TN LR 2 TT M283

0.5 - 14 mg/L N[b)]

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	0.5 - 14 mg/L N[b)]

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Total Nitrogen DMP LR / 25	1 pc.	2423540
Total Nitrogen	1 pc.	2420703

The following accessories are required.

Accessories	Packaging Unit	Part Number
Thermoreactor RD 125	1 pc.	2418940

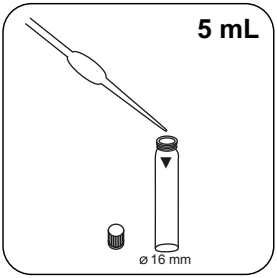
Application List

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

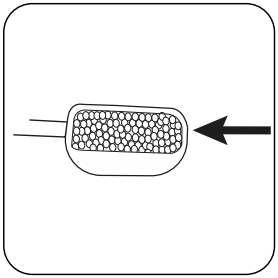
Notes

1. This test determines the inorganic compounds Ammonia, Nitrate and Nitrite, as well as organic compounds like amino acid, urea, complexing agents etc.

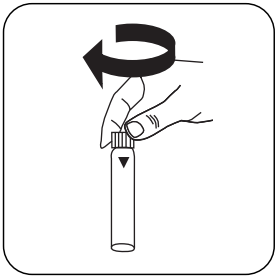
Digestion



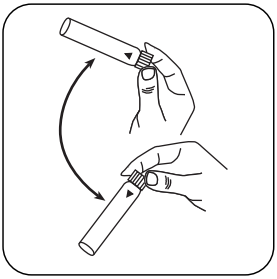
Put **5 mL sample** in the digestion vial.



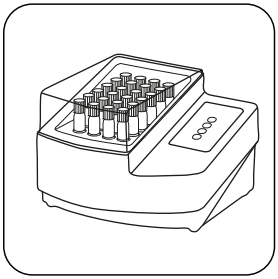
Add **a level measuring scoop No. 8 (black) Digestion Reagent** .



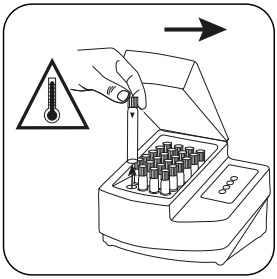
Close vial(s).



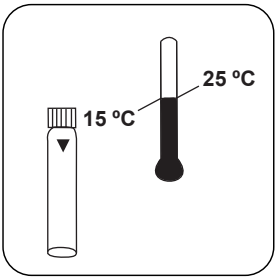
Invert several times to mix the contents.



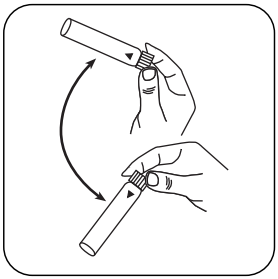
Seal the vials in the pre-heated thermoreactor for **60 minutes at 100 °C** .



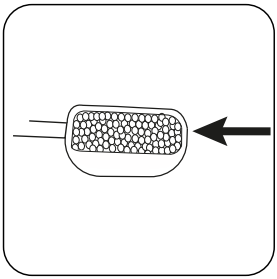
Remove the vial from the thermoreactor. **(Note: vial will be hot!)**



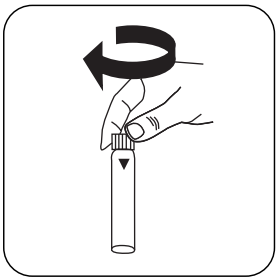
Allow the sample to cool to room temperature.



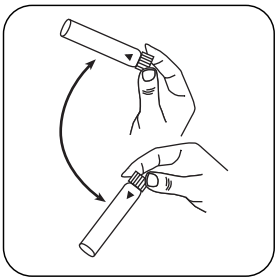
Invert several times to mix the contents.



Add **a level measuring scoop No. 4 (white) Compensation Reagent** .



Close vial(s).



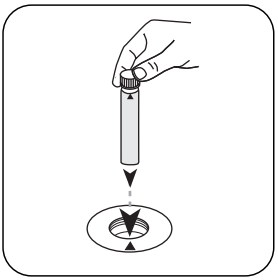
Invert several times to mix the contents.

