600 | 0.0020 | 0.4789 | 0.1561 | 0.0218 | 9 | -0.11 | OK | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0515 | 0.4693 | 0.0902 | 0.4789 | 0.1561 | 0.0218 | 9 | -0.06 | OK | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0042 | 0.5005 | 0.0090 | 0.4789 | 0.1561 | 0.0218 | 9 | 0.13 | OK | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0519 | 0.6550 | 0.0300 | 0.4789 | 0.1561 | 0.0218 | 9 | 1.04 | High | 0 |
| 321.99 | Acid Soluble Zinc , Other (0.62%) | 0520 | 0.7200 | 0.0000 | 0.4789 | 0.1561 | 0.0218 | 9 | 1.43 | High | 0 |
| 325.00 | Water Soluble Zinc , AA (%) | 0027 | 0.1215 | 0.0330 | 0.3881 | 0.2620 | 0.0263 | 4 | -1.02 | | 0 |
| 325.00 | Water Soluble Zinc , AA (%) | 0356 | 0.2110 | 0.0120 | 0.3881 | 0.2620 | 0.0263 | 4 | -0.68 | | 0 |
| 325.00 | Water Soluble Zinc , AA (%) | 0532 | 0.5600 | 0.0400 | 0.3881 | 0.2620 | 0.0263 | 4 | 0.66 | | 0 |
| 325.00 | Water Soluble Zinc , AA (%) | 0537 | 0.6600 | 0.0200 | 0.3881 | 0.2620 | 0.0263 | 4 | 1.04 | | 0 |
| 325.30 | Water Soluble Zinc , ICP (%) | 0444 | 0.2850 | 0.0300 | | | | 2 | | | 0 |
| 325.30 | Water Soluble Zinc , ICP (%) | 0541 | 0.3750 | 0.0100 | | | | 2 | | | 0 |

Interpreting Z Scores: Red indicates a normally distributed Z value >3 or <-3 (requires action), Orange = Z between 2 and 3 or -2 and -3 (warning) and Green = Z < 2 and >-2 (OK at 95%). Flags indicate data usage: 0 = Used, 1 = rejected for duplicates too far apart, 2 = rejected as extreme outlier, 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.