Polyacrylate L 338
1 - 30 mg/l Polyacryl POLY
Turbidity

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.

Instrument Type	Cuvette	λ	Measuring Range
MD 100, MD 110	ø 24 mm	530 nm	1 - 30 mg/l Polyacryl
MD 600, MD 610, MD 640, XD 7000, XD 7500	ø 24 mm	660 nm	1 - 30 mg/l Polyacryl

Material

Required material (partly optional):

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

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/polymers will give differing responses and therefore the test range will vary.

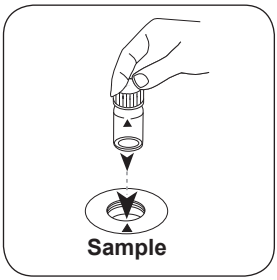
Implementation of the provision Polyacrylate with Fluid reagent

Select the method on the device

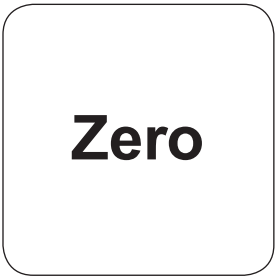
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500

Fill 24 mm vial with **10 ml sample**.

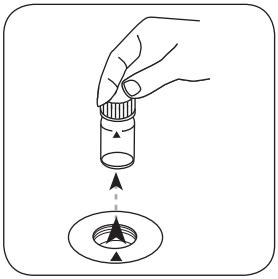
Close vial(s).



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

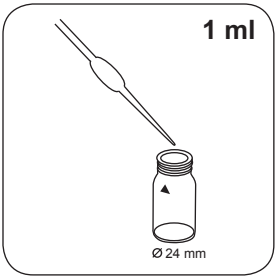


Press the **ZERO** button.



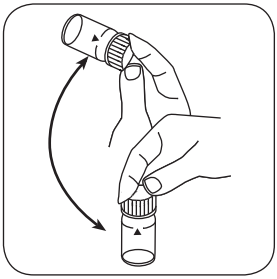
Remove the vial from the sample chamber.

For devices that require **no ZERO measurement** , **start here**.

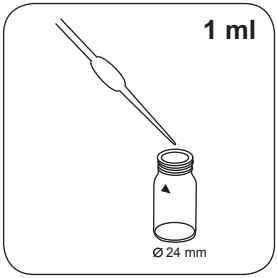


Place **1 ml (25 Tropfen) KS255 (Polyacrylate Reagenz 1) solution**in the test vial.

Close vial(s).

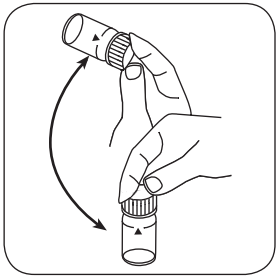


Invert several times to mix the contents.

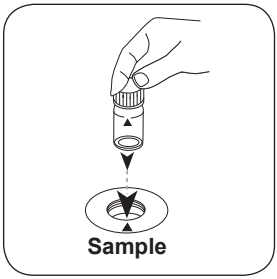


Place **1 ml (25 Tropfen) KS256 (Polyacrylate Reagenz 2) solution**in the test vial.

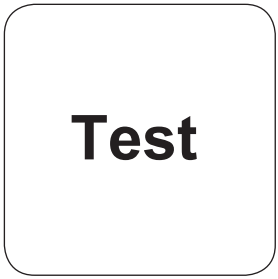
Close vial(s).



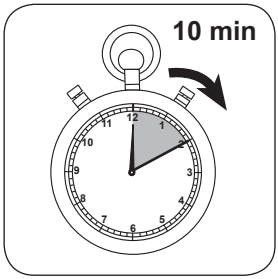
Invert several times to mix the contents.



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

Bibliography

W.B. Crummett, R.A. Hummel (1963), The Determination of Polyacrylamides in Water, American Water Works Association, 55 (2), pp. 209-219

[a)] determination of free, combined and total | [b)] Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | [c)] MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | [d)] Spectroquant® is a Merck KGaA Trademark | [e)] alternative reagent, used instead of DPD No.1/No.3 in case of turbidity in the water sample caused by high concentration of calcium and/or high conductivity | [f)] additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | [g)] Reagent recovers most insoluble iron oxides without digestion | [h)] additionally required for samples with hardness values above 300 mg/l $CaCO_3$ | [i)] high range by dilution | [#] including stirring rod, 10 cm