**Nitrate HR****M268****1.2 - 35 mg/L N****2,6-Dimethylphenole****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
SpectroDirect, XD 7000, XD 7500	ø 16 mm	340 nm	1.2 - 35 mg/L N

Material

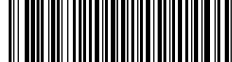
Required material (partly optional):

Reagents	Packaging Unit	Part Number
Nitrate-DMP HR / 25	25 pc.	2423370

Application List

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

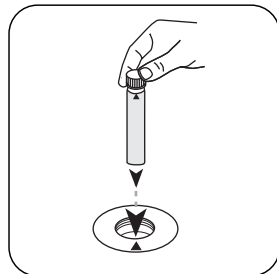




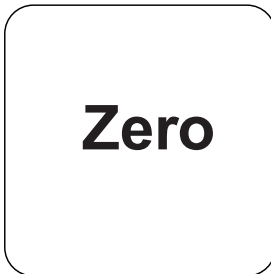
Determination of Nitrate HR with tube test

Select the method on the device.

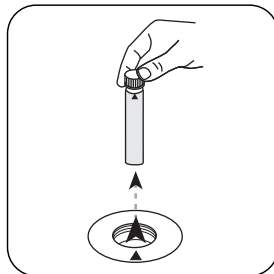
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



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

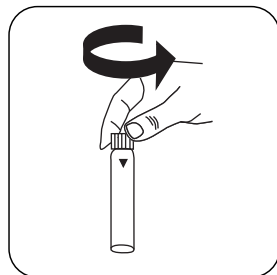


Press the **ZERO** button.

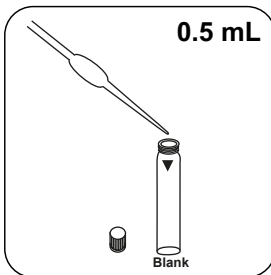


Remove **vial** from the sample chamber.

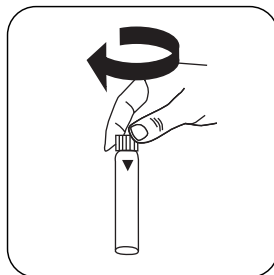
For devices that require **no ZERO measurement**, start here.



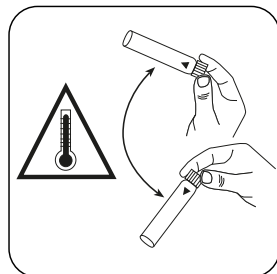
Open a **digestion vial**.



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

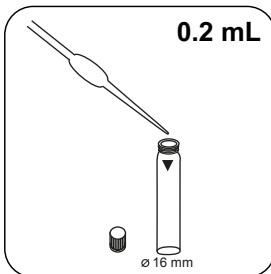


Close vial(s).

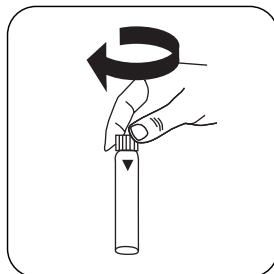


Carefully invert several times to mix the contents.

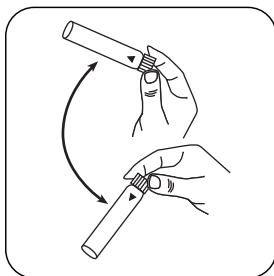
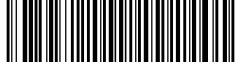
Note: Will get hot!



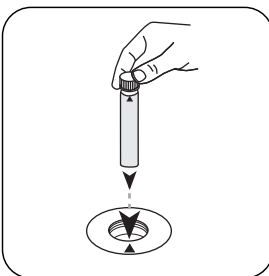
Add **0.2 mL Nitrate-111**.



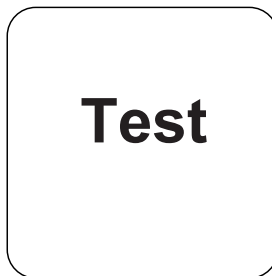
Close vial(s).



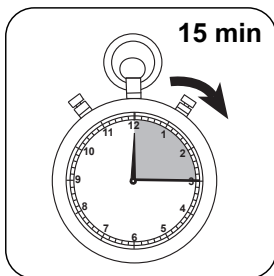
Invert several times to mix the contents.



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

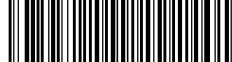


Press the **TEST** (XD: **START**) button.



Wait for **15 minute(s)** reaction time.

Once the reaction period is finished, the measurement takes place automatically.
The result in mg/L $\text{NO}_3\text{-N}$ or NO_3 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 ₃	4.4268

Chemical Method

2,6-Dimethylphenole

Appendix

Calibration function for 3rd-party photometers

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

	ø 16 mm
a	$-2.73451 \cdot 10^{-1}$
b	$2.47521 \cdot 10^{-1}$
c	
d	
e	
f	

Interferences

Persistent Interferences

1. Nitrite concentrations above 2 mg/L result in higher results.
2. High levels of oxidisable organic substances (COD) lead to higher results.

Interference	from / [mg/L]
Cr ⁶⁺	5
Fe ²⁺	50
Sn ²⁺	50
Ca ²⁺	100
Co ²⁺	100
Cu ²⁺	100



Interference	from / [mg/L]
Fe ³⁺	100
Ni ²⁺	100
Pb ²⁺	100
Zn ²⁺	100
Cd ²⁺	200
K ⁺	500
NO ₂ ⁻	2
Cl ⁻	500

Bibliography

Photometrische Analyseverfahren, Schwedt, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart 1989

Derived from

ISO 7890-1-2-1986

DIN 38405 D9-2