

MAGRUDER - Fertilizer Check Sample No. - 200508 Grade 25-2-5

- Pass 1 Results for 77 Labs - - Pass 2 Results for 77 Labs -

| Method | AOAC Ref. | Method Code | No. of Labs | Grand Avq. | Std. Dev. | Average Range of Dups | No. of Labs | Grand Avq. | Std. Dev. | Average Range of Dups |
|---|-----------|-------------|-------------|------------|-----------|-----------------------|-------------|------------|-----------|-----------------------|
| Ammoniacal Nitrogen, MgO Distillation . | 920.03 | 001.10 | 6 | 5.15 | 0.29 | 0.09 | 6 | 5.15 | 0.29 | 0.09 |
| Ammoniacal Nitrogen, Other | | 001.99 | 8 | 5.12 | 0.24 | 0.06 | 7 | 5.11 | 0.25 | 0.02 |
| Method Group 001.XX PCT | | | 14 | 5.13 | 0.26 | 0.07 | 12 | 5.12 | 0.27 | 0.03 |
| Nitrate Nitrogen, Other | | 002.99 | 1 | 0.02 | 0.00 | 0.00 | 1 | 0.02 | 0.00 | 0.00 |
| Water Insoluble Nitrogen, Meth I | 945.01 | 003.10 | 3 | 3.65 | 1.74 | 0.08 | 3 | 3.65 | 1.74 | 0.08 |
| Water Insoluble Nitrogen, Other | | 003.99 | 2 | 2.75 | 0.17 | 0.00 | 2 | 2.75 | 0.17 | 0.00 |
| Method Group 003.XX PCT | | | 5 | 3.29 | 1.38 | 0.05 | 5 | 3.29 | 1.38 | 0.05 |
| Nitrogen From Urea, Other | | 005.99 | 4 | 16.32 | 2.66 | 0.04 | 4 | 16.32 | 2.66 | 0.04 |
| Percent Urea, Urease (as Urea) | 959.03 | 007.00 | 1 | 13.08 | 0.27 | 0.38 | 1 | 13.08 | 0.27 | 0.38 |
| Percent Urea, Other | | 007.99 | 1 | 12.40 | 0.00 | 0.00 | 1 | 12.40 | 0.00 | 0.00 |
| Method Group 007.XX PCT | | | 2 | 12.74 | 0.42 | 0.19 | 2 | 12.74 | 0.42 | 0.19 |
| Ammon & Nitrate N, Devarda | 892.01 | 009.10 | 1 | 4.99 | 0.03 | 0.04 | 1 | 4.99 | 0.03 | 0.04 |
| Ammon & Nitrate N, Other | | 009.99 | 1 | 5.19 | 0.06 | 0.09 | 1 | 5.19 | 0.06 | 0.09 |
| Method Group 009.XX PCT | | | 2 | 5.09 | 0.12 | 0.07 | 2 | 5.09 | 0.12 | 0.07 |
| Total Nitrogen, Modified Comprehensive | 978.02 | 010.11 | 6 | 25.89 | 0.28 | 0.06 | 6 | 25.89 | 0.28 | 0.06 |
| Total Nitrogen, Salicylic | 955.04D | 010.12 | 4 | 25.89 | 0.20 | 0.09 | 4 | 25.89 | 0.20 | 0.09 |
| Total Nitrogen, Comprehensive | 970.02 | 010.17 | 1 | 25.32 | 0.03 | 0.04 | 1 | 25.32 | 0.03 | 0.04 |
| Total Nitrogen, Combustion | | 010.60 | 49 | 26.24 | 0.28 | 0.14 | 46 | 26.23 | 0.27 | 0.11 |
| Total Nitrogen, Other | | 010.99 | 3 | 26.05 | 0.24 | 0.29 | 3 | 26.05 | 0.24 | 0.29 |
| Method Group 010.XX PCT | | | 63 | 26.16 | 0.31 | 0.13 | 59 | 26.16 | 0.31 | 0.11 |
| Total Phosphate, Grav Quimociac | 962.02 | 020.10 | 7 | 2.93 | 0.12 | 0.06 | 7 | 2.93 | 0.12 | 0.06 |
| Total Phosphate, Spectrometric | 958.01 | 020.20 | 16 | 2.96 | 0.18 | 0.06 | 14 | 2.98 | 0.17 | 0.03 |
| Total Phosphate, Automated | 978.01 | 020.40 | 8 | 2.92 | 0.07 | 0.04 | 7 | 2.93 | 0.05 | 0.03 |
| Total Phosphate, ICP | | 020.50 | 6 | 3.00 | 0.12 | 0.09 | 6 | 3.00 | 0.12 | 0.09 |
| Total Phosphate, Other | | 020.99 | 1 | 3.00 | 0.01 | 0.02 | 1 | 3.00 | 0.01 | 0.02 |
| Method Group 020.XX PCT | | | 38 | 2.95 | 0.14 | 0.06 | 35 | 2.96 | 0.13 | 0.05 |
| Insoluble Phosphate, Grav Quimociac ... | 963.03C | 030.10 | 2 | 0.02 | 0.02 | 0.00 | 2 | 0.02 | 0.02 | 0.00 |
| Insoluble Phosphate, Spectrometric | 963.03C | 030.20 | 1 | 0.20 | 0.02 | 0.03 | 1 | 0.20 | 0.02 | 0.03 |
| Insoluble Phosphate, Automated | 978.01 | 030.40 | 1 | 0.05 | 0.00 | 0.00 | 1 | 0.05 | 0.00 | 0.00 |
| Insoluble Phosphate, ICP | | 030.50 | 1 | 0.05 | 0.01 | 0.01 | 1 | 0.05 | 0.01 | 0.01 |
| Insoluble Phosphate, Other | | 030.99 | 1 | 0.02 | 0.01 | 0.01 | 1 | 0.02 | 0.01 | 0.01 |
| Method Group 030.XX PCT | | | 6 | 0.06 | 0.07 | 0.01 | 5 | 0.03 | 0.02 | 0.00 |
| InDir Available Phosphate, Grav Quim .. | 960.02 | 040.10 | 2 | 3.05 | 0.11 | 0.12 | 2 | 3.05 | 0.11 | 0.12 |
| InDir Available Phosphate, Spectrometri | 960.02 | 040.20 | 1 | 2.79 | 0.02 | 0.03 | 1 | 2.79 | 0.02 | 0.03 |
| InDir Available Phosphate, Automated .. | 960.02 | 040.40 | 2 | 2.93 | 0.04 | 0.01 | 2 | 2.93 | 0.04 | 0.01 |
| InDir Available Phosphate, Other | | 040.99 | 1 | 2.89 | 0.03 | 0.04 | 1 | 2.89 | 0.03 | 0.04 |
| Method Group 040.XX PCT | | | 6 | 2.94 | 0.12 | 0.05 | 5 | 2.91 | 0.08 | 0.03 |
| Dir Available Phosphate, Grav Quimociac | 960.03E | 041.10 | 13 | 2.89 | 0.06 | 0.05 | 13 | 2.89 | 0.06 | 0.05 |
| Dir Available Phosphate, Spectrometric | 960.03D | 041.20 | 5 | 2.88 | 0.06 | 0.04 | 4 | 2.88 | 0.06 | 0.02 |

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|---|-----------|-------------|-------------|------------|-----------|-----------------------|-------------|------------|-----------|-----------------------|
| Dir Available Phosphate, Automated | 978.01 | 041.40 | 4 | 2.85 | 0.08 | 0.03 | 4 | 2.85 | 0.08 | 0.03 |
| Dir Available Phosphate, ICP | | 041.50 | 7 | 2.87 | 0.07 | 0.06 | 7 | 2.87 | 0.07 | 0.06 |
| Dir Available Phosphate, EDTA Extract . | 993.01 | 041.60 | 9 | 2.87 | 0.06 | 0.05 | 9 | 2.87 | 0.06 | 0.05 |
| Method Group 041.XX PCT | | | 39 | 2.87 | 0.07 | 0.05 | 39 | 2.87 | 0.07 | 0.05 |
| Water Soluble Phosphate, Spectrometric | 970.01 | 048.20 | 5 | 2.46 | 0.05 | 0.01 | 5 | 2.46 | 0.05 | 0.01 |
| Soluble Potash, STPB Oxalate | 958.02 | 050.00 | 12 | 4.16 | 0.13 | 0.06 | 11 | 4.15 | 0.13 | 0.04 |
| Soluble Potash, AA (Oxalate) | | 050.30 | 8 | 4.15 | 0.23 | 0.06 | 8 | 4.15 | 0.23 | 0.06 |
| Soluble Potash, AA (Citrate) | | 050.31 | 1 | 3.60 | 0.18 | 0.26 | 1 | 3.60 | 0.18 | 0.26 |
| Soluble Potash, ICP (Oxalate) | | 050.50 | 7 | 4.10 | 0.28 | 0.11 | 6 | 4.02 | 0.17 | 0.06 |
| Soluble Potash, ICP (Citrate) | | 050.51 | 10 | 4.13 | 0.18 | 0.07 | 9 | 4.14 | 0.18 | 0.05 |
| Soluble Potash, Flame (Oxalate) | 983.02(a) | 050.60 | 6 | 4.05 | 0.07 | 0.07 | 6 | 4.05 | 0.07 | 0.07 |
| Soluble Potash, Flame (Citrate) | 983.02(b) | 050.61 | 9 | 4.11 | 0.22 | 0.08 | 9 | 4.11 | 0.22 | 0.08 |
| Soluble Potash, Other | | 050.99 | 13 | 4.12 | 0.28 | 0.07 | 13 | 4.12 | 0.28 | 0.07 |
| Method Group 050.XX PCT | | | 67 | 4.11 | 0.23 | 0.08 | 63 | 4.11 | 0.21 | 0.06 |
| Free Water, Vacuum Oven | 965.08B | 060.00 | 8 | 1.12 | 0.12 | 0.07 | 8 | 1.12 | 0.12 | 0.07 |
| Acid Soluble Calcium, AA | 945.04 | 101.00 | 1 | 4.22 | 0.34 | 0.48 | 1 | 4.22 | 0.34 | 0.48 |
| Acid Soluble Calcium, ICP | | 101.30 | 15 | 3.91 | 0.26 | 0.10 | 15 | 3.91 | 0.26 | 0.10 |
| Acid Soluble Calcium, Other | | 101.99 | 1 | 3.68 | 0.01 | 0.02 | 1 | 3.68 | 0.01 | 0.02 |
| Method Group 101.XX PCT | | | 17 | 3.91 | 0.27 | 0.12 | 16 | 3.89 | 0.25 | 0.10 |
| Acid Soluble Magnesium, AA | 984.01 | 121.00 | 1 | 2.27 | 0.06 | 0.09 | 1 | 2.27 | 0.06 | 0.09 |
| Acid Soluble Magnesium, ICP | | 121.30 | 16 | 2.24 | 0.14 | 0.08 | 15 | 2.23 | 0.13 | 0.07 |
| Acid Soluble Magnesium, Other | | 121.99 | 1 | 2.19 | 0.01 | 0.02 | 1 | 2.19 | 0.01 | 0.02 |
| Method Group 121.XX PCT | | | 18 | 2.24 | 0.13 | 0.08 | 17 | 2.23 | 0.13 | 0.07 |
| Sulfur, Gravimetric | 980.02a | 144.01 | 14 | 4.81 | 0.11 | 0.03 | 14 | 4.81 | 0.11 | 0.03 |
| Sulfur, Gravimetric | 980.02b | 144.02 | 2 | 4.80 | 0.07 | 0.04 | 2 | 4.80 | 0.07 | 0.04 |
| Sulfur, Spectrometric | | 144.70 | 1 | 4.80 | 0.11 | 0.16 | 1 | 4.80 | 0.11 | 0.16 |
| Sulfur, Other | | 144.99 | 17 | 4.71 | 0.22 | 0.09 | 16 | 4.70 | 0.22 | 0.08 |
| Method Group 144.XX PCT | | | 34 | 4.76 | 0.18 | 0.07 | 32 | 4.75 | 0.17 | 0.05 |
| Arsenic, Atomic Absorption | | 151.00 | 2 | 0.74 | 0.27 | 0.24 | 2 | 0.74 | 0.27 | 0.24 |
| Arsenic, ICP | | 151.30 | 4 | 1.27 | 1.18 | 0.34 | 4 | 1.27 | 1.18 | 0.34 |
| Arsenic, Other | | 151.99 | 1 | 1.40 | 0.42 | 0.60 | 1 | 1.40 | 0.42 | 0.60 |
| Method Group 151.XX PPM | | | 7 | 1.14 | 0.92 | 0.35 | 7 | 1.14 | 0.92 | 0.35 |
| Acid Soluble Boron, Other | | 165.99 | 5 | 0.003 | 0.002 | 0.000 | 5 | 0.003 | 0.002 | 0.000 |
| Cadmium, Atomic Absorption | | 181.00 | 4 | 0.78 | 0.18 | 0.08 | 3 | 0.70 | 0.03 | 0.01 |
| Cadmium, ICP | | 181.30 | 10 | 0.87 | 0.25 | 0.17 | 9 | 0.86 | 0.21 | 0.09 |
| Cadmium, Other | | 181.99 | 1 | 0.75 | 0.07 | 0.10 | 1 | 0.75 | 0.07 | 0.10 |
| Method Group 181.XX PPM | | | 15 | 0.84 | 0.22 | 0.14 | 14 | 0.83 | 0.19 | 0.09 |
| Water Soluble Chlorine, Titrimetric ... | 928.02 | 190.00 | 3 | 3.09 | 0.05 | 0.01 | 3 | 3.09 | 0.05 | 0.01 |
| Water Soluble Chlorine, Other | | 190.99 | 1 | 3.04 | 0.07 | 0.10 | 1 | 3.04 | 0.07 | 0.10 |

