

High sensitivity test kit for the determination in the range of 0.005–0.10 mg/L NO₂⁻

Method:

Azo dye formed by sulfanilamide and *N*-(1-naphthyl) ethylene diamine

Contents of test kit (*refill pack):

sufficient for 150 tests

100 mL NO₂-1*

23 g NO₂-2*

1 black measuring spoon 85 mm*

1 plastic beaker for sampling

2 round glass tubes with

screw caps

1 comparator block

1 color comparison disc Nitrite

Hazard warning:

NO₂-1 contains ortho-phosphoric acid 10–25 %.

For further information ask for a safety data sheet.

Procedure:

1. Place comparator block into the position provided in the box (see illustration).
2. Insert color comparison disc.
3. Open both round glass tubes, rinse several times with the water sample and fill up to the mark with the sample.
4. Add **12 drops NO₂-1** to the right glass tube, close and mix.
5. Add **1 level measuring spoon NO₂-2** to the right glass tube, close and mix. Wait **10 min.**
6. Reading: Turn color disc until both colors match by transmitted light from above.
Read test results from the mark on the front side of the comparator. Intermediate values can be estimated.
7. After use clean both round glass tubes thoroughly and close.

The method can be applied also for the analysis of sea water.

Disposing of the samples:

The used analysis specimens can be flushed down the drain with tap water and channelled off to the local sewage treatment works.

Interferences:

Chromium(VI) and iron(III) ions > 3 mg/L simulate high nitrite concentrations.

Chlorine interferes in minute concentrations.

The reaction is temperature dependent. Below 20 °C results can be too low, above 25 °C too high.

Conversion table:

mg/L NO ₂ ⁻	mg/L NO ₂ -N (nitrite- nitrogen)	mmol m ³
0.005	0.002	0.11
0.010	0.003	0.22
0.015	0.005	0.33
0.02	0.006	0.43
0.03	0.009	0.65
0.04	0.012	0.87
0.06	0.018	1.30
0.08	0.024	1.74
0.10	0.030	2.17

