

# 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 and PF-12<sup>Plus</sup>.

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:  $\leq 5$  mg/L  $\text{Co}^{2+}$ ,  $\text{Ni}^{2+}$ ,  $\text{MoO}_4^{2-}$ ;  
 $\leq 3$  mg/L  $\text{Cu}^{2+}$ .

**Conversion table:**

mg/L Fe	mmol/m <sup>3</sup>
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.