



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	$\lambda$	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

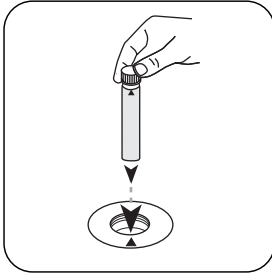




## Determination of Nitrate HR with tube test

Select the method on the device.

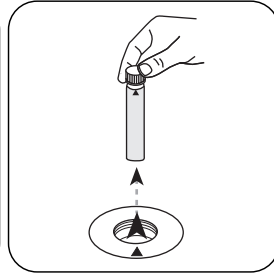
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



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

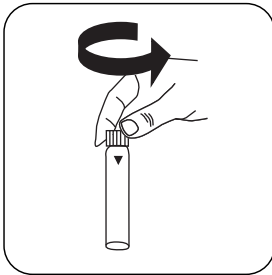


Press the **ZERO** button.

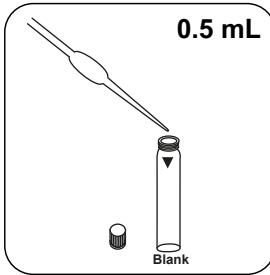


Remove **vial** from the sample chamber.

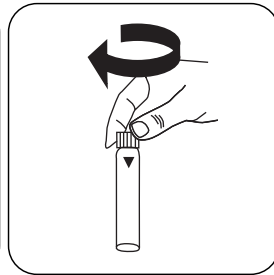
For devices that require **no ZERO measurement**, start here.



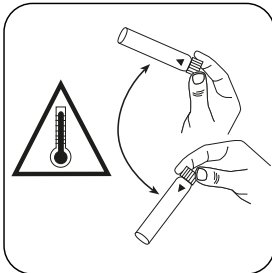
Open a **digestion vial**.



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

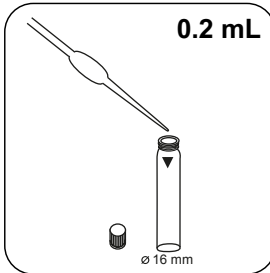


Close vial(s).

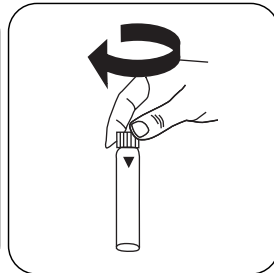


Carefully invert several times to mix the contents.

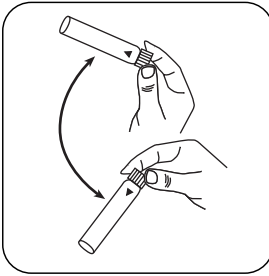
**Note: Will get hot!**



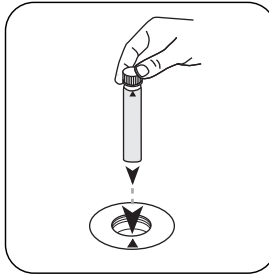
Add **0.2 mL Nitrate-111**.



Close vial(s).



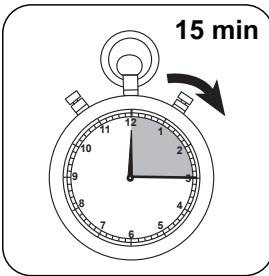
Invert several times to mix the contents.



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

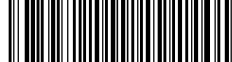


Press the **TEST** (XD: **START**) button.



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  $\text{NO}_3$  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 <sub>3</sub>	4.4268

## Chemical Method

2,6-Dimethylphenole

## Appendix

### Calibration function for 3rd-party photometers

Conc. = a + b•Abs + c•Abs<sup>2</sup> + d•Abs<sup>3</sup> + e•Abs<sup>4</sup> + f•Abs<sup>5</sup>


	ø 16 mm
a	-2.73451 • 10 <sup>-1</sup>
b	2.47521 • 10 <sup>-1</sup>
c	
d	
e	
f	

## Interferences

### Persistent Interferences

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

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



<b>Interference</b>	<b>from / [mg/L]</b>
Fe <sup>3+</sup>	100
Ni <sup>2+</sup>	100
Pb <sup>2+</sup>	100
Zn <sup>2+</sup>	100
Cd <sup>2+</sup>	200
K <sup>+</sup>	500
NO <sub>2</sub> <sup>-</sup>	2
Cl <sup>-</sup>	500

**Bibliography**

Photometrische Analyseverfahren, Schwedt, Wissenschaftliche Verlagsgesellschaft mbH, Stuttgart 1989

**Derived from**

ISO 7890-1-2-1986

DIN 38405 D9-2