

**Nitrite VARIO PP****272****0.01 - 0.3 mg/l N****Diazotation****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.

| <b>Instrument Type</b>              | <b>Cuvette</b> | <b><math>\lambda</math></b> | <b>Measuring Range</b> |
|-------------------------------------|----------------|-----------------------------|------------------------|
| MD 600, MD 610, MD 640, MultiDirect | ø 24 mm        | 530 nm                      | 0.01 - 0.3 mg/l N      |
| SpectroDirect, XD 7000, XD 7500     | ø 24 mm        | 507 nm                      | 0.01 - 0.3 mg/l N      |

**Material**

Required material (partly optional):

| <b>Reagents</b>   | <b>Packaging Unit</b> | <b>Part Number</b> |
|-------------------|-----------------------|--------------------|
| VARIO Nitri 3 F10 | Powder / 100 pc.      | 530980             |

**Application List**

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

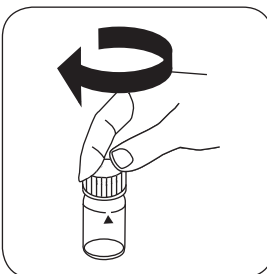
## Implementation of the provision Nitrite with Vario Powder Pack

Select the method on the device

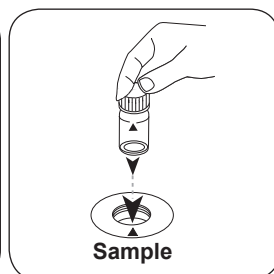
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500



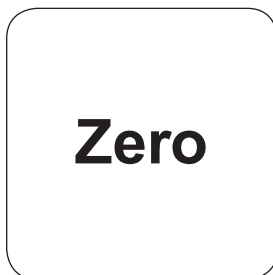
Fill 24 mm vial with **10 ml sample**.



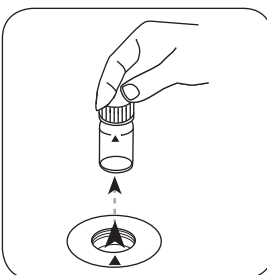
Close vial(s).



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

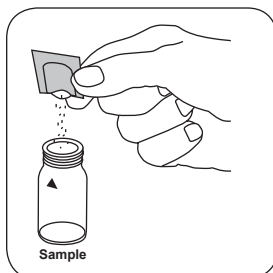


Press the **ZERO** button.

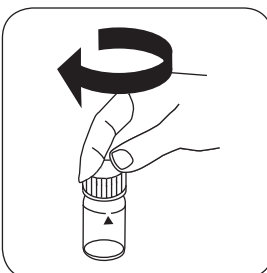


Remove the vial from the sample chamber.

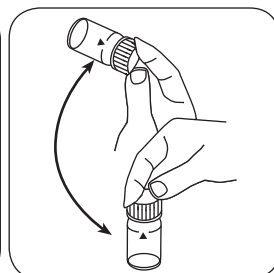
For devices that require **no ZERO measurement**, start here.



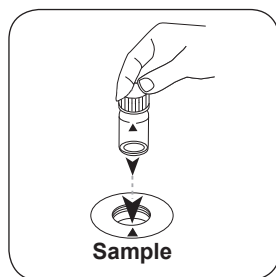
Add **Vario Nitri 3 F10 powder pack**.



Close vial(s).



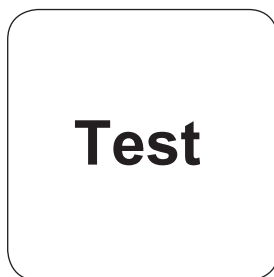
Invert several times to mix the contents.



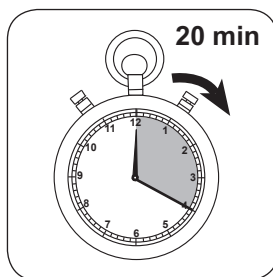
Place **sample vial** in the sample chamber. • Pay attention to the positioning.

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

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



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



Wait for **20 minute(s) reaction time**.

## 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 <sub>2</sub> | 3.2846       |

## Chemical Method

Diazotation

## Appendix

### Interferences

#### Persistent Interferences

1. Strong oxidising and reducing agents interfere at all concentrations.
2. Copper and Iron (II) ions may cause lower test results.
3. The following ions can produce interferences through precipitation: Antimony, Iron (III), Lead, Gold, Mercury, Silver, Chloroplatinate, Metavanadate and Bismuth.
4. At very high concentrations of nitrate (<100 mg/l N) a small amount of nitrite is always detected. This seems to be caused by a minor reduction of nitrate to nitrite, which occurs either spontaneously or over the course of the test.

#### Derived from

USGS I-4540-85

<sup>a)</sup> determination of free, combined and total | <sup>b)</sup> Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | <sup>c)</sup> MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | <sup>d)</sup> Spectroquant® is a Merck KGaA Trademark | <sup>e)</sup> 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 | <sup>f)</sup> additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | <sup>g)</sup> Reagent recovers most insoluble iron oxides without digestion | <sup>h)</sup> additionally required for samples with hardness values above 300 mg/l CaCO<sub>3</sub> | <sup>i)</sup> high range by dilution | <sup>j)</sup> including stirring rod, 10 cm