Ammonia HR TT 66
1.0 - 50 mg/l N
Salicylate

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 16 mm	660 nm	1.0 - 50 mg/l N
SpectroDirect, XD 7000, XD 7500	ø 16 mm	655 nm	1.0 - 50 mg/l N

Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
VARIO am Vial Test Reagent Set High Range F5	1 Set	535650

Application List

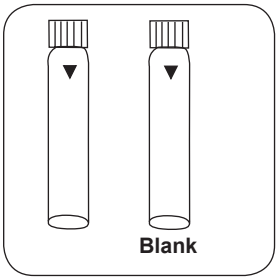
- Waste Water Treatment
- Raw Water Treatment

Preperation

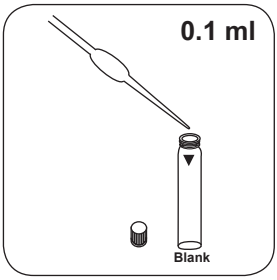
1. Strong alkaline or acidic water samples must be adjusted to approx. pH 7 before analysis (use 1 mol/l Hydrochloric acid or 1 mol/l Sodium hydroxide).

Implementation of the provision Ammonium HR with Vario Tube Test

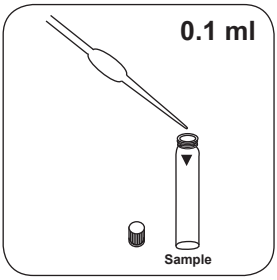
Select the method on the device



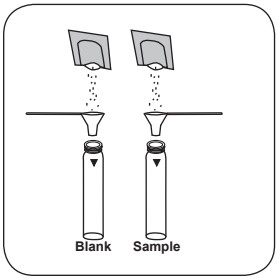
Prepare two **reaction vials**. Mark one as a blank.



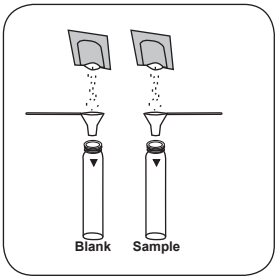
Put **0.1 ml deionised water** in the blank.



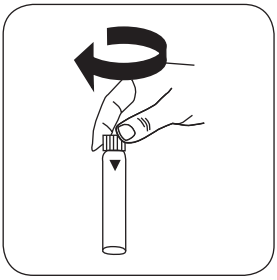
Put **0.1 ml sample** in the sample vial.



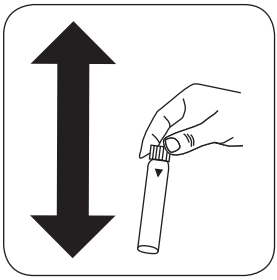
Add **a Vario AMMONIA Salicylate F5 powder pack** in each vial.



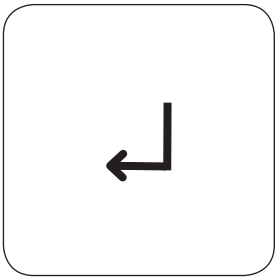
Add **a Vario AMMONIA Cyanurate F5 powder pack** in each vial.



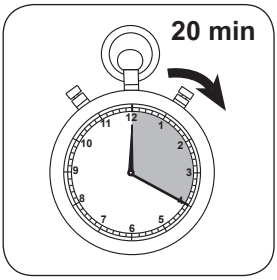
Close vial(s).



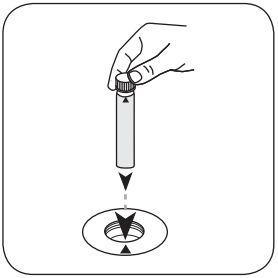
Dissolve the contents by shaking.



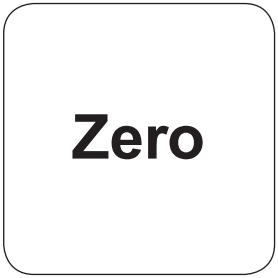
Press the **ENTER** button.



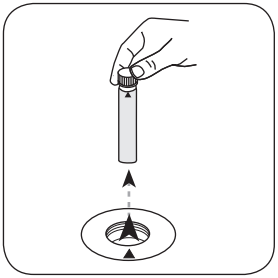
Wait for **20 minute(s) reaction time**.



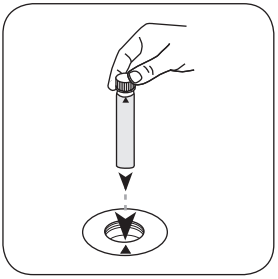
Place **blank** in the sample chamber. • Pay attention to the positioning.



Press the **ZERO** button.



Remove **vial** from the sample chamber.



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

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

The result in mg/l Ammonium 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	1.29
mg/l	NH_3	1.22

Chemical Method

Salicylate

Appendix

Interferences

Removeable Interferences

- Iron interferes with the test and can be eliminated as follows: Determine the amount of total iron present. To produce the blank, add an iron standard solution with the same concentration instead of deionised water.
- If chlorine is known to be present, the sample must be treated with sodium thiosulphate. Add one drop of 0.1 mol/l Sodium thiosulphate for each 0.3 mg/l Cl_2 in a one litre water sample.

Method Validation

Limit of Detection	0.97 mg/l
Limit of Quantification	2.9 mg/l
End of Measuring Range	50 mg/l
Sensitivity	0.0301 mg/l / Abs
Confidence Range	0.93 mg/l
Standard Deviation	0.38 µg
Variation Coefficient	1.40 %

Derived from

DIN 38406-E5-1 ISO 7150-1

[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 $CaCO_3$ | [i] high range by dilution | [#] including stirring rod, 10 cm