

1.10019.0001

MQuant™
Sulfate Test**1. Method**

Sulfate ions react with a red thorin-barium complex, releasing yellow thorin in the process. The sulfate concentration is measured **semiquantitatively** by visual comparison of the reaction zones of the test strip with the color rows of a color scale.

2. Measuring range and number of determinations

Measuring range / color-scale graduation	Number of determinations
<200 - >400 - >800 - >1200 - >1600 mg/l SO_4^{2-}	100

3. Applications**Sample material:**

Groundwater and surface water
Drinking water
Wastewater
Industrial water

4. Influence of foreign substances

This was checked in solutions containing 800 and 0 mg/l SO_4^{2-} . The determination is not yet interfered with up to the concentrations of foreign substances given in the table.

Concentrations of foreign substances in mg/l					
Al^{3+}	100	CrO_4^{2-}	400	$\text{Fe}(\text{CN})_6^{3-}$	400
CN^-	50	Cu^{2+}	10	S^{2-}	25
Cr^{3+}	100	$[\text{Fe}(\text{CN})_6]^{4-}$	400	SO_3^{2-}	25

5. Reagents and auxiliaries

The test strips are stable up to the date stated on the pack when stored closed at +15 to +25 °C.

Package contents:

Tube containing 100 test strips

Other reagents:

MColorpHast™ Universal indicator strips pH 0 - 14, Cat. No. 109535
Sodium acetate anhydrous GR for analysis, Cat. No. 106268
L(+)-Tartaric acid GR for analysis, Cat. No. 100804
Sulfate standard solution CertiPUR®, 1000 mg/l SO_4^{2-} ; Cat. No. 119813

6. Preparation

- Samples containing more than 1600 mg/l SO_4^{2-} must be diluted with distilled water.
- **The pH must be within the range 4 - 8.**
If necessary, buffer the sample with sodium acetate or, respectively, adjust the pH with tartaric acid.

7. Procedure

Immerse **all reaction zones** of the test strip in the pre-treated sample (**15 - 25 °C**) for **1 sec (not in running water!)**.
Shake off excess liquid from the strip and **after 2 min** determine with which color row on the label the colors of the reaction zones coincide most exactly.
Read off the corresponding result in mg/l SO_4^{2-} .

Notes on the measurement:

- The colors of the reaction zones may continue to change after the specified reaction time has elapsed. This must not be considered in the measurement.
- **If the measurement sample has a sulfate content lying between two adjacent values indicated on the color scale, one of the reaction zones shows a yellow area in the middle.**
- Concerning the result of the analysis, the dilution (see also section 6) must be taken into account:

Result of analysis = measurement value x dilution factor

8. Method control

To check test strips and handling:
Analyze the sulfate standard solution as described in section 7.

Additional notes see under www.qa-test-kits.com.

9. Note

Reclose the tube containing the test strips immediately after use.

