**Ammonia LR TT****M65****0.02 - 2.5 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	$\lambda$	Measuring Range
MD 600, MD 610, MD 640, MultiDirect	ø 16 mm	660 nm	0.02 - 2.5 mg/L N
SpectroDirect, XD 7000, XD 7500	ø 16 mm	655 nm	0.02 - 2.5 mg/L N

## Material

Required material (partly optional):

Reagents	Packaging Unit	Part Number
VARIO Am Vial Test Reagent, Set Low Range F5	1 Set	535600

## Application List

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

## Preparation

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).



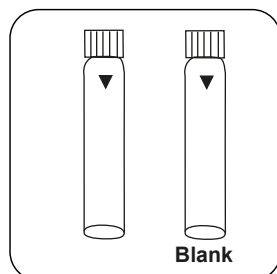




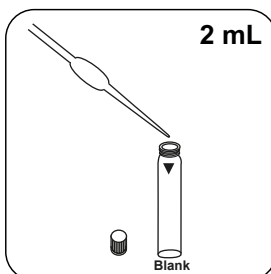


## Determination of Ammonium LR with Vario Vial Test

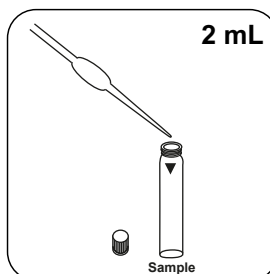
Select the method on the device.



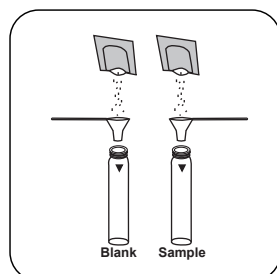
Prepare two **Ammonium Diluent Reagent LR** vials. Mark one as a blank.



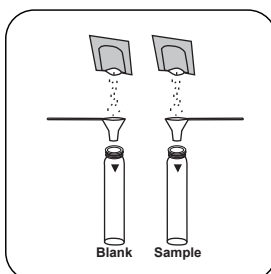
Put **2 mL deionised water** in the blank.



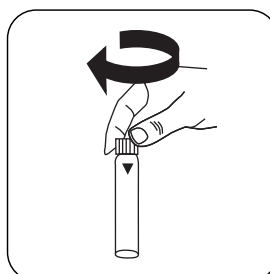
Put **2 mL sample** in the sample vial.



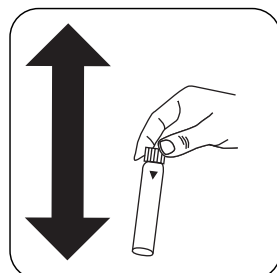
Add a **Vario AMMONIA Salicylate F5 powder pack** in each vial.



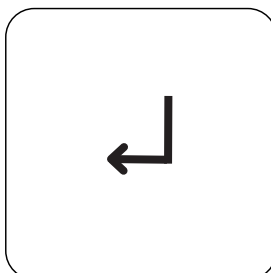
Add a **Vario AMMONIA Cyanurate F5 powder pack** in each vial.



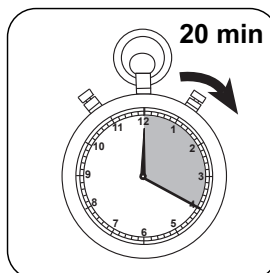
Close vial(s).



Dissolve the contents by shaking.

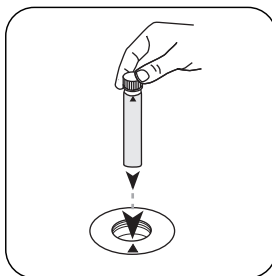


Press the **ENTER** button.

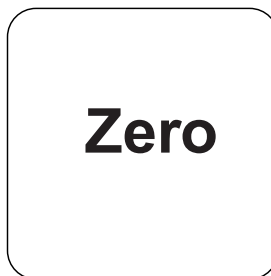


Wait for **20 minute(s) reaction time**.

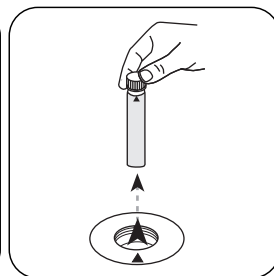




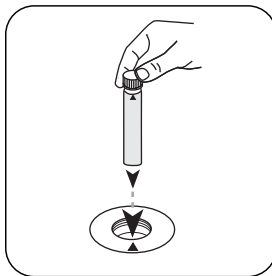
Place **blank** in the sample chamber. • Pay attention to the positioning.



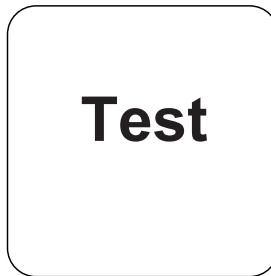
Press the **ZERO** button.



Remove **vial** from the sample chamber.



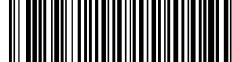
Place **sample vial** in the sample chamber. • Pay attention to the positioning.



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 <sub>4</sub>	1.29
mg/l	NH <sub>3</sub>	1.22

## Chemical Method

Salicylate

## Appendix

### Calibration function for 3rd-party photometers

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

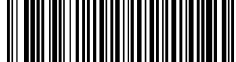
	ø 16 mm
a	$-1.54654 \cdot 10^{-1}$
b	$1.45561 \cdot 10^{-0}$
c	
d	
e	
f	

## 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.





## Method Validation

<b>Limit of Detection</b>	0.01 mg/L
<b>Limit of Quantification</b>	0.04 mg/L
<b>End of Measuring Range</b>	2.5 mg/L
<b>Sensitivity</b>	1.49 mg/L / Abs
<b>Confidence Intervall</b>	0.061 mg/L
<b>Standard Deviation</b>	0.025 mg/L
<b>Variation Coefficient</b>	2.02 %

### Derived from

DIN 38406-E5-1

ISO 7150-1