# Nitrite HR TT M276

## 0.3 - 3 mg/L N

## Sulfanilic / Naphthylamine

### 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 600, MD 610, MD 640, SpectroDirect, XD 7000, XD 7500 | ø 16 mm | 545 nm | 0.3 - 3 mg/L N |

### Material

Required material (partly optional):

| Reagents | Packaging Unit | Part Number |
|---|---|---|
| Nitrite HR / 25 | 1 pc. | 2423470 |
| Nitrite / 25 | 1 pc. | 2419018 |
| ValidCheck Nitrite 1 mg/l $NO_2$ - N | 1 pc. | 48221625 |

The following accessories are required.

| Accessories | Packaging Unit | Part Number |
|---|---|---|
| Measuring spoon no. 8, black | 1 pc. | 424513 |

### Application List

- Galvanization
- Waste Water Treatment
- Drinking Water Treatment
- Raw Water Treatment

### Preparation

1. The test sample and the reagents should be at room temperature when undertaking the test.

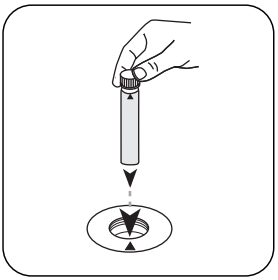
## Notes

1. The reagents are to be stored in closed containers at a temperature of +4 °C – +8 °C.

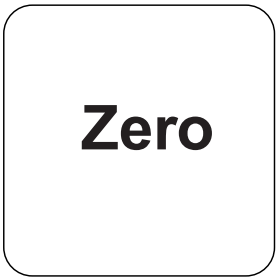
## Determination of Nitrite HR with Vial Test

Select the method on the device.

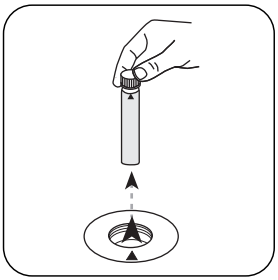
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



Place the supplied Zero vial (red sticker) in the sample chamber. • Pay attention to the positioning.

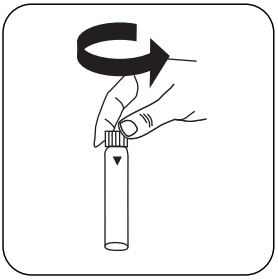



Press the **ZERO** button.

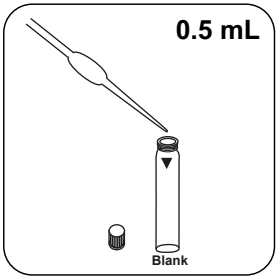


Remove **vial** from the sample chamber.

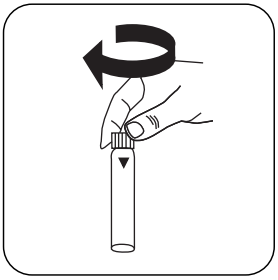
For devices that require **no ZERO measurement** , **start here**.



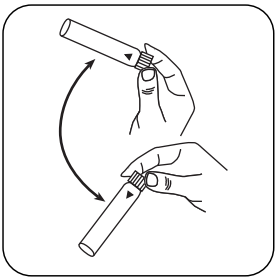
Open **digestion vial** .



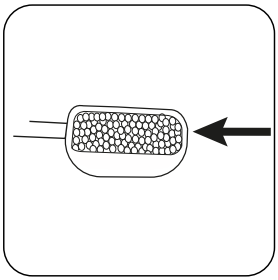

Put **0.5 mL sample** in the vial.



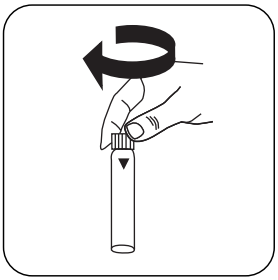
Close vial(s).



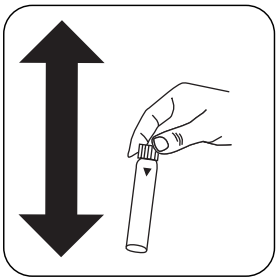
Invert several times to mix the contents.



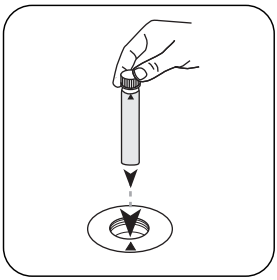
Add **a level measuring scoop No. 8 (black) Nitrite-101** .



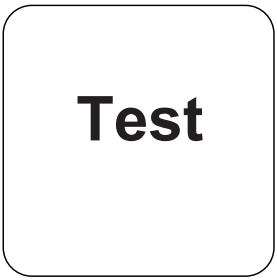
Close vial(s).



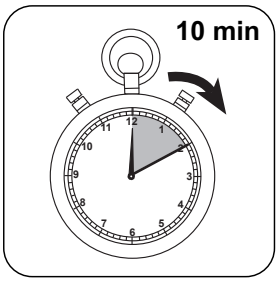
Dissolve the contents by shaking.



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 Nitrite appears on the display.

## Analyses

The following table identifies the output values can be converted into other citation forms.

| Unit | Cite form | Scale Factor |
|---|---|---|
| mg/l | N | 1 |
| mg/l | $NO_2$ | 3.2846 |

## Chemical Method

Sulfanilic / Naphthylamine

## Appendix

## Calibration function for 3rd-party photometers

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

| | ø 16 mm |
|---|---|
| a | $-3.31219 \cdot 10^{-2}$ |
| b | $7.53948 \cdot 10^{+0}$ |
| c | |
| d | |
| e | |
| f | |

## Interferences

| Interference | from / [mg/L] |
|---|---|
| $Fe^{3+}$ | 20 |
| $Fe^{2+}$ | 50 |
| $Cu^{2+}$ | 500 |
| $Cr^{3+}$ | 500 |
| $Al^{3+}$ | 1000 |
| $Cd^{2+}$ | 1000 |
| total hardness | 178,6 mmol/l (1000 °dH) |
| $CrO_4^{2-}$ | 0,5 |
| p-$PO_4$ | 10 |
| $S^{2-}$ | 50 |

| Interference | from / [mg/L] |
|---|---|
| $SO_3^{2-}$ | 50 |
| $NO_3^-$ | 100 |
| $HCO_3^-$ | 143,2 mmol/l (400 °dH) |
| $Hg^{2+}$ | 1000 |
| $Mn^{2+}$ | 1000 |
| $NH_4^+$ | 1000 |
| $Ni^{2+}$ | 1000 |
| $Pb^{2+}$ | 1000 |
| $Zn^{2+}$ | 1000 |
| $Cl^-$ | 1000 |
| $CN^-$ | 1000 |
| EDTA | 1000 |
| o-$PO_4^{3-}$ | 1000 |
| $SO_4^{2-}$ | 1000 |

## Method Validation

| | |
|---|---|
| **Limit of Detection** | 0.05 mg/L |
| **Limit of Quantification** | 0.15 mg/L |
| **End of Measuring Range** | 3 mg/L |
| **Sensitivity** | 8.54 mg/L / Abs |
| **Confidence Intervall** | 0.61 mg/L |
| **Standard Deviation** | 0.25 mg/L |
| **Variation Coefficient** | 15.16 % |

**Derived from**

DIN EN 26777
ISO 6777