

TN HR TT

284

5 - 140 mg/l N^(b) i)

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	5 - 140 mg/l N ^(b) i)

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
Total Nitrogen	1 Set	2420703

The following accessories are required.

Accessory	Packaging Unit	Part Number
Measuring spoon No. 4 white PP	1 pc.	424515
Measuring spoon no. 8, black	1 pc.	424513

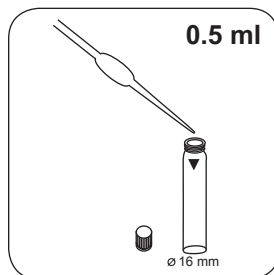
Application List

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

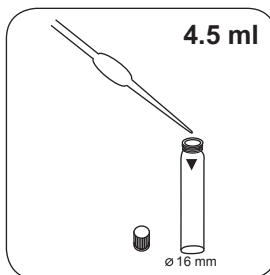
Notes

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

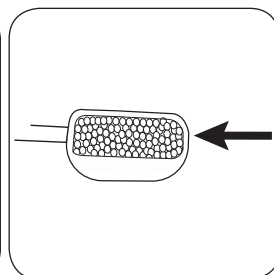
Digestion



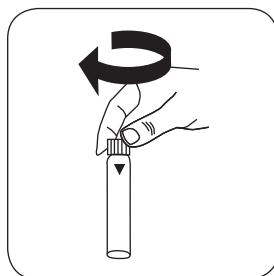
Put **0.5 ml sample** in the digestion vial.



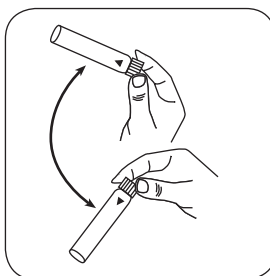
Put **4.5 ml deionised water** in the digestion vial.



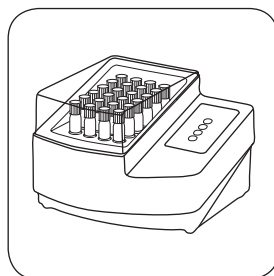
Add a level measuring scoop No. 8 (black) Digestion Reagent .



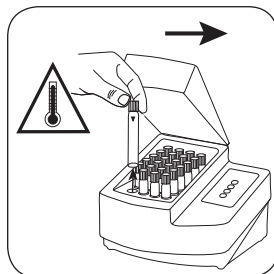
Close vial(s).



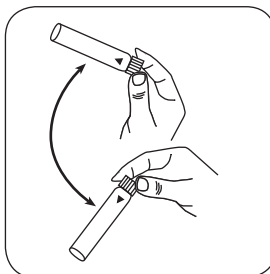
Invert several times to mix the contents.



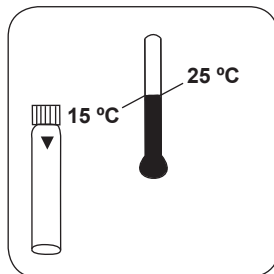
Seal the vials in the pre-heated thermoreactor for **60 minutes at 100 °C** .



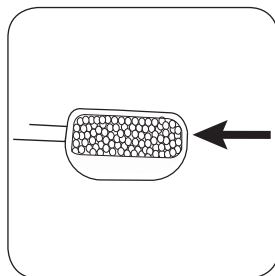
Remove the vial from the thermoreactor. **Note: vial will be hot!**



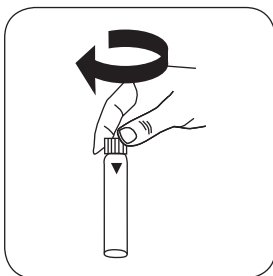
Invert several times to mix the contents.



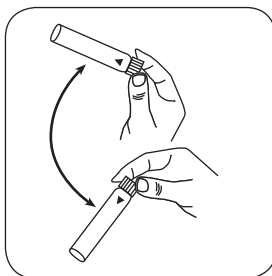
Allow the vial(s) to cool to room temperature.



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



Close vial(s).



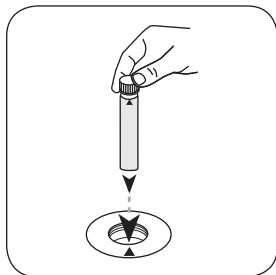
Invert several times to mix the contents.

