

High sensitivity test kit for the determination in the range of 0.01–0.20 mg/L Fe

Method:

Iron triazine complex

Contents of test kit (*refill pack):

sufficient for 300 tests

100 mL Fe-1*	1 plastic beaker for sampling
2 x 23 g Fe-2*	2 round glass tubes with screw caps
1 measuring spoon 85 mm*	1 comparator block
	1 color comparison disc Iron

Hazard warning:

This test does not contain any harmful substances which must be specially labelled as hazardous.

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 **10 drops Fe-1** to the right glass tube, close and mix.
5. Add **1 level measuring spoon Fe-2** to the right glass tube, close and mix. Wait **3 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.
8. The iron(II) ion content is ascertained by carrying out the analysis without Fe-2.

This method cannot be applied 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:

Copper ions > 0.3 mg/L form a grey-violet complex and thus interfere with the determination of iron.

Nickel ions > 0.5 mg/L lead to reduced findings.

Cobalt ions and molybdate ions > 0.5 mg/L disrupt the iron test by forming a yellow complex.

Nitrite ions > 20 mg/L interfere by producing a yellowish red color.

The temperature of the water sample should be between 15 and 30 °C; outside this range results can be too low.

Conversion table:

mg/L Fe	mmol/m ³
0.01	0.18
0.02	0.36
0.03	0.54
0.04	0.72
0.05	0.90
0.07	1.25
0.10	1.8
0.15	2.7
0.20	3.6

