Instrument specific information

The test can be performed on the following devices. In addition, the required cuvette and the absorption range of the photometer are indicated.

<table>
<thead>
<tr>
<th>Instrument Type</th>
<th>Cuvette</th>
<th>λ</th>
<th>Measuring Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD 100, MD 110</td>
<td>ø 24 mm</td>
<td>530 nm</td>
<td>1 - 30 mg/l Polyacryl</td>
</tr>
<tr>
<td>MD 600, MD 610, MD 640,</td>
<td>ø 24 mm</td>
<td>660 nm</td>
<td>1 - 30 mg/l Polyacryl</td>
</tr>
<tr>
<td>XD 7000, XD 7500</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Material

Required material (partly optional):

<table>
<thead>
<tr>
<th>Reagents</th>
<th>Packaging Unit</th>
<th>Part Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyacrylat Reagent Set</td>
<td>1 pc.</td>
<td>56R019165</td>
</tr>
<tr>
<td>KS336-Propan-2-ol</td>
<td>65 ml</td>
<td>56L033665</td>
</tr>
<tr>
<td>Cartouche C18</td>
<td>1 pc.</td>
<td>56A020101</td>
</tr>
<tr>
<td>KS173-P2-2,4 Dinitrophenol Indicator</td>
<td>65 ml</td>
<td>56L017365</td>
</tr>
<tr>
<td>KS183-QA2-MO1-P3-Nitric Acid</td>
<td>65 ml</td>
<td>56L018365</td>
</tr>
</tbody>
</table>

Application List

- Cooling Water
- Boiler Water
- Raw Water Treatment

Preperation

- Preparing the cartridge:
1. Remove the plunger from a suitable syringe. Attach the C18 cartridge to the syringe cylinder.
2. Add 5 ml of KS336 (propane-2-ol) to the syringe cylinder.
3. Using the plunger, press the solvent by drop through the cartridge.
4. Remove the solvent that has passed through.
5. Remove the plunger again. Fill the syringe cylinder with 20 ml of deionised water.
6. With the help of the plunger, press the contents through the cartridge drop by drop.
7. Discard the deionised water that has flowed through.
8. The cartridge is now ready for use.

Notes

1. If little or no turbidity is present at correct dose concentrations, the sample will need a pre-concentration step in order to detect this level of polyacrylate/polymer.
2. Anomalous results occur when interferences are present as part of the sample components or from sample contaminants. In this case, the interference will need to be eliminated.
3. This test has been calibrated using polyacrylic acid 2‘100 sodium salt in the range 1-30 mg/l. Other polyacrylates/polymer will give differing responses and therefore the test range will vary.
Implementation of the provision Polyacrylate with Fluid reagent

Select the method on the device
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500

10 ml

Fill 24 mm vial with 10 ml sample.

Close vial(s).

Place sample vial in the sample chamber. • Pay attention to the positioning.

Zero

Press the ZERO button.

Remove the vial from the sample chamber.

For devices that require no ZERO measurement, start here.

1 ml

Place 1 ml (25 Tropfen) KS255 (Polyacrylate Reagenz 1) solution in the test vial.

Close vial(s).

Invert several times to mix the contents.
Place 1 ml (25 Tropfen) KS256 (Polyacrylate Reagenz 2) solution in the test vial.

Close vial(s).

Invert several times to mix the contents.

Place sample vial in the sample chamber. • Pay attention to the positioning.

Press the TEST (XD: START) button.

Wait for 10 minute(s) reaction time.

Once the reaction period is finished, the measurement takes place automatically. The result in mg/l Polyacryl acid 2100 sodium salt appears on the display.
Chemical Method
Turbidity

Appendix

Calibration function for 3rd-party photometers
Conc. = a + b•Abs + c•Abs² + d•Abs³ + e•Abs⁴ + f•Abs⁵

<table>
<thead>
<tr>
<th></th>
<th>ø 24 mm</th>
<th>□ 10 mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>a</td>
<td>5.21463 • 10⁻¹</td>
<td>5.21463 • 10⁻¹</td>
</tr>
<tr>
<td>b</td>
<td>3.45852 • 10⁺⁰</td>
<td>7.43583 • 10⁻¹</td>
</tr>
<tr>
<td>c</td>
<td>-2.38855 • 10⁻¹</td>
<td>-1.10411 • 10⁻²</td>
</tr>
<tr>
<td>d</td>
<td>1.52167 • 10⁻¹</td>
<td>1.51229 • 10⁻²</td>
</tr>
<tr>
<td>e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>f</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Bibliography