Implementation of the provision Nitrogen, total HR with Vial Test

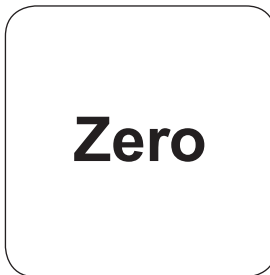
Select the method on the device

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

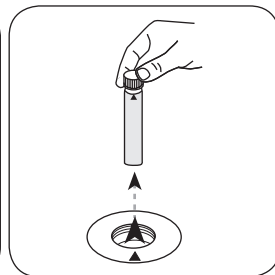
For this method, no ZERO measurements are to be carried out with the following devices: XD 7000, XD 7500



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

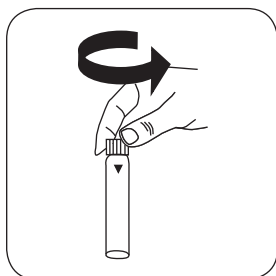


Press the **ZERO** button.

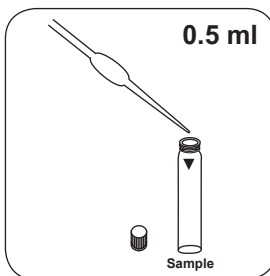


Remove **vial** from the sample chamber.

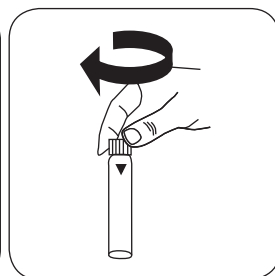
For devices that require **no ZERO measurement**, start here.



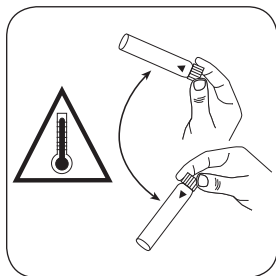
Open a **digestion vial**.



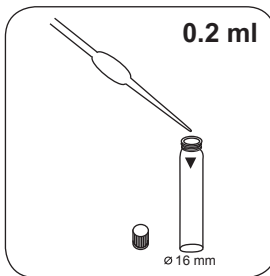
Fill sample vial with **0.5 ml prepared, digested sample**.



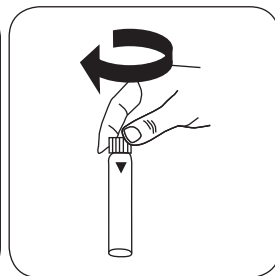
Close vial(s).



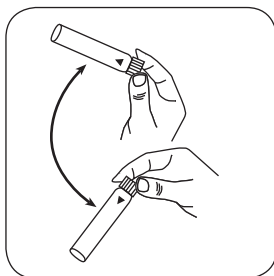
Carefully invert several times to mix the contents.
Note: Will get hot!



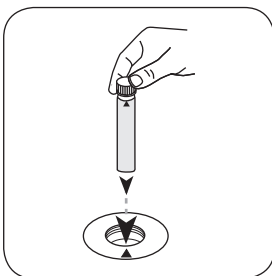
Add **0.2 ml Nitrate-111**.



Close vial(s).



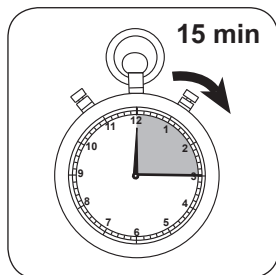
Invert several times to mix the contents.



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

Test

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

Interferences

Persistent Interferences

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

According to

US EPA 40 CFR 141

Derived from

EN ISO 11905-1

^{a)} determination of free, combined and total | ^{b)} Reactor is necessary for COD (150 °C), TOC (120 °C) and total -chromium, - phosphate, -nitrogen, (100 °C) | ^{c)} MultiDirect: Adapter is necessary for Vacu-vials® (Order code 19 20 75) | ^{d)} Spectroquant® is a Merck KGaA Trademark | ^{e)} 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 | ^{f)} additionally required for determination of bromine, chlorine dioxide and ozone in the presence of chlorine | ^{g)} Reagent recovers most insoluble iron oxides without digestion | ^{h)} additionally required for samples with hardness values above 300 mg/l CaCO₃ | ⁱ⁾ high range by dilution | ^{*} including stirring rod, 10 cm