

Method Z610M – Sulphate SO<sub>4</sub> marine water

## Specification

|              |  |
|--------------|--|
| Description: | Test for determining the content of sulphate in marine water |
| Range:       | 200-3000 mg/l  |
| Resolution:  | 20 mg/l  |
| Wavelength:  | 470 nm   |

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## Reagent set

| Product Code | Description   | List of components  |
|--------------|---|---|
| 8610         | Set of reagents for method Z610M, Sulphate SO <sub>4</sub> marine water (reagents for approx. 70 tests) | <ul style="list-style-type: none"><li>✓ Reagent SO<sub>4</sub>-1</li><li>✓ powder Reagent SO<sub>4</sub>-2</li><li>✓ spatula</li><li>✓ 1 ml syringe</li></ul> |

## NOTE:

To perform this method measurement it is required to have also deionized water available as a separate product (no 8903/100 ml bottle).

## Performing the measurement

1. Select the **Z610M Sulphate SO<sub>4</sub> marine water** method (**Methods** → **Select method** → **Z610M Sulphate SO<sub>4</sub> Marine**). How to select the method, see [8.1 Choosing method](#).

## NOTE:

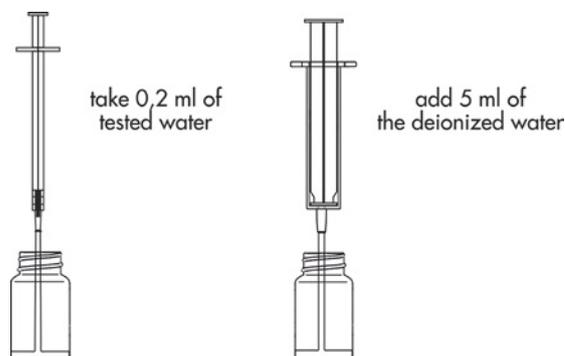
It is recommended to use the **GUIDE** system by pressing the context button **GUIDE** on the photometer. It will provide you with step-by step basic instruction how to perform measurement and a timer with beeper to count down reaction time. To enable this function press the button **GUIDE**.

2. Rinse the vial and the syringe three times with the tested water.

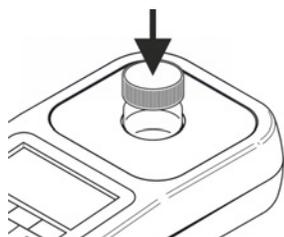
Take exactly 0,2 ml of the tested water with the syringe, pour into the vial, then add 4,8 ml of the deionized water.

## NOTE:

Make sure no air bubbles are present in the syringe. Trapped air bubbles can affect accuracy of the measurement.



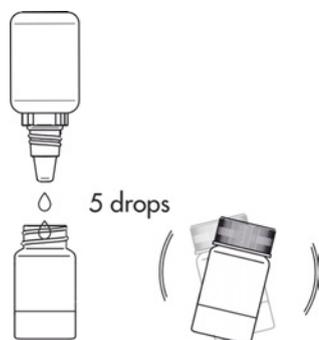
- Insert the vial into the round vial holder and press the **ZERO** key. The display will show "-0.0-", which means the device is ready for measurement.



|                      |                    |       |  |
|----------------------|--------------------|-------|--|
| 26 08 20             |                    | 12:35 |  |
| SO <sub>4</sub>      | Z610M Sulphate SO4 | tag 1 |  |
| <b>Measuring ...</b> |                    |       |  |
| ZERO                 | MEAS               | GUIDE |  |

|                   |                    |       |  |
|-------------------|--------------------|-------|--|
| 26 08 20          |                    | 12:35 |  |
| SO <sub>4</sub>   | Z610M Sulphate SO4 | tag 1 |  |
| <b>-0.0- mg/l</b> |                    |       |  |
| ZERO              | MEAS               | GUIDE |  |

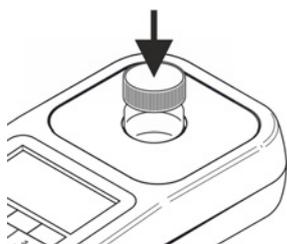
- Add 5 drops of **Reagent SO<sub>4</sub>-1** and shake to mix.



- Add 1 portion of **powder Reagent SO<sub>4</sub>-2** with the spatula into the vial and mix thoroughly. Before making a measurement wait exactly **1 minute**.



- After exactly 1 min insert the vial into the round vial holder and press the **MEAS** key to take a measurement. The result - the concentration of sulphate - is displayed in **mg/l (ppm)**.



|                      |                    |       |  |
|----------------------|--------------------|-------|--|
| 26 08 20             |                    | 12:36 |  |
| SO <sub>4</sub>      | Z610M Sulphate SO4 | tag 1 |  |
| <b>Measuring ...</b> |                    |       |  |
| ZERO                 | MEAS               | GUIDE |  |

|                   |                    |       |     |
|-------------------|--------------------|-------|-----|
| 26 08 20          |                    | 12:36 |     |
| SO <sub>4</sub>   | Z610M Sulphate SO4 | tag 1 |     |
| <b>270.0 mg/l</b> |                    |       |     |
| ZERO              | MEAS               | GUIDE | REC |

## Potential interferences

the high content of organic matter

may reduce precipitation

the high content of:

calcium (Ca)

above 20 000 ppm

manganese (Mg)

above 10 000 ppm

chloride

above 40 000 ppm

silica

above 500 ppm

may interfere with the measurement