



# JMLORD, INC.

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## 2009 Laboratory Methods & Detection Limits

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| Analyte                               | Matrix        | Method                           | Method Detection Limit | JML Test Code      |
|---------------------------------------|---------------|----------------------------------|------------------------|--------------------|
| NO <sub>3</sub> -N                    | Soil          | 1M Ammonium acetate extract      | 0.10 mg/Kg             | 106, 508, 509      |
| K                                     | Soil          | 1M Ammonium acetate extract      | 20.0 mg/Kg             | 509                |
| TP                                    | Soil          | Nitric/Peroxide Digest           | 0.01 %                 | 507                |
| PO <sub>4</sub> -P                    | Soil          | Olson bicarbonate extract        | 0.50 mg/Kg             | 509                |
| OM                                    | Soil          | Automated Combustion/Calculation | 0.15 %                 | 508, 509           |
| Carbonate (CO <sub>3</sub> )          | Manure        | Saturated Paste Extract          | 0.10 meq/L             | 503                |
| Bicarbonate (HCO <sub>3</sub> )       | Manure        | Saturated Paste Extract          | 0.10 meq/L             | 503                |
| Cl                                    | Manure        | Saturated Paste Extract          | 0.02 meq/L             | 503                |
| SO <sub>4</sub>                       | Manure        | Saturated Paste Extract          | 0.06 meq/L             | 503                |
| Na                                    | Manure/Tissue | Nitric/Peroxide Digest           | 0.04 %                 | 503                |
| K                                     | Manure/Tissue | Nitric/Peroxide Digest           | 0.01 %                 | 504, 505, 512      |
| P                                     | Manure/Tissue | Nitric/Peroxide Digest           | 0.01 %                 | 504, 505, 512      |
| Ca                                    | Manure/Tissue | Nitric/Peroxide Digest           | 0.13 %                 | 503                |
| Mg                                    | Manure/Tissue | Nitric/Peroxide Digest           | 0.03 %                 | 503                |
| TN                                    | Manure/Tissue | Automated Combustion             | 0.01 %                 | 504, 505, 506, 512 |
| Density                               | Manure/Tissue | Mass per volume                  | 0.1 lb/cuyd            | 503, 504, 505      |
| Moisture                              | Manure/Tissue | Dry at 70°C                      | 0.10 %                 | 503, 504, 505      |
| NH <sub>4</sub> -N                    | Wastewater    | Flow Injection Analysis-350.1    | 2.6 ppm                | 510                |
| NO <sub>3</sub> -N+NO <sub>2</sub> -N | Wastewater    | Flow Injection Analysis-353.2    | 0.01 ppm               | 510                |
| Cl                                    | Wastewater    | Flow Injection Analysis-325.2    | 0.02 meq/L             | 511                |
| ECw                                   | Wastewater    | Direct measurement               | 0.01 dS/m              | 316                |
| Ca                                    | Wastewater    | 1M HCl extract                   | 0.14 meq/L             | 511                |
| Mg                                    | Wastewater    | 1M HCl extract                   | 0.06 meq/L             | 511                |
| Na                                    | Wastewater    | 1M HCl extract                   | 0.21 meq/L             | 511                |
| K                                     | Wastewater    | 1M HCl extract                   | 0.11 meq/L             | 510                |
| H <sub>2</sub> PO <sub>4</sub>        | Wastewater    | 1M HCl extract                   | 0.02 meq/L             | 510                |
| SO <sub>4</sub>                       | Wastewater    | 1M HCl extract                   | 0.06 meq/L             | 511                |
| TN                                    | Wastewater    | Automated Combustion             | 76 ppm                 | 510                |
| CO <sub>3</sub>                       | Wastewater    | Direct titration                 | 0.10 meq/L             | 511                |
| HCO <sub>3</sub>                      | Wastewater    | Direct titration                 | 0.10 meq/L             | 511                |

As of January 1, 2009.