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|---|-----------|-------------|-------------|------------|-----------|-----------------------|-------------|------------|-----------|-----------------------|
| Method Group 190.XX PCT | | | 4 | 3.08 | 0.06 | 0.03 | 4 | 3.08 | 0.06 | 0.03 |
| Chromium, ICP | | 191.30 | 14 | 62.07 | 30.94 | 4.30 | 13 | 60.78 | 31.56 | 2.62 |
| Chromium, Other | | 191.99 | 1 | 72.25 | 5.44 | 7.70 | 1 | 72.25 | 5.44 | 7.70 |
| Method Group 191.XX PPM | | | 15 | 62.75 | 29.99 | 4.53 | 14 | 61.60 | 30.54 | 2.98 |
| Acid Soluble Cobalt, ICP | 965.11 | 202.30 | 13 | 8.90 | 3.91 | 0.84 | 12 | 8.75 | 4.01 | 0.66 |
| Acid Soluble Cobalt, Other | | 202.99 | 1 | 14.75 | 0.64 | 0.90 | 1 | 14.75 | 0.64 | 0.90 |
| Method Group 202.XX PPM | | | 14 | 9.32 | 4.06 | 0.85 | 13 | 9.21 | 4.18 | 0.68 |
| Acid Soluble Copper, Atomic Absorption | 975.01 | 221.00 | 8 | 0.0106 | 0.0012 | 0.0004 | 8 | 0.0106 | 0.0012 | 0.0004 |
| Acid Soluble Copper, ICP | | 221.30 | 18 | 0.0109 | 0.0010 | 0.0005 | 17 | 0.0108 | 0.0009 | 0.0004 |
| Acid Soluble Copper, Other | | 221.99 | 1 | 0.0120 | 0.0003 | 0.0004 | 1 | 0.0120 | 0.0003 | 0.0004 |
| Method Group 221.XX PCT | | | 27 | 0.0109 | 0.0011 | 0.0005 | 25 | 0.0108 | 0.0010 | 0.0004 |
| Acid Soluble Iron, Atomic Absorption .. | 980.01 | 241.00 | 13 | 1.02 | 0.13 | 0.03 | 12 | 1.03 | 0.13 | 0.02 |
| Acid Soluble Iron, ICP | | 241.30 | 23 | 1.02 | 0.12 | 0.04 | 22 | 1.02 | 0.12 | 0.04 |
| Acid Soluble Iron, Other | | 241.99 | 3 | 1.13 | 0.05 | 0.03 | 3 | 1.13 | 0.05 | 0.03 |
| Method Group 241.XX PCT | | | 40 | 1.04 | 0.13 | 0.04 | 37 | 1.02 | 0.12 | 0.03 |
| Lead, Atomic Absorption | | 251.00 | 2 | 5.67 | 0.71 | 0.59 | 2 | 5.67 | 0.71 | 0.59 |
| Lead, ICP | | 251.30 | 10 | 6.17 | 1.43 | 0.30 | 9 | 6.18 | 1.50 | 0.20 |
| Lead, Other | | 251.99 | 1 | 9.80 | 0.00 | 0.00 | 1 | 9.80 | 0.00 | 0.00 |
| Method Group 251.XX PPM | | | 13 | 6.37 | 1.63 | 0.32 | 12 | 6.39 | 1.69 | 0.25 |
| Acid Soluble Manganese, AA | 972.02a | 261.00 | 1 | 0.027 | 0.000 | 0.000 | 1 | 0.027 | 0.000 | 0.000 |
| Acid Soluble Manganese, ICP | 972.02a | 261.30 | 13 | 0.022 | 0.002 | 0.001 | 12 | 0.022 | 0.002 | 0.001 |
| Acid Soluble Manganese, ICP | 972.02b | 261.31 | 1 | 0.021 | 0.001 | 0.001 | 1 | 0.021 | 0.001 | 0.001 |
| Acid Soluble Manganese, Other | | 261.99 | 1 | 0.022 | 0.000 | 0.001 | 1 | 0.022 | 0.000 | 0.001 |
| Method Group 261.XX PCT | | | 16 | 0.022 | 0.002 | 0.001 | 15 | 0.022 | 0.002 | 0.001 |
| Water Soluble Manganese, Atomic Abs ... | 972.03 | 271.00 | 1 | 0.001 | 0.000 | 0.000 | 1 | 0.001 | 0.000 | 0.000 |
| Mercury, Atomic Absorption | | 281.00 | 2 | 0.10 | 0.08 | 0.01 | 2 | 0.10 | 0.08 | 0.01 |
| Mercury, Other | | 281.99 | 1 | 0.07 | 0.00 | 0.00 | 1 | 0.07 | 0.00 | 0.00 |
| Method Group 281.XX PPM | | | 3 | 0.09 | 0.07 | 0.01 | 3 | 0.09 | 0.07 | 0.01 |
| Molybdenum, Atomic Absorption | | 289.00 | 1 | 6.55 | 0.35 | 0.50 | 1 | 6.55 | 0.35 | 0.50 |
| Molybdenum, ICP | | 289.30 | 13 | 7.11 | 1.01 | 0.50 | 13 | 7.11 | 1.01 | 0.50 |
| Molybdenum, Other | | 289.99 | 1 | 8.35 | 0.21 | 0.30 | 1 | 8.35 | 0.21 | 0.30 |
| Method Group 289.XX PPM | | | 15 | 7.15 | 1.01 | 0.49 | 15 | 7.15 | 1.01 | 0.49 |
| Nickel, ICP | | 291.30 | 7 | 34.45 | 2.74 | 2.42 | 6 | 33.91 | 1.93 | 1.48 |
| Nickel, Other | | 291.99 | 2 | 33.28 | 2.34 | 3.45 | 2 | 33.28 | 2.34 | 3.45 |
| Method Group 291.XX PPM | | | 9 | 34.19 | 2.64 | 2.65 | 9 | 34.19 | 2.64 | 2.65 |
| Selenium, Atomic Absorption | | 301.00 | 1 | 0.02 | 0.01 | 0.02 | 1 | 0.02 | 0.01 | 0.02 |
| Selenium, ICP | | 301.30 | 3 | 22.29 | 33.86 | 0.99 | 3 | 22.29 | 33.86 | 0.99 |
| Method Group 301.XX PPM | | | 4 | 16.72 | 30.42 | 0.75 | 4 | 16.72 | 30.42 | 0.75 |
| Sodium, Other | | 311.99 | 5 | 0.07 | 0.06 | 0.00 | 4 | 0.07 | 0.07 | 0.00 |

