Nitrite

Test kit for performing colorimetric tests on nitrite ions in surface water and sewage

Method:
Sulfanilamide is diazotized by nitrite in acidic solution. The diazonium salt is coupled with a naphthylamine to form a reddish-violet azo dye.

Measurement range:
0.02–0.5 mg/L $\text{NO}_2^{-}$

Contents of test kit (*refill pack):
sufficient for 120 tests
- 30 mL $\text{NO}_2^{-} \cdot 1^\dagger$
- 5 g $\text{NO}_2^{-} \cdot 2^\dagger$
- 1 measuring spoon 70 mm
- 2 screw-plug measuring glasses
- 1 slide comparator
- 1 color chart
- 1 plastic syringe 5 mL
- 1 instructions for use

Hazard warning:
This test does not contain any hazardous substances which must be specially labelled as hazardous.

Instructions for use:
also refer to the pictogram on the back of the color chart
1. Pour a 5 mL water sample into each of the measuring glasses using the plastic syringe.
Place a measuring glass on position A in the comparator.

Only add the reagent to measuring glass B.
2. Add 4 drops of $\text{NO}_2^- \cdot 1^\dagger$, seal the glass and mix.
3. Add 1 level measuring spoonful of $\text{NO}_2^- \cdot 2^\dagger$, seal the glass and shake the mixture until the powder has dissolved.
4. Open the glass after 10 min and place it on position B in the comparator.
5. Slide the comparator until the colors match in the inspection hole on top. Check the measurement reading in the recess on the comparator reed. Mid-values can be estimated.
6. After use, rinse out both measuring glasses thoroughly and seal them.

The reagents can be used for the photometric evaluation with photometer PF-12.
This technique can be used also for analyzing 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 present in excess of 3 mg/L simulate nitrite values which are too high. Chlorine interferes even in minute concentrations.

Conversion table:

<table>
<thead>
<tr>
<th>mg/L $\text{NO}_2^{-}$</th>
<th>mg/L $\text{NO}_2^{-} \cdot \text{N}$ (nitrite nitrogen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.02</td>
<td>0.006</td>
</tr>
<tr>
<td>0.03</td>
<td>0.009</td>
</tr>
<tr>
<td>0.05</td>
<td>0.015</td>
</tr>
<tr>
<td>0.07</td>
<td>0.021</td>
</tr>
<tr>
<td>0.1</td>
<td>0.03</td>
</tr>
<tr>
<td>0.2</td>
<td>0.06</td>
</tr>
<tr>
<td>0.3</td>
<td>0.09</td>
</tr>
<tr>
<td>0.5</td>
<td>0.15</td>
</tr>
</tbody>
</table>

Storage:
Store the test kit in a cool (< 25 °C) and dry place.

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**Product data and ordering information**

<table>
<thead>
<tr>
<th>REF</th>
<th>931 044 (931 244)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>colorimetric test kit (refill pack)</td>
</tr>
<tr>
<td>Range</td>
<td>0 · 0.02 · 0.03 · 0.05 · 0.07 · 0.1 · 0.2 · 0.3 · 0.5 mg/L (ppm) $\text{NO}_2^{-}$</td>
</tr>
<tr>
<td>Sufficient for</td>
<td>120 determinations</td>
</tr>
<tr>
<td>Shelf life</td>
<td>at least 1.5 years</td>
</tr>
<tr>
<td>Sea water suitability</td>
<td>yes</td>
</tr>
<tr>
<td>Detectable with PF-12</td>
<td>yes</td>
</tr>
</tbody>
</table>

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