

Method Z210H – Nitrate NO₃ High range

Specification

Description:	Test for determining the content of nitrate in marine and fresh water
Range:	5 - 150 mg/l
Resolution:	1,0 mg/l
Wavelength:	520 nm

Reagent set

Product Code	Description	List of components
8210	Set of reagents for method Z210H, Nitrate NO ₃ High range (reagents for approx. 85 tests)	<ul style="list-style-type: none"> ✓ Reagent NO₃-1 ✓ Reagent NO₃-3 ✓ powder Reagent NO₃-2 ✓ spatula ✓ 1 ml syringe

NOTE:

To perform this method measurement, it is required to have also deionized water available as a separate product (no 8903 / 100 ml bottle).

Performing the measurement

1. Select the **Z210H Nitrate NO₃ High range** method (Methods → Select method → Z210H Nitrate NO₃ High range). How to select the method, see [8.1 Choosing method](#).

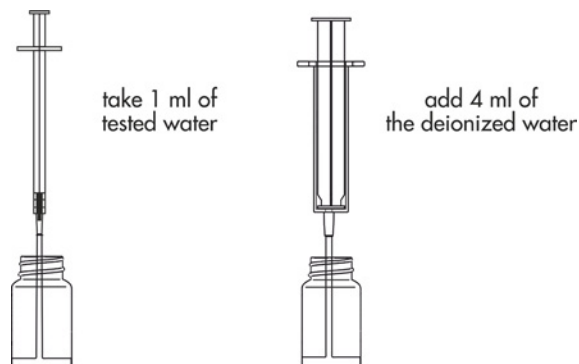
NOTE:

If you do not know what the concentration of nitrate can be expected in the sample, it is recommended to choose Z210L method and perform the measurement for low range first.

It is recommended to use the **GUIDE** system. It will provide you with step-by step basic instruction how to perform measurement and a timer with beeper to count down reaction time. To enable this function press the button **GUIDE**.

2. Rinse the vial and the syringe three times with the tested water.

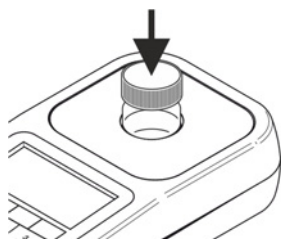
Take exactly 1 ml of the tested water with 1 ml syringe, pour into the vial, then add 4 ml of the deionized water.



NOTE:

Make sure no air bubbles are present in the syringe. Trapped air bubbles can affect accuracy of the measurement.

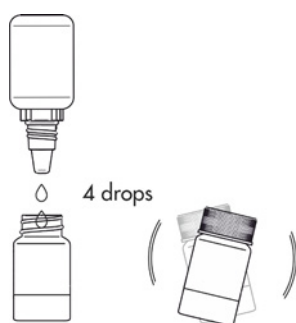
- Insert the vial into the round vial holder and press the **ZERO** key. The display will show "-0.0-", which means the device is ready for measurement.



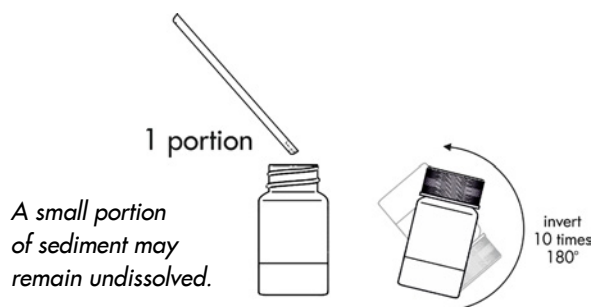
26 08 20		12:45	
NO ₃	Z210H Nitrate NO3	tag 1	
Measuring ...			
ZERO	MEAS	GUIDE	

26 08 20		12:45	
NO ₃	Z210H Nitrate NO3	tag 1	
-0.0- mg/l			
ZERO	MEAS	GUIDE	

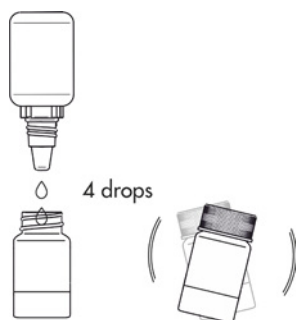
- Add 4 drops of **Reagent NO₃-1**, replace the cap and shake gently to mix.
- Wait 30 seconds before adding **Reagent NO₃-2**



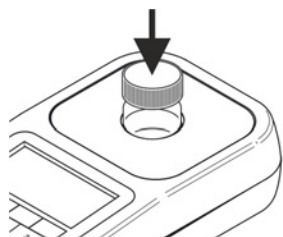
- Add 1 portion of **powder Reagent NO₃-2** with the spatula. Replace the cap and invert 10 times to mix.
- Wait 30 seconds before adding **Reagent NO₃-3**.



- Add 4 drops of **Reagent NO₃-3** and mix.
- Wait **5 minutes** before taking the measurement. Do not stir or shake the sample. In case of air bubbles, gently tap the vial to remove them from the sample. Some sediment may be visible in the solution.



10. After **5 minutes** insert the vial into round vial holder and press the **MEAS** key to take a measurement. The result - **the concentration of nitrate** - is displayed in **mg/l (ppm)**.



26 08 20		12:50	
NO ₃	Z210H Nitrate NO3	tag 1	
Measuring ...			
ZERO	MEAS	GUIDE	

26 08 20		12:50	
NO ₃	Z210H Nitrate NO3	tag 1	
45.0 mg/l			
ZERO	MEAS	GUIDE	REC

There are also available alternative units to display: **ppm** and **N mg/l**. They can be accessed by pressing the **left / right** cursors on the keyboard.

Potential interferences

too high or too low temperature

may cause false readings
maintain the optimal temperature of solutions and reagents – 25°C

nitrite content – above 0,5 ppm

may cause falsely high readings

the presence of metal ions:

iron (Fe), antimony (Sb), bismuth (Bi), caesium (Ce), chromium (Cr), gold (Au), silver (Ag) and mercury (Hg)

may cause falsely low readings

strongly oxidizing or reducing agents,
organic ammonium compounds such as urea or amines

may interfere with a NO₃ measurement