Determination of Nitrogen, total LR with Vial Test

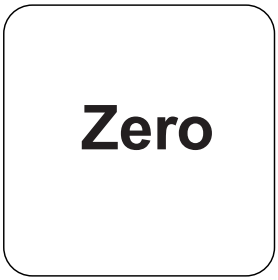
Select the method on the device.

For testing of **Nitrogen, total LR with tube test,** carry out the described **digestion**.

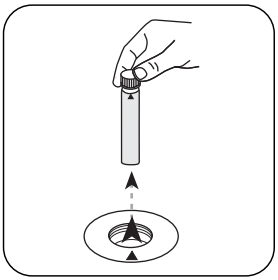
For this method, a ZERO measurement does not have to be carried out every time on the following devices: XD 7000, XD 7500



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

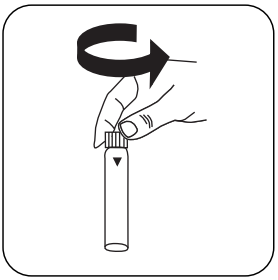


Press the **ZERO** button.

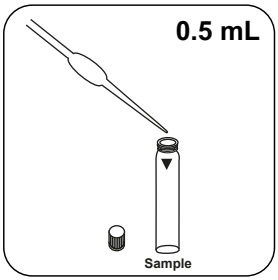


Remove **vial** from the sample chamber.

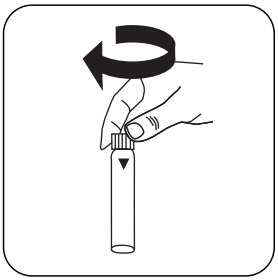
For devices that require **no ZERO measurement** , **start here**.



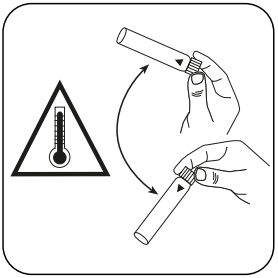
Open a **digestion vial**.



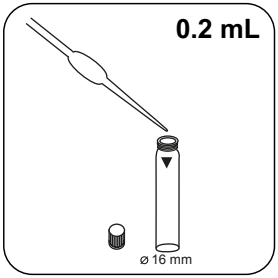
Fill sample vial with **0.5 mL prepared, digested sample**.



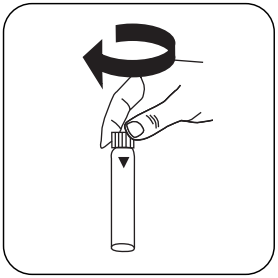
Close vial(s).



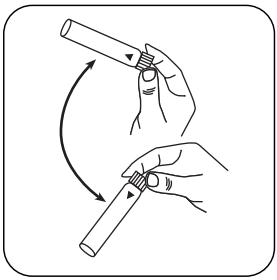
Carefully invert several times to mix the contents. **Note: Will get hot!**



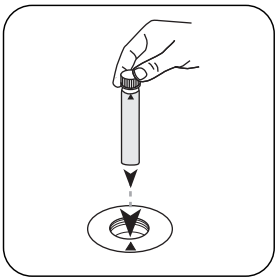
Add **0.2 mL Nitrate-111**.



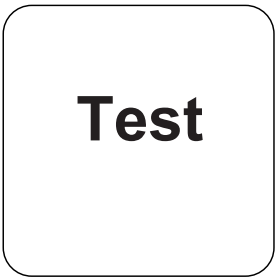
Close vial(s).



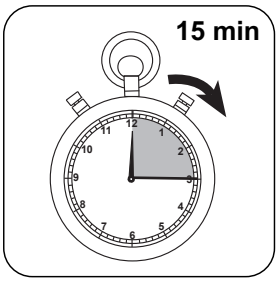
Invert several times to mix the contents.



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 Nitrogen 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	NH_4	1.288
mg/l	NH_3	1.2158

Chemical Method

2,6-Dimethylphenole

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	$2.35054 \cdot 10^{-1}$
b	$1.92879 \cdot 10^{+2}$
c	
d	
e	
f	

Interferences

Persistant Interferences

- Nitrogen compounds which are hardly to oxidise, as may be found in industrial sewage, are not digested or only partially.

Bibliography

1. ISO 23697-1, Water quality — Determination of total bound nitrogen (ST-TNb) in water using small-scale sealed tubes — Part 1: Dimethylphenol colour reaction

According to

US EPA 40 CFR 141

Derived from

EN ISO 11905-1

[b] Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C)