## AGRICULTURE METHODS LIST

Method Detection Limits are calculated using USEPA procedure 40 CFR, Part 136, Appendix B

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>METHOD DESCRIPTION</th>
<th>EXTRACT</th>
<th>METHOD NUMBER</th>
<th>METHOD DETECTION LIMIT</th>
<th>EQUIVALENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMMONIA</td>
<td>Alkaline phenate method with hypochlorite and sodium nitroprusside (indophenol blue)</td>
<td>2 M KCl</td>
<td>AGR-210-C Rev. 0</td>
<td>0.04 mg N/L (Range: 0.2 to 10 mg N/L)</td>
<td></td>
</tr>
<tr>
<td>NITRATE + NITRITE</td>
<td>Cadmium coil reduction followed by sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride</td>
<td>K2SO4</td>
<td>AGR-230-C Rev. 1</td>
<td>0.01 mg N/L (Range: 0.05 to 5.0 mg N/L)</td>
<td></td>
</tr>
<tr>
<td>NITRATE + NITRITE</td>
<td>Cadmium coil reduction followed by sulfanilamide reaction in the presence of N-(1-naphthylethylenediamine) dihydrochloride</td>
<td>2 M KCl</td>
<td>AGR-231-C Rev. 0</td>
<td>0.015 mg N/L (Range: 0.06 to 5.0 mg N/L)</td>
<td></td>
</tr>
<tr>
<td>NITROGEN, Total Kjeldahl (TKN)</td>
<td>Kjeldahl digests (Hg catalyst) are reacted with alkaline salicylate in the presence of hypochlorite and sodium nitroprusside (Digestion required) for total kjeldahl nitrogen</td>
<td>Plant tissue</td>
<td>AGR-270-C Rev. 5</td>
<td>TBD mg N/L (Range: 1.0 to 40 mg N/L)</td>
<td></td>
</tr>
<tr>
<td>PHOSPHATE, Ortho</td>
<td>Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue) for orthophosphate</td>
<td>Bray’s P1 or P2, or similar extract</td>
<td>AGR-201-C Rev. 0</td>
<td>0.015 mg P/L (Range: 0.05 to 5 mg P/L)</td>
<td></td>
</tr>
<tr>
<td>PHOSPHATE, Ortho</td>
<td>Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue) for orthophosphate</td>
<td>Modified Morgan’s or similar acetate/acetic acid extract</td>
<td>AGR-202-C Rev. 2</td>
<td>0.01 mg P/L (Range: 0.2 to 8 mg P/L)</td>
<td></td>
</tr>
<tr>
<td>PHOSPHATE, Ortho</td>
<td>Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue) for orthophosphate</td>
<td>Olsen 0.5 M sodium bicarbonate extract</td>
<td>AGR-203-C Rev. 3</td>
<td>0.01 mg P/L (Range: 0.1 to 5 mg P/L)</td>
<td></td>
</tr>
</tbody>
</table>
## AGRICULTURE METHODS LIST

Method Detection Limits are calculated using USEPA procedure 40 CFR, Part 136, Appendix B

<table>
<thead>
<tr>
<th>ANALYTE</th>
<th>METHOD DESCRIPTION</th>
<th>EXTRACT</th>
<th>METHOD NUMBER</th>
<th>METHOD DETECTION LIMIT</th>
<th>EQUIVALENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHATE, Ortho</td>
<td>Acidic molybdate/antimony with ascorbic acid reduction (phosphomolybdenum blue) for o-phosphate</td>
<td>2 M KCl</td>
<td>AGR-204-C Rev. 0</td>
<td>0.04 mg P/L (Range: 0.05 to 5 mg P/L)</td>
<td></td>
</tr>
<tr>
<td>SILICA (Reactive silica)</td>
<td>Acidic molybdate with ANSA reduction (silico-molybdenum blue) for reactive silica</td>
<td>Alkaline-peroxide digests of plant tissue</td>
<td>AGR-280-C Rev. 6</td>
<td>TBD mg SiO₂/L (Range: 0.2 to 10 mg SiO₂/L)</td>
<td></td>
</tr>
<tr>
<td>SULFATE</td>
<td>Barium chloride turbidimetric method</td>
<td>KH₂PO₄ or similar extraction</td>
<td>AGR-290-C Rev. 1</td>
<td>0.75 mg SO₄²⁻/L (Range: 5 to 40 mg SO₄²⁻/L)</td>
<td></td>
</tr>
</tbody>
</table>

**SEAL Analytical** is continually developing methods. Please note that others may exist.

*If you do not see your chosen method on this list, please consult your SEAL Analytical Technical Support Team at:*

---

SEAL Analytical Ltd.
67 Victoria Rd.
Burgess Hill
Sussex RH15 9TR
United Kingdom
Tel: +44 (0) 1444 872600
Fax: +44 (0) 1444 871495

SEAL Analytical, Inc.
Mequon Technology Center
10520-C Baehr Rd.
Mequon, WI 53092
United States
Tel: +1 (262) 241 7900
Fax: +1 (262) 241 7970
[www.seal-analytical.com](http://www.seal-analytical.com)

SEAL Analytical GmbH
Werkstrasse 4
D-22844 Norderstedt
Germany
Tel: +49 40 522 02 100
Fax: +49 40 522 02 473

---

Copyright © 2014 SEAL Analytical
Reproduction or distribution of this document is expressly forbidden without written permission from SEAL Analytical