



Enzymatic kit for determination of Ammoniacal nitrogen

Principle:



The determination is based on the formation of NAD^+ measured by the decrease in light absorbance at 340 nm

Kit for 50 / 125 analysis includes

Bottle	Composition	Quantity
A.	Buffer	90 ml
B.	Coenzyme	10 ml
C.	Enzyme	20 ml
STD.	Standard 80 mg/l	2 ml

Reagent preparation:

R1: preparation of R1 for 10 analysis with macro cuvettes (or 25 analysis with semi-micro cuvettes)

Mix 2 ml of **Bottle B** with 18 ml of **Bottle A**.

Stability of R1: 4 weeks if stored at 2-8 °C.

R2: is **Bottle C** and it's ready to use.

Sample preparation:

If necessary, filtrate or centrifuge the sample in order to eliminate the particles in suspension.

Performances:

This test has been developed to determine the concentration of ammoniacal nitrogen in a measuring range from 0 to 80 mg/l. If the expected values are higher than 80 mg/l, samples should be diluted with distilled water and the results must be multiplied by the dilution factor.

Storage instructions and reagent stability:

The reagents are stable up to the expiry date, if stored at 2 to 8°C. Contamination should be avoided. Do not freeze the reagents!

Warnings and precautions:

Do not swallow the reagents. Avoid contact with the skin and mucous membranes.

Take the necessary precautions for the use of laboratory reagents.

Sample analysis

	Blank	Standard	Sample
R1	2000 µl	2000 µl	2000 µl
Water	30 µl		
Standard		30 µl	
Sample			30 µl
Mix and read	DO1 blank	DO1 standard	DO1 sample
R2	400 µl	400 µl	400 µl
Mix wait 15 min and read	DO2 blank	DO2 standard	DO2 sample

Wavelength: 340 nm
Cuvette: 1 cm path (plastic or glass)
Temperature: 20 - 37°C
Zero: against water or air

Calculations:

$\Delta\text{DO sample} = (\text{DO2-DO1}) \text{ sample} - (\text{DO2-DO1}) \text{ blank}$

$\Delta\text{DO standard} = (\text{DO2-DO1}) \text{ standard} - (\text{DO2-DO1}) \text{ blank}$

$\text{C sample (mg/l)} = \text{C standard} \times \frac{\Delta\text{DO sample}}{\Delta\text{DO standard}}$

Dilution factor of the sample has to be considered in the calculation

It's possible to perform 125 analysis if working with semi-micro and applying the volumes below:

R1= 800 µl / Sample = 12 µl / R2= 160 µl