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|---|------------------|--------------------|--------------------|-------------------|------------------|------------------------------|--------------------|-------------------|------------------|------------------------------|
| Acid Soluble Zinc, Atomic Absorption .. | 975.02 | 321.00 | 13 | 0.209 | 0.018 | 0.007 | 13 | 0.209 | 0.018 | 0.007 |
| Acid Soluble Zinc, ICP | | 321.30 | 24 | 0.206 | 0.018 | 0.011 | 21 | 0.204 | 0.015 | 0.006 |
| Acid Soluble Zinc, Other | | 321.99 | 1 | 0.222 | 0.009 | 0.013 | 1 | 0.222 | 0.009 | 0.013 |
| Method Group 321.XX PCT | | | 38 | 0.207 | 0.018 | 0.009 | 35 | 0.207 | 0.016 | 0.007 |
| Water Soluble Zinc, Atomic Absorption . | | 325.00 | 1 | 0.001 | 0.000 | 0.000 | 1 | 0.001 | 0.000 | 0.000 |
| Water Soluble Zinc, ICP | | 325.30 | 2 | 0.079 | 0.086 | 0.030 | 2 | 0.079 | 0.086 | 0.030 |
| Method Group 325.XX PCT | | | 3 | 0.053 | 0.077 | 0.020 | 3 | 0.053 | 0.077 | 0.020 |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|-----------------------------------|----------|-------|-----------------------------|----------|-------|------------------------------|----------|-------|------------------------------|----------|-------|-----------------------|----------|-------|
| Meth: 001.10 PCT | | | Meth: 001.XX PCT | | | Meth: 005.99 PCT | | | Meth: 010.11 PCT | | | Meth: 010.60 PCT | | |
| <u>Ammoniacal Nitrogen</u> | | | <u>Ammoniacal Nitrogen</u> | | | <u>Nitrogen From Urea</u> | | | <u>Total Nitrogen</u> | | | <u>Total Nitrogen</u> | | |
| <u>MgO Distillation</u> | | | | | | <u>Other</u> | | | <u>Modified Comprehensi</u> | | | <u>Combustion</u> | | |
| 415 | 5.44 | 1.00 | 027 | 4.87 | -.93 | 394 | 15.32 | -.38 | 105 | 26.21 | 1.13 | 406 | 26.51 | 1.02 |
| 309 | 5.41 | .89 | 324 | 4.89 | -.94 | 029 | 14.69 | -.61 | 073 | 26.08 | .72 | 369 | 26.50 | 1.01 |
| 029 | 5.21 | .50 | 251 | 4.70 | -1.56 | 027 | 14.66 | -.62 | 405 | 26.09 | .71 | 007 | 26.36 R | 1.01 |
| 090 | 5.25 | .34 | Meth: 002.99 PCT | | | Meth: 007.00 PCT | | | Avg 25.89 | | | 409 26.43 1.01 | | |
| Avg | 5.15 | | Nitrate Nitrogen | | | Percent Urea | | | 029 25.85 -.18 | | | 095 26.50 .97 | | |
| 324 | 4.89 | -.96 | <u>Other</u> | | | <u>Urease (as Urea)</u> | | | 415 25.69 -.71 | | | 234 26.47 .95 | | |
| 251 | 4.70 | -1.55 | 027 | 0.02 | .00 | 251 13.08 .71 | | | 090 25.43 -1.63 | | | 106 26.47 .89 | | |
| Meth: 001.99 PCT | | | Meth: 003.10 PCT | | | Meth: 007.99 PCT | | | Meth: 010.12 PCT | | | 057 26.42 .76 | | |
| <u>Ammoniacal Nitrogen</u> | | | <u>Water Insoluble Nitr</u> | | | Percent Urea | | | <u>Total Nitrogen</u> | | | 325 26.43 .72 | | |
| <u>Other</u> | | | <u>Meth I</u> | | | <u>Other</u> | | | <u>Salicylic</u> | | | 035 26.42 .67 | | |
| 393 | 6.73 s | 6.53 | 397 | 5.90 X | 1.29 | 234 | 12.40 | .00 | 397 | 26.10 | 1.15 | 034 | 26.25 | .56 |
| 397 | 5.51 | 1.60 | Avg | 3.65 | | Meth: 007.XX PCT | | | 254 25.95 .29 | | | 262 26.35 .47 | | |
| 234 | 5.39 | 1.14 | 029 | 2.57 | -.62 | <u>Percent Urea</u> | | | 211 25.92 .12 | | | 361 26.32 .33 | | |
| 409 | 5.15 R | .61 | 023 | 2.48 | -.67 | 251 13.08 .92 | | | Avg 25.89 | | | 025 26.26 .15 | | |
| 096 | 5.20 | .35 | Meth: 003.99 PCT | | | Avg 12.74 | | | 185 25.61 -1.44 | | | 114 26.26 .08 | | |
| Avg | 5.11 | | <u>Water Insoluble Nitr</u> | | | 234 12.40 -.81 | | | Meth: 010.17 PCT | | | 296 26.21 -.12 | | |
| 420 | 4.99 | -.49 | <u>Other</u> | | | Meth: 009.10 PCT | | | <u>Total Nitrogen</u> | | | 291 26.20 -.17 | | |
| 394 | 4.93 | -.75 | 234 | 2.90 | .87 | Ammon & Nitrate N | | | <u>Comprehensive</u> | | | 232 26.19 -.20 | | |
| 105 | 4.89 | -.89 | Avg | 2.75 | | Devarda | | | 137 25.32 .71 | | | 040 26.21 -.20 | | |
| 027 | 4.87 | -.97 | 027 | 2.60 | -.87 | 420 4.99 -.71 | | | Meth: 010.60 PCT | | | 247 26.15 -.34 | | |
| Meth: 001.XX PCT | | | Meth: 003.XX PCT | | | Meth: 009.99 PCT | | | Meth: 010.60 PCT | | | 251 26.15 -.36 | | |
| <u>Ammoniacal Nitrogen</u> | | | <u>Water Insoluble Nitr</u> | | | Ammon & Nitrate N | | | <u>Total Nitrogen</u> | | | 018 26.15 -.36 | | |
| 393 | 6.73 s | 5.95 | 397 | 5.90 X | 1.89 | <u>Other</u> | | | <u>Combustion</u> | | | 029 26.18 -.38 | | |
| 397 | 5.51 | 1.43 | Avg | 3.29 | | 105 5.19 -.71 | | | 157 27.78 s 5.72 | | | 426 26.18 -.39 | | |
| 415 | 5.44 | 1.18 | 234 | 2.90 | -.28 | Meth: 009.XX PCT | | | 422 27.44 s 4.48 | | | 023 26.14 -.39 | | |
| 309 | 5.41 | 1.06 | 027 | 2.60 | -.50 | <u>Ammon & Nitrate N</u> | | | 102 26.86 s 4.02 | | | 393 26.12 -.50 | | |
| 234 | 5.39 | 1.00 | 029 | 2.57 | -.52 | 105 5.19 -.71 | | | 390 26.67 1.61 | | | 055 26.17 -.56 | | |
| 029 | 5.21 R | .59 | 023 | 2.48 | -.59 | Meth: 009.99 PCT | | | 096 26.66 1.55 | | | 177 26.05 -.69 | | |
| 409 | 5.15 R | .55 | Meth: 005.99 PCT | | | Avg 5.09 | | | 330 26.55 R 1.49 | | | 049 26.03 -.81 | | |
| 090 | 5.25 | .46 | <u>Nitrogen From Urea</u> | | | 420 4.99 -.83 | | | 028 26.63 1.48 | | | 009 26.02 -.82 | | |
| 096 | 5.20 | .28 | <u>Other</u> | | | Meth: 009.99 PCT | | | 425 26.60 1.37 | | | 136 26.02 -.82 | | |
| Avg | 5.12 | | 309 | 20.60 | 1.61 | Ammon & Nitrate N | | | 324 26.55 1.20 | | | 162 26.02 -.85 | | |
| 420 | 4.99 | -.49 | Avg | 16.32 | | 105 5.19 .90 | | | 233 26.56 1.19 | | | 131 25.99 -.90 | | |
| 394 | 4.93 | -.72 | Meth: 003.10 PCT | | | Avg 5.09 | | | 394 26.53 1.07 | | | 042 25.95 -1.06 | | |
| 105 | 4.89 | -.85 | <u>Water Insoluble Nitr</u> | | | 420 4.99 -.83 | | | A=Analysis beyond 3-s limits | | | 360 26.00 -1.19 | | |
| * X=Excluded from lab performance | | | S/s=Screened Outlier | | | R=Duplicate Range too large | | | | | | | | |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|-----------------------|----------|--------|-----------------------|----------|-------|-----------------------------------|----------|-------|------------------------|----------|-------|-----------------------------|----------|-------|
| Meth: 010.60 PCT | | | Meth: 010.XX PCT | | | Meth: 010.XX PCT | | | Meth: 020.20 PCT | | | Meth: 020.99 PCT | | |
| <u>Total Nitrogen</u> | | | <u>Total Nitrogen</u> | | | <u>Total Nitrogen</u> | | | <u>Total Phosphate</u> | | | <u>Total Phosphate</u> | | |
| <u>Combustion</u> | | | | | | | | | <u>Spectrometric</u> | | | <u>Other</u> | | |
| 043 | 26.07 R | -1.22 | 057 | 26.42 | .90 | 360 | 26.00 | -.87 | 232 | 2.94 | -.22 | 392 | 3.00 | .71 |
| 428 | 25.90 | -1.23 | 325 | 26.43 | .87 | 043 | 26.07 R | -.97 | 177 | 2.92 | -.35 | | | |
| 389 | 25.75 | -1.80 | 035 | 26.42 | .84 | 029 | 25.85 | -1.01 | 234 | 2.88 | -.61 | | | |
| 027 | 25.62 | -2.27 | 262 | 26.35 | .64 | 300 | 25.87 R | -1.29 | 369 | 2.93 R | -.64 | Meth: 020.XX PCT | | |
| 292 | 25.55 | -2.53 | 034 | 26.25 | .57 | 389 | 25.75 | -1.32 | 420 | 2.86 | -.73 | <u>Total Phosphate</u> | | |
| | | | 361 | 26.32 | .53 | 415 | 25.69 | -1.51 | 390 | 3.31 s | 3.11 | | | |
| | | | 055 | 26.17 | .44 | 027 | 25.62 | -1.74 | 324 | 3.36 | 2.95 | | | |
| | | | 025 | 26.26 | .34 | 185 | 25.61 | -1.77 | 405 | 3.15 | 1.56 | | | |
| Meth: 010.99 PCT | | | 114 | 26.26 | .32 | 292 | 25.55 | -1.97 | 362 | 3.13 | 1.22 | | | |
| <u>Total Nitrogen</u> | | | 426 | 26.18 | .30 | 090 | 25.43 | -2.35 | 425 | 3.12 | 1.15 | | | |
| <u>Other</u> | | | 029 | 26.18 | .28 | 137 | 25.32 | -2.70 | 361 | 3.12 | 1.15 | | | |
| 368 | 26.46 S | 5.78 | 105 | 26.21 | .21 | 309 | 25.05 s | -3.61 | 262 | 3.10 | 1.03 | | | |
| 362 | 26.19 | .60 | 040 | 26.21 | .21 | 030 | 23.45 s | -8.75 | 330 | 3.02 | .80 | | | |
| 420 | 26.10 | .49 | 362 | 26.19 | .19 | Meth: 020.40 PCT | | | 389 | 3.06 | .74 | | | |
| Avg | 26.05 | | 296 | 26.21 | .18 | <u>Total Phosphate</u> | | | 418 | 3.04 X | .58 | | | |
| 300 | 25.87 | -1.38 | 291 | 26.20 | .15 | <u>Automated</u> | | | 432 | 3.02 | .57 | | | |
| 030 | 23.45 S | -10.74 | 232 | 26.19 | .14 | 096 | | | 3.02 | 1.78 | | | | |
| | | | Avg | 26.16 | | 193 | | | 2.98 | .99 | | | | |
| | | | 041 | 26.14 | -.09 | Meth: 020.10 PCT | | | 105 | 2.94 | .31 | | | |
| | | | 247 | 26.15 | -.09 | <u>Total Phosphate</u> | | | 096 | 2.93 | .44 | | | |
| | | | 023 | 26.14 | -.13 | <u>Grav Quimociac</u> | | | 292 | 3.00 | .31 | | | |
| | | | 018 | 26.15 | -.16 | 405 | | | 3.15 | 2.07 | | | | |
| | | | 251 | 26.15 | -.16 | 090 | | | 2.99 | .55 | | | | |
| | | | 405 | 26.09 | -.22 | 105 | | | 2.93 | .09 | | | | |
| | | | 393 | 26.12 | -.25 | Avg | | | 2.93 | | | | | |
| | | | 073 | 26.08 | -.34 | 024 | | | 2.88 | -1.09 | | | | |
| | | | 177 | 26.05 | -.36 | 035 | | | 2.80 R | -3.04 | | | | |
| | | | 397 | 26.10 | -.37 | 114 | | | 2.88 | -.53 | | | | |
| | | | 420 | 26.10 | -.40 | 157 | | | 2.85 | -.69 | | | | |
| | | | 049 | 26.03 | -.48 | 300 | | | 2.82 | -1.00 | | | | |
| | | | 136 | 26.02 | -.48 | Meth: 020.50 PCT | | | Meth: 020.50 PCT | | | | | |
| | | | 009 | 26.02 | -.48 | <u>Total Phosphate</u> | | | <u>Total Phosphate</u> | | | | | |
| | | | 162 | 26.02 | -.53 | <u>Spectrometric</u> | | | <u>ICP</u> | | | | | |
| | | | 131 | 25.99 | -.54 | 324 | | | 3.36 | 2.17 | | | | |
| | | | 042 | 25.95 | -.69 | 362 | | | 3.13 | .85 | | | | |
| | | | 254 | 25.95 | -.69 | 425 | | | 3.12 | .80 | | | | |
| | | | 211 | 25.92 | -.78 | 262 | | | 3.10 | .71 | | | | |
| | | | 428 | 25.90 | -.83 | 418 | | | 3.04 X | .36 | | | | |
| | | | | | | 292 | | | 3.00 | .18 | | | | |
| | | | | | | 406 | | | 2.99 | .05 | | | | |
| | | | | | | 363 | | | 2.98 | .01 | | | | |
| | | | | | | Avg | | | 2.98 | | | | | |
| | | | | | | 390 | | | 3.31 S | 3.15 | | | | |
| | | | | | | 361 | | | 3.12 | .97 | | | | |
| | | | | | | 330 | | | 3.02 | .76 | | | | |
| | | | | | | 389 | | | 3.06 | .53 | | | | |
| | | | | | | 432 | | | 3.02 | .47 | | | | |
| | | | | | | Avg | | | 3.00 | | | | | |
| | | | | | | 426 | | | 2.98 | -.21 | | | | |
| | | | | | | 368 | | | 2.79 | -1.86 | | | | |
| | | | | | | 422 | | | 2.45 S | -4.43 | | | | |
| | | | | | | 393 | | | 2.17 S | -6.77 | | | | |
| | | | | | | 420 | | | 2.86 | -.85 | | | | |
| | | | | | | * X=Excluded from lab performance | | | S/s=Screened Outlier | | | R=Duplicate Range too large | | |
| | | | | | | A=Analysis beyond 3-s limits | | | | | | | | |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|------------------------|----------|-------|----------------------------|----------|-------|-----------------------------|----------|-------|-----------------------------|----------|--------|-----------------------------|----------|-------|
| Meth: 020.XX PCT | | | Meth: 030.XX PCT | | | Meth: 040.XX PCT | | | Meth: 041.40 PCT | | | Meth: 041.XX PCT | | |
| <u>Total Phosphate</u> | | | <u>Insoluble Phosphate</u> | | | <u>InDir Available Phos</u> | | | <u>Dir Available Phosph</u> | | | <u>Dir Available Phosph</u> | | |
| 157 | 2.85 | -.87 | 363 | 0.20 R | 8.43 | 394 | 2.90 | -.15 | <u>Automated</u> | | | 041 | 7.56 s | 66.85 |
| 300 | 2.82 | -1.13 | 096 | 0.05 | 1.11 | 247 | 2.89 | -.32 | 131 | 2.86 | .18 | 029 | 2.98 | 1.48 |
| 035 | 2.80 | -1.32 | 409 | 0.05 | .89 | 363 | 2.79 | -1.57 | Avg | 2.85 | | 105 | 2.97 | 1.42 |
| 397 | 2.78 | -1.37 | 405 | 0.03 | .10 | | | | 027 | 2.81 | -.51 | 023 | 2.97 | 1.37 |
| 368 | 2.79 R | -1.49 | Avg | 0.03 | | Meth: 041.10 PCT | | | 025 | 2.77 | -1.02 | 043 | 2.95 | 1.15 |
| 309 | 2.68 R | -2.35 | 247 | 0.02 | -.70 | Dir Available Phosph | | | 409 | 2.38 s | -6.12 | 260 | 2.95 | 1.15 |
| 428 | 2.62 | -2.62 | 090 | 0.00 | -1.41 | <u>Grav Quimociac</u> | | | Meth: 041.50 PCT | | | 136 | 2.95 | 1.12 |
| 422 | 2.45 s | -3.84 | | | | 041 | 7.56 s | 77.94 | Dir Available Phosph | | | 030 | 2.88 | 1.07 |
| 409 | 2.43 s | -4.31 | Meth: 040.10 PCT | | | 105 | 2.97 | 1.32 | ICP | | | 018 | 2.89 | .89 |
| 393 | 2.17 s | -6.00 | InDir Available Phos | | | 260 | 2.95 | 1.04 | | | | 397 | 2.93 | .87 |
| | | | <u>Grav Quim</u> | | | 136 | 2.95 | .95 | 023 | 2.97 | 1.33 | 049 | 2.92 | .74 |
| | | | 405 | 3.12 | 1.03 | 049 | 2.92 | .55 | 043 | 2.89 | .61 | 009 | 2.92 | .70 |
| | | | Avg | 3.05 | | 009 | 2.92 | .55 | 361 | 2.91 | .56 | 055 | 2.92 | .68 |
| | | | 090 | 2.99 | -.66 | 296 | 2.92 | .43 | 325 | 2.91 | .55 | 296 | 2.92 | .64 |
| | | | Meth: 040.20 PCT | | | 040 | 2.92 | .36 | Avg | 2.87 | | 296 | 2.92 | .64 |
| | | | InDir Available Phos | | | Avg | 2.89 | | 007 | 2.83 | -.75 | 043 | 2.89 | .62 |
| | | | <u>Spectrometri</u> | | | 029 | 2.86 | -.59 | 009 | 2.81 | -.89 | 040 | 2.92 | .61 |
| | | | 363 | 2.79 | -.71 | 211 | 2.86 | -.65 | 251 | 2.78 | -1.54 | 361 | 2.91 | .55 |
| | | | Meth: 040.40 PCT | | | 131 | 2.88 | -.66 | 360 | 2.57 S | -4.07 | 325 | 2.91 | .54 |
| | | | InDir Available Phos | | | 028 | 2.86 | -.70 | 291 | 2.04 S | -11.25 | 131 | 2.88 | .50 |
| | | | <u>Automated</u> | | | 055 | 2.86 | -1.30 | 393 | 2.02 S | -11.44 | 095 | 2.90 | .48 |
| | | | 096 | 2.97 | .88 | 102 | 2.79 | -2.12 | | | | 057 | 2.88 | .44 |
| | | | Avg | 2.93 | | 254 | 2.70 s | -3.33 | Meth: 041.60 PCT | | | 106 | 2.88 | .08 |
| | | | 394 | 2.90 | -.85 | Meth: 041.20 PCT | | | Dir Available Phosph | | | Avg | 2.87 | |
| | | | Meth: 040.99 PCT | | | Dir Available Phosph | | | EDTA Extract | | | 029 | 2.86 | -.23 |
| | | | InDir Available Phos | | | <u>Spectrometric</u> | | | 043 | 2.95 | 1.48 | 211 | 2.86 | -.26 |
| | | | <u>Other</u> | | | 397 | 2.93 | .94 | 018 | 2.89 | 1.13 | 131 | 2.86 | -.33 |
| | | | 247 | 2.89 | .71 | 055 | 2.92 | .70 | 296 | 2.92 | .85 | 028 | 2.86 | -.33 |
| | | | Meth: 040.XX PCT | | | Avg | 2.88 | | 095 | 2.90 | .64 | 034 | 2.84 | -.54 |
| | | | InDir Available Phos | | | 106 | 2.88 | -.10 | 057 | 2.88 | .57 | 024 | 2.83 | -.68 |
| | | | 405 | 3.12 R | 3.02 | 030 | 2.88 R | -1.27 | Avg | 2.87 | | 073 | 2.84 | -.73 |
| | | | 090 | 2.99 | 1.09 | 415 | 2.79 | -1.46 | 034 | 2.84 | -.63 | 007 | 2.83 | -.83 |
| | | | 096 | 2.97 | .85 | Meth: 041.40 PCT | | | 024 | 2.83 | -.80 | 027 | 2.81 | -.89 |
| | | | Avg | 2.91 | | Dir Available Phosph | | | 073 | 2.84 | -.88 | 009 | 2.81 | -.98 |
| | | | 029 | 2.98 | 1.48 | <u>Automated</u> | | | 137 | 2.80 | -1.33 | 055 | 2.86 | -1.01 |
| | | | | | | | | | 105 | 2.57 s | -6.16 | 137 | 2.80 | -1.11 |
| | | | | | | | | | | | | 415 | 2.79 | -1.14 |
| | | | | | | | | | | | | 025 | 2.77 | -1.49 |

* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|-----------------------------------|----------|--------|-----------------------------|----------|-------|------------------------------|----------|-------|-----------------------|----------|-------|-----------------------|----------|-------|
| Meth: 041.XX PCT | | | Meth: 050.30 PCT | | | Meth: 050.51 PCT | | | Meth: 050.99 PCT | | | Meth: 050.XX PCT | | |
| <u>Dir Available Phosph</u> | | | Soluble Potash | | | Soluble Potash | | | Soluble Potash | | | <u>Soluble Potash</u> | | |
| 102 | 2.79 | -1.55 | <u>AA (Oxalate)</u> | | | <u>ICP (Citrate)</u> | | | <u>Other</u> | | | 361 | 4.23 | .61 |
| 251 | 2.78 | -1.67 | 234 | 5.37 s | 5.41 | Avg | 4.14 | | 426 | 5.33 S | 4.26 | 292 | 4.23 | .60 |
| 254 | 2.70 | -2.54 | 262 | 4.60 | 1.99 | 389 | 4.10 | -.36 | 300 | 4.64 | 1.83 | 137 | 4.23 | .59 |
| 360 | 2.57 s | -4.35 | 073 | 4.31 | .74 | 007 | 4.01 | -.74 | 432 | 4.63 | 1.81 | 393 | 4.22 | .54 |
| 105 | 2.57 s | -4.98 | 137 | 4.23 | .37 | 043 | 3.98 | -.90 | 247 | 4.21 | .33 | 025 | 4.22 | .52 |
| 409 | 2.38 s | -7.57 | Avg | 4.15 | | 251 | 4.02 R | -1.07 | 260 | 4.20 | .30 | 247 | 4.21 | .49 |
| 291 | 2.04 s | -11.96 | 136 | 4.07 | -.34 | 096 | 3.84 | -1.70 | 392 | 4.17 | .23 | 260 | 4.20 | .45 |
| 393 | 2.02 s | -12.16 | 428 | 4.07 | -.36 | Meth: 050.60 PCT | | | 232 | 4.17 | .18 | 040 | 4.11 | .43 |
| Meth: 048.20 PCT | | | 040 | 4.11 | -.43 | Soluble Potash | | | 177 | 4.13 | .03 | 105 | 4.15 | .39 |
| Water Soluble Phosph | | | 369 | 3.93 | -.96 | <u>Flame (Oxalate)</u> | | | Avg | 4.12 | | 392 | 4.17 | .36 |
| <u>Spectrometric</u> | | | 095 | 3.87 | -1.23 | 041 | 11.08 s | 93.74 | 325 | 4.09 | -.10 | 057 | 4.13 | .35 |
| 420 | 2.52 | 1.36 | Meth: 050.31 PCT | | | 415 | 4.88 S | 11.15 | 027 | 4.01 | -.37 | 232 | 4.17 | .29 |
| 096 | 2.50 | .83 | Soluble Potash | | | 415 | 4.88 S | 11.15 | 330 | 4.01 | -.44 | 291 | 4.15 | .21 |
| Avg | 2.46 | | <u>AA (Citrate)</u> | | | 028 | 4.13 | .98 | 394 | 3.90 | -.78 | 418 | 4.15 X | .18 |
| 363 | 2.44 | -.40 | 254 | 3.60 | .71 | 406 | 4.11 | .74 | 397 | 3.72 X | -1.45 | 028 | 4.13 | .09 |
| 247 | 2.43 | -.66 | Meth: 050.50 PCT | | | 105 | 4.07 | .28 | 360 | 3.67 | -1.60 | 177 | 4.13 | .09 |
| 193 | 2.40 | -1.18 | Soluble Potash | | | Avg | 4.05 | | 425 | 3.28 S | -2.99 | 029 | 4.12 | .08 |
| Meth: 050.00 PCT | | | <u>ICP (Oxalate)</u> | | | 055 | 4.03 | -.85 | Meth: 050.XX PCT | | | Avg | 4.11 | |
| Soluble Potash | | | 422 | 5.13 S | 6.44 | 131 | 3.98 | -.97 | <u>Soluble Potash</u> | | | 406 | 4.11 | -.07 |
| <u>STPB Oxalate</u> | | | 390 | 4.62 R | 3.71 | 309 | 4.00 | -1.50 | 041 | 11.08 s | 33.03 | 325 | 4.09 | -.09 |
| 095 | 4.47 | 2.39 | 292 | 4.23 | 1.26 | 042 | 3.65 S | -7.11 | 234 | 5.37 s | 5.99 | 211 | 4.09 | -.09 |
| 090 | 4.23 R | 1.14 | 324 | 4.10 | .54 | Meth: 050.61 PCT | | | 426 | 5.33 s | 5.80 | 049 | 4.09 | -.09 |
| 043 | 4.28 | .92 | 106 | 4.06 | .35 | Soluble Potash | | | 422 | 5.13 s | 4.83 | 114 | 4.08 | -.15 |
| 296 | 4.25 | .73 | 420 | 4.03 | .25 | <u>Flame (Citrate)</u> | | | 415 | 4.88 s | 3.70 | 105 | 4.07 | -.18 |
| Avg | 4.15 | | Avg | 4.02 | | 018 | 4.52 | 1.93 | 390 | 4.62 R | 2.63 | 136 | 4.07 | -.18 |
| 418 | 4.15 X | -.07 | 368 | 3.98 | -.24 | 030 | 4.35 | 1.10 | 300 | 4.64 | 2.52 | 428 | 4.07 | -.19 |
| 029 | 4.12 | -.31 | 157 | 3.70 | -1.84 | 025 | 4.22 | .48 | 432 | 4.63 | 2.49 | 324 | 4.10 | -.19 |
| 211 | 4.09 | -.48 | Meth: 050.51 PCT | | | 105 | 4.15 | .37 | 262 | 4.60 | 2.33 | 389 | 4.10 | -.24 |
| 049 | 4.09 | -.48 | Soluble Potash | | | Avg | 4.11 | | 018 | 4.52 | 2.02 | 106 | 4.06 | -.32 |
| 057 | 4.13 | -.56 | <u>ICP (Citrate)</u> | | | 057 | 4.02 | -.43 | 095 | 4.47 | 1.72 | 009 | 4.04 | -.39 |
| 114 | 4.08 | -.59 | 009 | 4.44 | 1.66 | 024 | 4.01 | -.49 | 009 | 4.44 | 1.58 | 420 | 4.03 | -.41 |
| 009 | 4.04 | -.93 | 023 | 4.31 | .94 | 034 | 3.95 | -.76 | 030 | 4.35 | 1.16 | 057 | 4.02 | -.42 |
| 055 | 4.01 | -1.15 | 361 | 4.23 | .53 | 029 | 3.95 | -.76 | 073 | 4.31 | .98 | 027 | 4.01 | -.46 |
| 102 | 3.65 s | -3.80 | 393 | 4.22 | .45 | 035 | 3.86 | -1.27 | 023 | 4.31 | .97 | 055 | 4.03 | -.46 |
| * X=Excluded from lab performance | | | 291 | 4.15 | .07 | S/s=Screened Outlier | | | 090 | 4.23 R | .85 | 007 | 4.01 | -.47 |
| | | | R=Duplicate Range too large | | | A=Analysis beyond 3-s limits | | | 043 | 4.28 | .80 | 024 | 4.01 | -.48 |
| | | | | | | | | | 296 | 4.25 | .68 | 055 | 4.01 | -.51 |
| | | | | | | | | | | | | 330 | 4.01 | -.55 |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|-----------------------------------|----------|-------|-----------------------------|----------|--------|-----------------------------|----------|-------|-----------------------------|----------|-------|------------------------------|----------|-------|
| Meth: 050.XX PCT | | | Meth: 101.30 PCT | | | Meth: 101.XX PCT | | | Meth: 121.30 PCT | | | Meth: 144.01 PCT | | |
| <u>Soluble Potash</u> | | | Acid Soluble Calcium | | | <u>Acid Soluble Calcium</u> | | | Acid Soluble Magnesi | | | Sulfur | | |
| 131 | 3.98 | -.60 | ICP | | | 106 | 3.94 | .19 | ICP | | | <u>Gravimetric</u> | | |
| 368 | 3.98 | -.61 | 422 | 5.59 s | 6.55 | 096 | 3.91 | .14 | 065 | 2.09 | -1.13 | 137 | 5.00 | 1.70 |
| 043 | 3.98 | -.61 | 432 | 4.48 | 2.23 | Avg | 3.89 | | 232 | 2.05 | -1.37 | 262 | 4.90 | .92 |
| 309 | 4.00 | -.69 | 035 | 4.21 | 1.19 | 409 | 3.83 | -.31 | Meth: 121.99 PCT | | | 095 | 4.86 | .61 |
| | | | 361 | 4.17 | 1.01 | 420 | 3.68 | -.83 | Acid Soluble Magnesi | | | 043 | 4.87 | .55 |
| 029 | 3.95 | -.76 | 009 | 4.03 | .50 | 065 | 3.69 | -.89 | <u>Other</u> | | | 029 | 4.82 | .22 |
| 251 | 4.02 R | -.81 | 057 | 4.01 | .49 | 232 | 3.67 | -.94 | 420 | 2.19 | -.71 | 157 | 4.81 | .05 |
| 369 | 3.93 | -.84 | 390 | 3.92 | .32 | 102 | 3.62 | -1.07 | Meth: 121.XX PCT | | | Avg | 4.81 | |
| 394 | 3.90 | -1.00 | 433 | 3.95 | .23 | 027 | 3.61 | -1.13 | Acid Soluble Magnesi | | | 324 | 4.78 | -.35 |
| 095 | 3.87 | -1.12 | 106 | 3.94 | .14 | 247 | 3.58 | -1.31 | 393 | 4.82 s | 20.64 | 102 | 4.72 | -.76 |
| 096 | 3.84 | -1.29 | 096 | 3.91 | .12 | 157 | 2.28 s | -6.34 | 422 | 2.84 s | 4.88 | 296 | 4.72 | -.77 |
| 035 | 3.86 | -1.29 | Avg | 3.91 | | 042 | 2.03 s | -7.31 | 057 | 2.46 | 1.86 | 055 | 4.71 | -.85 |
| 397 | 3.72 X | -1.90 | 409 | 3.83 | -.36 | Meth: 121.00 PCT | | | 027 | 2.33 | .81 | 040 | 4.71 | -.91 |
| 157 | 3.70 | -1.93 | 065 | 3.69 | -.93 | Acid Soluble Magnesi | | | 105 | 2.27 | .71 | 028 | 4.69 | -1.08 |
| 360 | 3.67 | -2.11 | 232 | 3.67 | -.98 | <u>AA</u> | | | 390 | 2.39 R | 1.71 | 105 | 4.68 | -1.13 |
| 102 | 3.65 | -2.17 | 102 | 3.62 | -1.12 | Meth: 121.30 PCT | | | 432 | 2.44 | 1.68 | Meth: 144.02 PCT | | |
| 254 | 3.60 R | -2.48 | 027 | 3.61 | -1.17 | Acid Soluble Magnesi | | | 035 | 2.38 | 1.60 | Sulfur | | |
| 042 | 3.65 s | -2.73 | 247 | 3.58 | -1.35 | <u>ICP</u> | | | 027 | 2.33 | .48 | <u>Gravimetric</u> | | |
