Sulphate PP

M360

5 - 100 mg/l $\text{SO}_4^{2-}$

Barium sulphate 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.

<table>
<thead>
<tr>
<th>Instrument Type</th>
<th>Cuvette</th>
<th>$\lambda$</th>
<th>Measuring Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>MD 100, MD 110, MD 600, MD 610,</td>
<td>ø 24 mm</td>
<td>530 nm</td>
<td>5 - 100 mg/l $\text{SO}_4^{2-}$</td>
</tr>
<tr>
<td>MD 640, MultiDirect, PM 620, PM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>630, SpectroDirect, XD 7000, XD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>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>VARIO Sulfa 4 F10</td>
<td>Powder / 100 pc.</td>
<td>532160</td>
</tr>
</tbody>
</table>

**Application List**

- Waste Water Treatment
- Cooling Water
- Drinking Water Treatment
- Pool Water Treatment
- Raw Water Treatment

**Notes**

1. Sulphate causes a finely distributed turbidity.
Implementation of the provision Sulphate with Vario Powder Pack

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.

Add Vario Sulpha 4/F10 powder pack.

Close vial(s).

Invert several times to mix the contents.
Place **sample vial** in the sample chamber. • Pay attention to the positioning.

Once the reaction period is finished, the measurement takes place automatically.

The result in mg/l Sulphate appears on the display.

Press the **TEST** (XD: **START**) button.

Wait for **5 minute(s) reaction time**.
Chemical Method
Barium sulphate Turbidity

Appendix

Calibration function for 3rd-party photometers

Conc. = a + b\cdot Abs + c\cdot Abs^2 + d\cdot Abs^3 + e\cdot Abs^4 + f\cdot Abs^5

\[
\begin{array}{|c|c|c|}
\hline
 & \varnothing 24 \text{ mm} & \square 10 \text{ mm} \\
\hline a & 2.42421 \cdot 10^0 & 2.42421 \cdot 10^0 \\
b & 1.07243 \cdot 10^{-2} & 2.30572 \cdot 10^{-2} \\
c & -1.11466 \cdot 10^{-2} & -5.15249 \cdot 10^{-2} \\
d & 7.93311 \cdot 10^{-1} & 7.88423 \cdot 10^{-2} \\
e & -1.88194 \cdot 10^{-1} & -4.02123 \cdot 10^{-2} \\
f & & \\
\hline
\end{array}
\]

According to
Standard Method 4500-SO42- E
US EPA 375.4

Derived from
DIN ISO 15923-1 D49