**Nitrite PP****M272****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.

Instrument Type	Cuvette	λ	Measuring Range
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

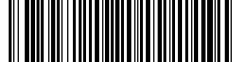
Required material (partly optional):

Reagents	Packaging Unit	Part Number
VARIO Nitri 3 F10	Powder / 100 pc.	530980

Application List

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

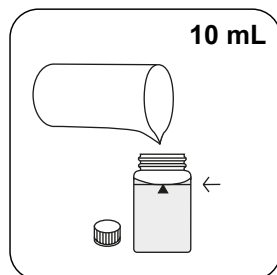




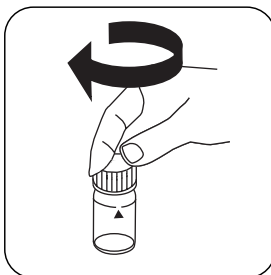
Determination of Nitrite with Vario Powder Pack

Select the method on the device.

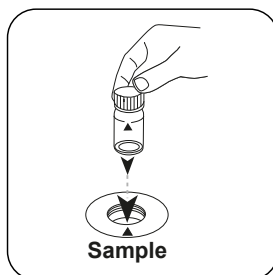
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



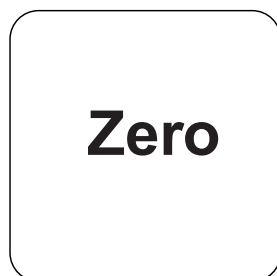
Fill 24 mm vial with **10 mL sample**.



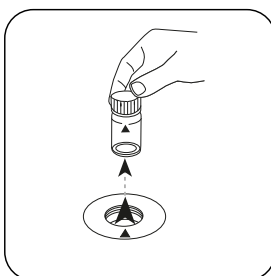
Close vial(s).



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

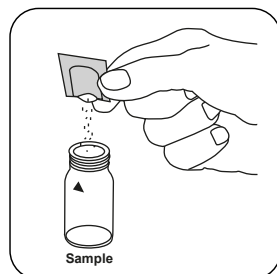


Press the **ZERO** button.

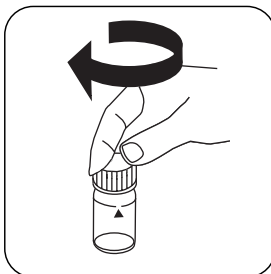


Remove the vial from the sample chamber.

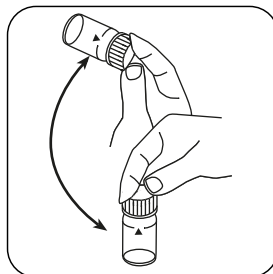
For devices that require **no ZERO measurement**, **start here**.



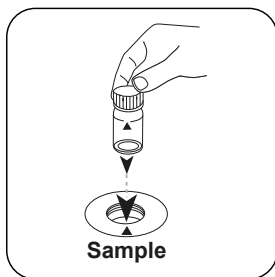
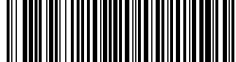
Add **Vario Nitri 3 F10 powder pack**.



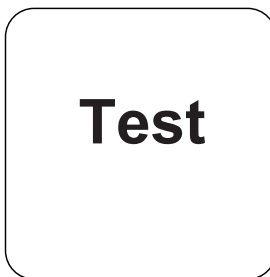
Close vial(s).



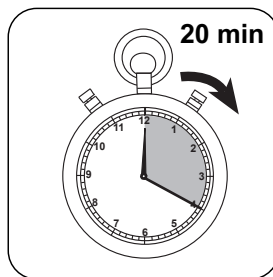
Invert several times to mix the contents.



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



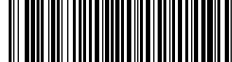
Press the **TEST** (XD: **START**) button.



Wait for **20 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

Diazotation

Appendix

Calibration function for 3rd-party photometers

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

	ø 24 mm	□ 10 mm
a	$-2.54687 \cdot 10^{-3}$	$-2.54687 \cdot 10^{-3}$
b	$1.89212 \cdot 10^{-1}$	$4.06806 \cdot 10^{-1}$
c	$1.10586 \cdot 10^{-2}$	$5.11184 \cdot 10^{-2}$
d		
e		
f		

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