

Iron 1

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

Method:

Colorimetric determination of Fe(II) and Fe(III) ions with a triazine derivate

Measurement range:

0.04–1.0 mg/L Fe

Contents of test kit (*refill pack):

sufficient for 200 tests

- 30 mL Fe-1*
- 2 screw-plug measuring glasses
- 1 slide comparator
- 1 color chart
- 1 plastic syringe 5 mL
- 1 instructions for use*

Hazard warning:

Fe-1 contains thioglycollic acid 24–60 %.

H301, H311, H314, H331 Toxic if swallowed. Toxic in contact with skin. Causes severe skin burns and eye damage. Toxic if inhaled.

P260, P280, P301+310, P301+330+331, P302+352, P303+361+353, P304+340, P305+351+338, P311, P361+364, P405, P501 Do not breathe vapors. Wear protective gloves/eye protection. IF SWALLOWED: Immediately call a POISON CENTER/doctor/... IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN: Wash with plenty of water/... IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a POISON CENTER/doctor/... Take off immediately all contaminated clothing and wash it before reuse. Store locked up. Dispose of contents/container to regulated waste treatment. For further information ask for a safety data sheet.

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 **5 drops of Fe-1**, seal the glass and mix.
3. Open the glass after **3 min** and place it on position B in the comparator.
4. 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.
5. After use, rinse out both measuring glasses thoroughly and seal them.

The reagents can also 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 channeled off to the local sewage treatment works.

Interferences:

The following quantities of ions will not interfere: ≤ 5 mg/L Ca^{2+} , Ni^{2+} , MoO_4^{2-} ; ≤ 3 mg/L Cu^{2+} .

Conversion table:

mg/L Fe	mmol/m ³
0.04	0.7
0.07	1.3
0.10	1.8
0.15	2.7
0.20	3.6
0.30	5.4
0.50	9.0
1.0	18

Storage:

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

Product data and ordering information

REF	931 025 (931 225)
Type	colorimetric test kit (refill pack)
Range	0 · 0.04 · 0.07 · 0.10 · 0.15 · 0.20 · 0.30 · 0.50 · 1.0 mg/L (ppm) Fe
Sufficient for	200 determinations
Shelf life	at least 2 years
Sea water suitability	yes
Detectable with PF-12	yes