| 425 | 3.28 s | -3.99 | 042 | 2.03 s | -7.31 | 393 | 4.82 s | 19.55 | 105 | 2.27 | .48 | 029 | 4.85 | .95 |
| Meth: 060.00 PCT | | | Meth: 101.99 PCT | | | 422 | 2.84 S | 4.62 | 409 | 2.23 | .08 | Avg | 4.80 | |
| Free Water | | | Acid Soluble Calcium | | | 057 | 2.46 | 1.77 | 433 | 2.22 | -.16 | 136 | 4.74 | -.77 |
| <u>Vacuum Oven</u> | | | <u>Other</u> | | | 390 | 2.39 R | 1.62 | 420 | 2.19 | -.31 | Meth: 144.70 PCT | | |
| 247 | 1.28 | 1.43 | 420 | 3.68 | .71 | 432 | 2.44 | 1.59 | 106 | 2.19 | -.34 | Sulfur | | |
| 409 | 1.24 | .97 | Avg | 3.68 | | 035 | 2.38 | 1.51 | 330 | 2.18 | -.41 | <u>Spectrometric</u> | | |
| 105 | 1.22 | .84 | 157 | 2.28 S | -99.29 | 027 | 2.33 | .77 | 247 | 2.16 | -.55 | 393 | 4.80 | .71 |
| 362 | 1.18 | .50 | Meth: 101.XX PCT | | | 361 | 2.26 | .25 | 009 | 2.14 | -.73 | Meth: 144.99 PCT | | |
| Avg | 1.12 | | <u>Acid Soluble Calcium</u> | | | 409 | 2.23 | .08 | 102 | 2.11 | -.93 | Sulfur | | |
| 193 | 1.05 | -.59 | 422 | 5.59 s | 6.66 | Avg | 2.23 | | 096 | 2.20 | -1.03 | <u>Other</u> | | |
| 096 | 1.05 | -.72 | 432 | 4.48 | 2.31 | 433 | 2.22 | -.15 | 232 | 2.05 | -1.45 | 409 | 5.11 | 1.85 |
| 363 | 0.99 | -1.13 | 105 | 4.22 R | 1.59 | 106 | 2.19 | -.32 | Meth: 144.01 PCT | | | 035 | 4.97 | 1.33 |
| 007 | 0.98 | -1.19 | 035 | 4.21 | 1.25 | 330 | 2.18 | -.39 | Sulfur | | | 361 | 4.95 | 1.14 |
| Meth: 101.00 PCT | | | 361 | 4.17 | 1.07 | 247 | 2.16 | -.52 | <u>Gravimetric</u> | | | 360 | 4.90 | .91 |
| Acid Soluble Calcium | | | 009 | 4.03 | .56 | 009 | 2.14 | -.69 | 251 | 5.71 s | 8.10 | 390 | 4.83 R | .91 |
| <u>AA</u> | | | 057 | 4.01 | .54 | 102 | 2.11 | -.88 | 397 | 5.02 | 1.94 | 177 | 4.84 | .62 |
| 105 | 4.22 | .71 | 390 | 3.92 | .33 | 096 | 2.20 | -.98 | Meth: 144.01 PCT | | | 394 | 4.78 | .34 |
| * X=Excluded from lab performance | | | 433 | 3.95 | .27 | S/s=Screened Outlier | | | R=Duplicate Range too large | | | A=Analysis beyond 3-s limits | | |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | | | | | | | | | |
|------------------|----------|-------|--------------------------|----------|-------|--------------------|----------|------------------|------------------|----------|------------------|-----------------------------|----------|------------|------|------------------|----------|------|----------|-------|---------|-------|-----|
| Meth: 144.99 PCT | | | Meth: 144.XX PCT | | | Meth: 151.XX PPM | | | Meth: 181.30 PPM | | | Meth: 190.00 PCT | | | | | | | | | | | |
| Sulfur | | | Sulfur | | | Arsenic | | | Cadmium | | | Water Soluble Chlori | | | | | | | | | | | |
| <u>Other</u> | | | <u>ICP</u> | | | <u>Other</u> | | | <u>ICP</u> | | | <u>Titrimetric</u> | | | | | | | | | | | |
| 291 | 4.73 | .26 | 040 | 4.71 | -.26 | 023 | 33.00 s | 34.65 | Avg | 0.86 | | 105 | 3.13 | .82 | | | | | | | | | |
| 027 | 4.72 | .09 | 291 | 4.73 | -.30 | 105 | 3.05 | 2.14 | 232 | 0.80 | -.30 | 422 | 3.11 | .48 | | | | | | | | | |
| Avg | 4.70 | | 023 | 4.69 | -.36 | 409 | 1.40 | .43 | 106 | 0.80 | -.30 | Avg | 3.09 | | | | | | | | | | |
| 023 | 4.69 | -.09 | 028 | 4.69 | -.36 | Avg | 1.14 | | 102 | 0.76 | -.51 | 102 | 3.02 | -1.27 | | | | | | | | | |
| 389 | 4.60 | -.46 | 105 | 4.68 | -.39 | 065 | 1.04 X | -.23 | 247 | 0.75 | -.60 | | | | | | | | | | | | |
| 096 | 4.60 | -.55 | 389 | 4.60 | -.85 | 040 | 0.94 | -.30 | 105 | 0.50 | -1.82 | Meth: 190.99 PCT | | | | | | | | | | | |
| 247 | 4.58 | -.55 | 096 | 4.60 | -.93 | 096 | 0.80 | -.37 | 393 | 0.00 S | -4.18 | Water Soluble Chlori | | | | | | | | | | | |
| 009 | 4.55 | -.75 | 247 | 4.58 | -.96 | 136 | 0.55 | -.64 | Meth: 181.99 PPM | | | <u>Other</u> | | | | | | | | | | | |
| 368 | 4.55 | -.78 | 009 | 4.55 | -1.20 | 368 | 0.20 | -1.02 | Cadmium | | | 009 | | | 3.04 | .71 | | | | | | | |
| 232 | 4.37 | -1.56 | 368 | 4.55 | -1.23 | Meth: 165.99 PCT | | | Cadmium | | | Meth: 190.XX PCT | | | | | | | | | | | |
| 422 | 4.31 | -1.77 | 232 | 4.37 | -2.22 | Acid Soluble Boron | | | <u>Other</u> | | | <u>Water Soluble Chlori</u> | | | | | | | | | | | |
| Meth: 144.XX PCT | | | 422 | | | 4.31 | -2.50 | 422 | | | 0.007 | 1.82 | 105 | | | 3.13 | .98 | | | | | | |
| Sulfur | | | Meth: 151.00 PPM | | | 433 | | | 0.003 | .25 | Meth: 181.XX PPM | | | 422 | | | 3.11 | .65 | | | | | |
| 251 | 5.71 s | 5.54 | Arsenic | | | Avg | | | 0.003 | | Cadmium | | | Avg | | | 3.08 | | | | | | |
| 409 | 5.11 | 2.07 | <u>Atomic Absorption</u> | | | 106 | | | 0.002 | -.51 | 324 | | | 1.90 s | 5.51 | 102 | | | 3.02 | -1.00 | | | |
| 397 | 5.02 | 1.58 | 040 | | | 0.94 | .98 | 409 | | | 0.002 | -.64 | 368 | | | 0.93 R | 2.43 | 009 | | | 3.04 | -1.06 | |
| 035 | 4.97 R | 1.44 | Avg | | | 0.74 | | 232 | | | 0.001 | -.68 | 390 | | | 1.17 | 1.83 | | | | | | |
| 137 | 5.00 | 1.42 | 136 | | | 0.55 | -.73 | Meth: 181.00 PPM | | | 193 | | | 1.05 | 1.36 | Meth: 191.30 PPM | | | | | | | |
| 361 | 4.95 | 1.18 | Meth: 151.30 PPM | | | Meth: 181.00 PPM | | | Cadmium | | | 065 | | | 1.06 | 1.20 | Chromium | | | | | | |
| 390 | 4.83 R | 1.00 | Arsenic | | | Atomic Absorption | | | 233 | | | 1.05 | 1.16 | <u>ICP</u> | | | | | | | | | |
| 262 | 4.90 | .91 | <u>ICP</u> | | | 193 | | | 1.05 R | 13.77 | 035 | | | 0.88 | .26 | 023 | | | 132.50 X | 2.27 | | | |
| 360 | 4.90 | .89 | 023 | | | 33.00 s | 26.97 | 040 | | | 0.73 | 1.03 | Avg | | | 0.83 | | 390 | | | 78.87 R | .71 | |
| 095 | 4.86 | .69 | 105 | | | 3.05 | 1.56 | 136 | | | 0.70 | .12 | 232 | | | 0.80 | -.17 | 009 | | | 72.75 | .38 | |
| 043 | 4.87 | .68 | Avg | | | 1.27 | | Avg | | | 0.70 | | 106 | | | 0.80 | -.17 | 035 | | | 69.85 | .34 | |
| 029 | 4.85 | .63 | 065 | | | 1.04 X | -.26 | 394 | | | 0.67 | -1.19 | 102 | | | 0.76 | -.39 | 096 | | | 71.00 | .32 | |
| 393 | 4.80 | .55 | 096 | | | 0.80 | -.40 | Meth: 181.30 PPM | | | 409 | | | 0.75 | -.50 | 102 | | | 68.60 | .26 | | | |
| 177 | 4.84 | .52 | 368 | | | 0.20 | -.91 | Cadmium | | | 247 | | | 0.75 | -.50 | 105 | | | 67.50 | .22 | | | |
| 029 | 4.82 | .45 | Meth: 151.99 PPM | | | Atomic Absorption | | | 040 | | | 0.73 | -.56 | 040 | | | 0.73 | -.56 | 247 | | | 67.25 | .21 |
| 157 | 4.81 | .37 | Arsenic | | | <u>ICP</u> | | | 136 | | | 0.70 | -.68 | 136 | | | 0.70 | -.68 | 233 | | | 66.94 | .20 |
| 324 | 4.78 | .25 | 0409 | | | 1.40 | .71 | 324 | | | 1.90 S | 5.03 | 394 | | | 0.67 | -.87 | 324 | | | 64.10 | .11 | |
| 394 | 4.78 | .18 | Avg | | | | | 368 | | | 0.93 R | 2.25 | 105 | | | 0.50 | -1.79 | 232 | | | 63.65 | .10 | |
| Avg | 4.75 | | 409 | | | 1.40 | .71 | 390 | | | 1.17 | 1.58 | 393 | | | 0.00 s | -4.30 | Avg | | | 60.78 | | |
| 136 | 4.74 | -.04 | 065 | | | 1.06 | .98 | 065 | | | 1.06 | .98 | 065 | | | 32.32 | -.90 | 368 | | | 13.66 | -1.49 | |
| 102 | 4.72 | -.16 | 233 | | | 1.05 | .95 | 233 | | | 1.05 | .95 | 393 | | | 0.01 | -1.93 | | | | | | |
| 027 | 4.72 | -.16 | 035 | | | 0.88 | .12 | | | | | | | | | | | | | | | | |
| 296 | 4.72 | -.17 | | | | | | | | | | | | | | | | | | | | | |

* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|---|----------|-------|--------------------------|----------|-------|----------------------------|----------|-------|----------------------------|----------|-------|--------------------------|----------|-------|
| Meth: 191.99 PPM | | | Meth: 202.30 PPM | | | Meth: 221.30 PCT | | | Meth: 221.XX PCT | | | Meth: 241.00 PCT | | |
| Chromium | | | Acid Soluble Cobalt | | | Acid Soluble Copper | | | <u>Acid Soluble Copper</u> | | | Acid Soluble Iron | | |
| <u>Other</u> | | | <u>ICP</u> | | | <u>ICP</u> | | | 027 0.0120 1.15 | | | <u>Atomic Absorption</u> | | |
| 409 | 72.25 | .71 | 368 | 2.79 | -1.49 | 023 | 0.1020 s | 97.85 | 105 | 0.0120 | 1.13 | 029 | 0.99 | -.35 |
| Meth: 191.XX PPM | | | Meth: 202.99 PPM | | | 390 0.0122 R 1.81 | | | 425 0.0120 1.10 | | | 233 0.87 R -1.39 | | |
| Chromium | | | Acid Soluble Cobalt | | | 102 0.0124 1.71 | | | 009 0.0113 .49 | | | 262 0.79 -1.87 | | |
| 023 | 132.50 X | 2.32 | <u>Other</u> | | | 057 0.0120 1.32 | | | 428 0.0109 .40 | | | 397 0.78 -2.02 | | |
| 390 | 78.87 R | .71 | 409 | 14.75 | .71 | 330 0.0120 1.27 | | | 426 0.0110 .18 | | | Meth: 241.30 PCT | | |
| 409 | 72.25 | .37 | Meth: 202.XX PPM | | | 027 0.0120 1.25 | | | 397 0.0110 .18 | | | Acid Soluble Iron | | |
| 009 | 72.75 | .37 | Acid Soluble Cobalt | | | 009 0.0113 .52 | | | Avg 0.0108 | | | <u>ICP</u> | | |
| 035 | 69.85 | .33 | 023 | 16.60 X | 1.78 | 065 0.0113 .47 | | | 043 0.0107 -.22 | | | 432 1.40 s 3.29 | | |
| 096 | 71.00 | .31 | 409 | 14.75 | 1.33 | 426 0.0110 .18 | | | 035 0.0107 -.23 | | | 057 1.13 R 1.17 | | |
| 102 | 68.60 | .24 | 057 | 12.10 | .69 | Avg 0.0108 | | | 232 0.0106 -.23 | | | 330 1.14 1.05 | | |
| 105 | 67.50 | .20 | 426 | 12.00 | .67 | 035 0.0107 -.26 | | | 233 0.0106 -.30 | | | 035 1.13 .95 | | |
| 247 | 67.25 | .19 | 105 | 10.70 R | .50 | 232 0.0106 -.27 | | | 106 0.0105 -.58 | | | 291 1.11 .77 | | |
| 233 | 66.94 | .18 | 233 | 11.14 | .46 | 106 0.0105 -.64 | | | 389 0.0105 -.58 | | | 009 1.10 .70 | | |
| 232 | 63.65 | .09 | 009 | 11.10 | .45 | 389 0.0105 -.64 | | | 247 0.0103 -.58 | | | 390 1.09 .65 | | |
| 324 | 64.10 | .09 | 040 | 10.50 | .35 | 247 0.0103 -.66 | | | 324 0.0101 -.74 | | | 409 1.09 .63 | | |
| Avg | 61.60 | | Avg | 9.21 | | 324 0.0101 -.84 | | | 393 0.0100 -.80 | | | 106 1.09 .60 | | |
| 065 | 32.32 | -.96 | 102 | 6.83 | -.60 | 393 0.0100 -.89 | | | 040 0.0100 -.80 | | | 157 1.04 .58 | | |
| 368 | 13.66 | -1.57 | 324 | 6.60 | -.64 | 040 0.0100 -.89 | | | 433 0.0105 R -.90 | | | 360 1.07 .57 | | |
| 393 | 0.01 | -2.02 | 232 | 6.25 | -.72 | 433 0.0105 -1.00 | | | 296 0.0093 -1.56 | | | 324 1.08 .55 | | |
| Meth: 202.30 PPM | | | 106 | 4.60 | -1.10 | 096 0.0091 -1.86 | | | 096 0.0091 -1.68 | | | 422 1.07 .48 | | |
| Acid Soluble Cobalt | | | 065 | 4.53 | -1.12 | 368 0.0058 s -5.36 | | | 029 0.0085 -2.26 | | | 096 1.07 .42 | | |
| <u>ICP</u> | | | 368 | 2.79 | -1.54 | Meth: 221.99 PCT | | | 368 0.0058 s -4.86 | | | 247 1.05 .30 | | |
| 023 | 16.60 X | 1.96 | Meth: 221.00 PCT | | | Acid Soluble Copper | | | Meth: 241.00 PCT | | | 027 1.04 .23 | | |
| 057 | 12.10 | .84 | Acid Soluble Copper | | | <u>Other</u> | | | Acid Soluble Iron | | | 426 1.02 .04 | | |
| 426 | 12.00 | .81 | <u>Atomic Absorption</u> | | | 409 0.0120 .71 | | | <u>Atomic Absorption</u> | | | Avg 1.02 | | |
| 105 | 10.70 R | .61 | 105 | 0.0120 | 1.16 | Meth: 221.XX PCT | | | 137 1.20 1.29 | | | 251 1.00 -.28 | | |
| 233 | 11.14 | .60 | 425 | 0.0120 | 1.15 | Acid Soluble Copper | | | 055 1.16 1.02 | | | 394 1.01 -.39 | | |
| 009 | 11.10 | .58 | 428 | 0.0109 | .43 | <u>Acid Soluble Copper</u> | | | 095 1.12 .66 | | | 433 0.95 -.52 | | |
| 040 | 10.50 | .47 | 397 | 0.0110 | .34 | 023 0.1020 s 88.86 | | | 040 1.10 .54 | | | 102 0.89 -1.13 | | |
| Avg | 8.75 | | 043 | 0.0107 | .14 | 422 0.0165 s 5.55 | | | 177 1.08 .38 | | | 232 0.87 -1.26 | | |
| 102 | 6.83 | -.52 | Avg | 0.0106 | | 390 0.0122 R 1.66 | | | 105 1.07 .30 | | | 389 0.79 -1.93 | | |
| 324 | 6.60 | -.56 | 233 | 0.0106 | -.13 | 102 0.0124 1.56 | | | 043 1.06 .28 | | | 023 0.66 -2.94 | | |
| 232 | 6.25 | -.63 | 296 | 0.0093 | -1.17 | 057 0.0120 1.21 | | | Avg 1.03 | | | 368 0.35 s -5.57 | | |
| 106 | 4.60 | -1.03 | 029 | 0.0085 | -1.77 | 409 0.0120 1.16 | | | 428 1.02 -.12 | | | | | |
| 065 | 4.53 | -1.05 | 330 | 0.0120 | 1.16 | 330 0.0120 1.16 | | | 296 1.02 -.18 | | | | | |
| * X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits | | | | | | | | | | | | | | |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|-------------------|----------|--------|-----------------------------------|----------|-------|------------------------|----------|-------|-----------------------------|----------|-------|------------------------------|----------|-------|
| Meth: 241.99 PCT | | | Meth: 241.XX PCT | | | Meth: 251.99 PPM | | | Meth: 261.30 PCT | | | Meth: 261.XX PCT | | |
| Acid Soluble Iron | | | Acid Soluble Iron | | | Lead | | | Acid Soluble Manganese | | | Acid Soluble Manganese | | |
| <u>Other</u> | | | <u>Other</u> | | | <u>Other</u> | | | <u>ICP</u> | | | <u>ICP</u> | | |
| 362 | 1.18 | 1.11 | 296 | 1.02 | -.17 | 409 | 9.80 | .00 | Avg | 0.022 | | 065 | 0.020 | -1.02 |
| 042 | 1.13 X | .46 | 029 | 0.99 | -.31 | 251 | 1.00 | -.32 | 009 | 0.022 | -.29 | 247 | 0.020 | -1.14 |
| Avg | 1.13 | | 394 | 1.01 | -.40 | Meth: 251.XX PPM | | | 102 | 0.022 | -.33 | Meth: 271.00 PCT | | |
| 234 | 1.08 | -1.03 | 433 | 0.95 | -.58 | <u>Lead</u> | | | 433 | 0.021 | -.63 | Water Soluble Manganese | | |
| 393 | 0.00 S | -23.80 | 102 | 0.89 | -1.16 | 065 | 33.91 s | 23.32 | 096 | 0.021 | -.87 | <u>Atomic Abs</u> | | |
| Meth: 241.XX PCT | | | 232 | 0.87 | -1.29 | 023 | 23.00 s | 9.83 | 232 | 0.021 | -1.01 | 193 | 0.001 | .00 |
| Acid Soluble Iron | | | 233 | 0.87 | -1.38 | 409 | 9.80 | 2.01 | 065 | 0.020 | -1.08 | Meth: 281.00 PPM | | |
| 432 | 1.40 R | 3.11 | 262 | 0.79 | -1.87 | 096 | 9.00 | 1.54 | 247 | 0.020 | -1.24 | Mercury | | |
| 137 | 1.20 | 1.38 | 389 | 0.79 | -1.94 | 368 | 7.34 | .61 | Meth: 261.31 PCT | | | <u>Atomic Absorption</u> | | |
| 362 | 1.18 | 1.23 | 397 | 0.78 | -2.02 | 324 | 7.25 | .51 | Acid Soluble Manganese | | | 363 | 0.17 | .87 |
| 055 | 1.16 | 1.10 | 023 | 0.66 | -2.92 | Avg | 6.39 | | <u>ICP</u> | | | Avg | 0.10 | |
| 057 | 1.13 R | 1.07 | 368 | 0.35 s | -5.47 | 136 | 6.20 | -.16 | 027 | 0.021 | .71 | 193 | 0.03 | -.86 |
| 330 | 1.14 | .93 | 393 | 0.00 s | -8.29 | 106 | 5.90 | -.29 | Meth: 261.99 PCT | | | Meth: 281.99 PPM | | |
| 042 | 1.13 X | .88 | Meth: 251.00 PPM | | | 105 | 5.90 | -.31 | Acid Soluble Manganese | | | Mercury | | |
| 035 | 1.13 | .84 | Lead | | | 233 | 5.81 | -.35 | Other | | | Other | | |
| 095 | 1.12 | .73 | <u>Atomic Absorption</u> | | | 009 | 6.10 R | -.39 | 409 | 0.022 | .71 | 409 0.07 .00 | | |
| 291 | 1.11 | .67 | 136 | 6.20 | .80 | 102 | 5.60 | -.47 | Meth: 261.XX PCT | | | Meth: 281.XX PPM | | |
| 040 | 1.10 | .61 | Avg | 5.66 | | 232 | 5.25 | -.68 | Acid Soluble Manganese | | | Mercury | | |
| 009 | 1.10 | .60 | 040 | 5.13 | -.93 | 040 | 5.13 | -.78 | 105 0.229 s 104.11 | | | 363 0.17 1.24 | | |
| 390 | 1.09 | .55 | Meth: 251.30 PPM | | | 247 | 3.55 | -1.68 | 193 0.027 2.39 | | | Avg 0.09 | | |
| 157 | 1.04 R | .54 | Lead | | | Meth: 261.00 PCT | | | 390 0.024 R 1.52 | | | 409 0.07 -.28 | | |
| 409 | 1.09 | .53 | <u>ICP</u> | | | Acid Soluble Manganese | | | 106 0.025 1.16 | | | 193 0.03 -.94 | | |
| 106 | 1.09 | .50 | 065 | 33.91 s | 26.45 | <u>AA</u> | | | 330 0.024 1.04 | | | Meth: 289.00 PPM | | |
| 360 | 1.07 | .49 | 023 | 23.00 s | 11.25 | 105 | 0.229 S | .00 | 035 0.023 .71 | | | Molybdenum | | |
| 324 | 1.08 | .45 | 096 | 9.00 | 1.88 | 193 | 0.027 | .00 | 422 0.023 .37 | | | <u>Atomic Absorption</u> | | |
| 177 | 1.08 | .45 | 368 | 7.34 | .82 | Avg | 0.027 | | 409 0.022 .16 | | | 040 6.55 .71 | | |
| 234 | 1.08 | .45 | 324 | 7.25 | .72 | Meth: 261.30 PCT | | | Avg 0.022 | | | Meth: 289.30 PPM | | |
| 422 | 1.07 | .40 | Avg | 6.18 | | Acid Soluble Manganese | | | 009 0.022 -.34 | | | Molybdenum | | |
| 105 | 1.07 | .36 | 106 | 5.90 | -.19 | <u>ICP</u> | | | 102 0.022 -.34 | | | <u>ICP</u> | | |
| 096 | 1.07 | .33 | 105 | 5.90 | -.23 | 390 | 0.024 R | 1.94 | 433 0.021 -.63 | | | 023 18.20 s 10.96 | | |
| 043 | 1.06 | .33 | 233 | 5.81 | -.25 | 106 | 0.025 | 1.57 | 096 0.021 -.85 | | | 247 8.50 1.46 | | |
| 247 | 1.05 | .22 | 102 | 5.60 | -.39 | 330 | 0.024 | 1.43 | 232 0.021 -.92 | | | 232 8.10 .98 | | |
| 027 | 1.04 | .15 | 009 | 6.10 R | -.40 | 035 | 0.023 | .96 | 027 0.021 -.93 | | | A=Analysis beyond 3-s limits | | |
| Avg | 1.02 | | 232 | 5.25 | -.62 | 057 | 0.023 | .78 | | | | | | |
| 426 | 1.02 | -.04 | 247 | 3.55 | -1.75 | 422 | 0.023 | .62 | | | | | | |
| 428 | 1.02 | -.09 | * X=Excluded from lab performance | | | S/s=Screened Outlier | | | R=Duplicate Range too large | | | A=Analysis beyond 3-s limits | | |

Laboratory Averages & Accuracy Indexes

| Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index | Lab | Average* | Index |
|------------------|----------|-------|------------------|----------|-------|------------------|----------|-------|--------------------------|----------|-------|--------------------------|----------|-------|
| Meth: 289.30 PPM | | | Meth: 291.30 PPM | | | Meth: 301.30 PPM | | | Meth: 321.00 PCT | | | Meth: 321.99 PCT | | |
| Molybdenum | | | Nickel | | | Selenium | | | Acid Soluble Zinc | | | Acid Soluble Zinc | | |
| <u>ICP</u> | | | <u>ICP</u> | | | <u>ICP</u> | | | <u>Atomic Absorption</u> | | | <u>Other</u> | | |
| 368 | 7.80 | .71 | 023 | 66.30 s | 16.82 | 023 | 66.00 X | 1.29 | 296 | 0.196 | -.77 | 042 | 0.265 S | 4.73 |
| 233 | 7.77 | .66 | 390 | 37.68 R | 2.87 | Avg | 22.29 | | 029 | 0.195 | -.78 | 392 | 0.222 | .71 |
| 057 | 7.52 | .46 | 009 | 36.50 | 1.44 | 065 | 0.68 X | -.64 | 233 | 0.194 | -.90 | Avg | 0.222 | |
| 035 | 7.50 | .40 | 102 | 34.86 | .72 | 368 | 0.20 | -.65 | | | | 409 | 0.144 S | -8.39 |
| 106 | 7.25 | .37 | 232 | 34.45 | .31 | | | | Meth: 321.30 PCT | | | | | |
| 102 | 7.13 | .27 | Avg | 33.91 | | Meth: 301.XX PPM | | | ICP | | | Meth: 321.XX PCT | | |
| Avg | 7.11 | | 233 | 33.66 | -.15 | <u>Selenium</u> | | | 432 | | | <u>Acid Soluble Zinc</u> | | |
| 324 | 6.95 | -.16 | 106 | 32.50 | -.78 | 023 | 66.00 X | 1.62 | 057 | 0.239 R | 2.61 | 432 | 0.605 s | 24.86 |
| 433 | 7.10 | -.30 | 247 | 31.50 | -1.47 | Avg | 16.72 | | 102 | 0.227 | 1.53 | 042 | 0.265 s | 3.56 |
| 105 | 5.90 | -1.21 | 065 | 16.84 s | -8.88 | 065 | 0.68 X | -.53 | 390 | 0.215 R | 1.41 | 193 | 0.250 | 2.65 |
| 009 | 5.90 | -1.23 | | | | 368 | 0.20 | -.54 | 251 | 0.225 | 1.38 | 057 | 0.239 R | 2.35 |
| 065 | 5.00 X | -2.19 | Meth: 291.99 PPM | | | 040 | 0.02 | -.55 | 291 | 0.222 | 1.15 | 137 | 0.240 | 2.04 |
| | | | Nickel | | | Meth: 311.99 PCT | | | 426 | 0.221 | 1.05 | 102 | 0.227 | 1.31 |
| | | | <u>Other</u> | | | Sodium | | | 330 | 0.215 | .77 | 390 | 0.215 R | 1.27 |
| | | | 035 | 34.30 | .96 | <u>Other</u> | | | 106 | 0.215 | .77 | 251 | 0.225 | 1.17 |
| | | | Avg | 33.28 | | 422 | 0.19 | 1.62 | 394 | 0.214 | .63 | 392 | 0.222 | .99 |
| | | | 409 | 32.25 | -.76 | Avg | 0.07 | | 023 | 0.213 | .53 | 291 | 0.222 | .95 |
| | | | | | | 035 | 0.05 R | -.38 | 035 | 0.211 | .51 | 426 | 0.221 | .85 |
| | | | | | | 102 | 0.04 | -.46 | 393 | 0.210 | .37 | 095 | 0.215 | .71 |
| | | | | | | 009 | 0.03 | -.58 | 247 | 0.208 | .27 | 106 | 0.215 | .60 |
| | | | | | | 232 | 0.03 | -.58 | 360 | 0.206 | .18 | 330 | 0.215 | .60 |
| | | | | | | | | | Avg | 0.204 | | 105 | 0.208 | .46 |
| | | | | | | | | | 009 | 0.203 | -.27 | 394 | 0.214 | .45 |
| | | | | | | | | | 324 | 0.195 | -.68 | 023 | 0.213 | .36 |
| | | | | | | | | | 368 | 0.196 | -.70 | 035 | 0.211 | .36 |
| | | | | | | | | | 065 | 0.192 | -.93 | 428 | 0.209 | .24 |
| | | | | | | | | | 422 | 0.189 | -1.02 | 262 | 0.210 | .21 |
| | | | | | | | | | 433 | 0.189 | -1.14 | 393 | 0.210 | .21 |
| | | | | | | | | | 027 | 0.181 | -1.53 | 247 | 0.208 | .16 |
| | | | | | | | | | 232 | 0.196 R | -1.55 | Avg | 0.207 | |
| | | | | | | | | | 292 | 0.180 | -1.56 | 360 | 0.206 | -.17 |
| | | | | | | | | | 389 | 0.180 | -1.56 | 055 | 0.205 | -.32 |
| | | | | | | | | | | | | 177 | 0.202 | -.33 |
| | | | | | | | | | | | | 009 | 0.203 | -.34 |
| | | | | | | | | | | | | 043 | 0.196 | -.65 |
| | | | | | | | | | | | | 296 | 0.196 | -.67 |
| | | | | | | | | | | | | 029 | 0.195 | -.68 |
| | | | | | | | | | | | | | | |

* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits

Laboratory Averages & Accuracy Indexes

| <u>Lab</u> | <u>Average*</u> | <u>Index</u> | <u>Lab</u> | <u>Average*</u> | <u>Index</u> | <u>Lab</u> | <u>Average*</u> | <u>Index</u> | <u>Lab</u> | <u>Average*</u> | <u>Index</u> |
|---------------------------|-----------------|--------------|------------|-----------------|--------------|------------|-----------------|--------------|------------|-----------------|--------------|
| Meth: 321.XX PCT | | | | | | | | | | | |
| <u>Acid Soluble Zinc</u> | | | | | | | | | | | |
| 040 | 0.200 | -.73 | | | | | | | | | |
| 324 | 0.195 | -.77 | | | | | | | | | |
| 368 | 0.196 | -.77 | | | | | | | | | |
| 233 | 0.194 | -.82 | | | | | | | | | |
| 065 | 0.192 | -1.00 | | | | | | | | | |
| 422 | 0.189 | -1.10 | | | | | | | | | |
| 433 | 0.189 | -1.20 | | | | | | | | | |
| 232 | 0.196 R | -1.52 | | | | | | | | | |
| 027 | 0.181 | -1.59 | | | | | | | | | |
| 292 | 0.180 | -1.62 | | | | | | | | | |
| 389 | 0.180 | -1.62 | | | | | | | | | |
| 409 | 0.144 s | -3.79 | | | | | | | | | |
| Meth: 325.00 PCT | | | | | | | | | | | |
| Water Soluble Zinc | | | | | | | | | | | |
| <u>Atomic Absorption</u> | | | | | | | | | | | |
| 193 | 0.001 | .00 | | | | | | | | | |
| Meth: 325.30 PCT | | | | | | | | | | | |
| Water Soluble Zinc | | | | | | | | | | | |
| <u>ICP</u> | | | | | | | | | | | |
| 432 | 0.150 | .90 | | | | | | | | | |
| Avg | 0.079 | | | | | | | | | | |
| 393 | 0.008 | -.83 | | | | | | | | | |
| Meth: 325.XX PCT | | | | | | | | | | | |
| <u>Water Soluble Zinc</u> | | | | | | | | | | | |
| 432 | 0.150 | 1.31 | | | | | | | | | |
| Avg | 0.053 | | | | | | | | | | |
| 393 | 0.008 | -.58 | | | | | | | | | |
| 193 | 0.001 | -.67 | | | | | | | | | |

* X=Excluded from lab performance S/s=Screened Outlier R=Duplicate Range too large A=Analysis beyond 3-s limits

Method Evaluation - Z Values Based on 1 Reports

| Method Code | Number Of Labs | Avg Bias of Labs | Std Dev of Biases | Std Dev Within Labs | Method Code | Number Of Labs | Avg Bias of Labs | Std Dev of Biases | Std Dev Within Labs |
|-------------|----------------|------------------|-------------------|---------------------|-------------|----------------|------------------|-------------------|---------------------|
| 001.10 | 6 | 0.00 | 1.02 | 0.23 | 050.99 | 15 | 0.09 | 1.67 | 0.20 |
| 001.99 | 9 | 0.75 | 2.35 | 0.20 | 050.XX | 67 | 0.71 | 4.35 | 0.42 |
| 001.XX | 15 | 0.43 | 1.78 | 0.21 | 060.00 | 8 | 0.00 | 0.97 | 0.33 |
| 003.10 | 3 | 0.00 | 1.12 | 0.02 | 060.XX | 8 | 0.00 | 0.97 | 0.33 |
| 003.99 | 2 | 0.00 | 1.22 | 0.00 | 101.30 | 17 | - 0.04 | 2.62 | 0.25 |
| 003.XX | 5 | 0.00 | 1.06 | 0.02 | 101.99 | 2 | - 49.64 | 70.20 | 1.25 |
| 005.99 | 4 | 0.00 | 1.08 | 0.01 | 101.XX | 20 | - 0.28 | 2.83 | 0.31 |
| 005.XX | 4 | 0.00 | 1.08 | 0.01 | 121.30 | 18 | 1.41 | 4.73 | 0.47 |
| 007.XX | 2 | 0.00 | 1.14 | 0.32 | 121.XX | 20 | 1.34 | 4.75 | 0.48 |
| 009.XX | 2 | 0.00 | 1.15 | 0.29 | 144.01 | 15 | 0.54 | 2.30 | 0.18 |
| 010.11 | 7 | - 0.43 | 1.47 | 0.23 | 144.02 | 2 | 0.00 | 1.09 | 0.40 |
| 010.12 | 4 | 0.00 | 1.03 | 0.29 | 144.99 | 17 | 0.03 | 0.96 | 0.29 |
| 010.60 | 52 | 0.26 | 1.39 | 0.58 | 144.XX | 34 | 0.20 | 1.36 | 0.28 |
| 010.99 | 5 | - 1.81 | 5.05 | 2.56 | 151.00 | 2 | 0.00 | 1.00 | 0.50 |
| 010.XX | 68 | 0.02 | 1.72 | 0.71 | 151.30 | 5 | 5.39 | 12.09 | 0.50 |
| 020.10 | 7 | 0.00 | 0.97 | 0.35 | 151.XX | 8 | 4.33 | 12.28 | 0.52 |
| | | | | | 165.99 | 5 | 0.000 | 1.046 | 0.157 |
| 020.40 | 9 | - 1.44 | 3.54 | 1.49 | 165.XX | 5 | 0.000 | 1.046 | 0.157 |
| 020.50 | 9 | - 0.96 | 2.90 | 0.78 | 181.00 | 4 | 3.17 | 6.40 | 2.70 |
| 020.XX | 41 | - 0.36 | 1.63 | 0.49 | 181.30 | 12 | 0.10 | 2.14 | 0.69 |
| 030.10 | 2 | 0.00 | 1.22 | 0.00 | 181.XX | 17 | 0.10 | 1.95 | 0.65 |
| 030.XX | 6 | 1.40 | 3.55 | 0.34 | 190.00 | 3 | 0.00 | 1.11 | 0.14 |
| 040.10 | 2 | 0.00 | 0.88 | 0.61 | 190.XX | 4 | 0.00 | 0.95 | 0.44 |
| 040.40 | 2 | 0.00 | 1.20 | 0.18 | 191.30 | 14 | 0.04 | 0.99 | 0.13 |
| 040.XX | 6 | 0.46 | 1.47 | 0.52 | 191.XX | 15 | 0.04 | 0.99 | 0.13 |
| 041.10 | 15 | 4.97 | 20.22 | 0.53 | 202.30 | 13 | 0.04 | 0.98 | 0.15 |
| 041.20 | 5 | - 0.01 | 0.90 | 0.61 | 202.XX | 14 | 0.03 | 0.98 | 0.14 |
| 041.40 | 5 | - 1.14 | 2.71 | 1.00 | 221.00 | 8 | 0.0000 | 1.0151 | 0.1893 |
| 041.50 | 10 | - 2.67 | 4.80 | 0.47 | 221.30 | 21 | 4.7525 | 21.378 | 1.4587 |
| 041.60 | 10 | - 0.54 | 1.89 | 1.07 | 221.XX | 30 | 3.0108 | 16.262 | 1.1145 |
| 041.XX | 38 | 0.70 | 11.43 | 0.85 | 241.00 | 13 | - 0.10 | 1.04 | 0.16 |
| 048.20 | 5 | 0.00 | 1.05 | 0.15 | 241.30 | 25 | - 0.06 | 1.62 | 0.28 |
| 048.XX | 5 | 0.00 | 1.05 | 0.15 | 241.99 | 4 | - 5.95 | 11.93 | 0.35 |
| 050.00 | 13 | - 0.25 | 1.41 | 0.34 | 241.XX | 42 | - 0.23 | 1.86 | 0.23 |
| 050.30 | 9 | 0.60 | 2.04 | 0.17 | 251.00 | 2 | 0.00 | 1.06 | 0.43 |
| 050.50 | 8 | 1.24 | 2.58 | 0.46 | 251.30 | 12 | 2.47 | 6.06 | 5.46 |
| 050.51 | 10 | - 0.07 | 0.98 | 0.29 | 251.XX | 15 | 1.73 | 4.84 | 4.32 |
| 050.60 | 9 | 11.05 | 31.31 | 1.73 | 261.00 | 2 | 0.000 | 0.000 | 0.000 |
| 050.61 | 9 | 0.00 | 0.99 | 0.26 | 261.30 | 13 | 0.076 | 0.926 | 0.614 |

Method Evaluation - Z Values Based on 1 Reports

| Method Code | Number Of Labs | Avg Bias of Labs | Std Dev of Biases | Std Dev Within Labs | Method Code | Number Of Labs | Avg Bias of Labs | Std Dev of Biases | Std Dev Within Labs |
|-------------|----------------|------------------|-------------------|---------------------|-------------|----------------|------------------|-------------------|---------------------|
| 261.XX | 17 | 6.164 | 25.257 | 0.481 | | | | | |
| 281.00 | 2 | 0.00 | 1.22 | 0.09 | | | | | |
| 281.XX | 3 | 0.00 | 1.11 | 0.09 | | | | | |
| 289.30 | 14 | 0.78 | 3.07 | 0.30 | | | | | |
| 289.XX | 16 | 0.69 | 2.90 | 0.29 | | | | | |
| 291.30 | 9 | 1.10 | 6.70 | 0.82 | | | | | |
| 291.99 | 2 | 0.00 | 0.62 | 0.75 | | | | | |
| 291.XX | 11 | 0.51 | 4.39 | 0.61 | | | | | |
| 301.30 | 3 | 0.00 | 1.12 | 0.02 | | | | | |
| 301.XX | 4 | 0.00 | 1.08 | 0.02 | | | | | |
| 311.99 | 5 | - 0.07 | 0.95 | 0.05 | | | | | |
| 311.XX | 5 | - 0.07 | 0.95 | 0.05 | | | | | |
| 321.00 | 13 | 0.000 | 0.980 | 0.273 | | | | | |
| 321.30 | 25 | 1.129 | 5.252 | 1.218 | | | | | |
| 321.99 | 3 | - 1.237 | 6.620 | 0.569 | | | | | |
| 321.XX | 41 | 0.631 | 3.993 | 0.918 | | | | | |
| 325.30 | 2 | 0.000 | 1.173 | 0.248 | | | | | |
| 325.XX | 2 | - 0.625 | 0.060 | 0.000 | | | | | |