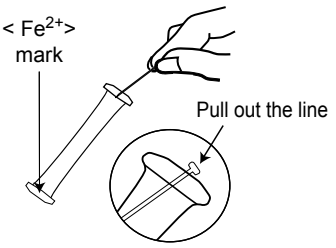
KYORITSU **PACK TEST** ION SELECTIVE **INSTRUCTIONS**

Iron (Divalent)

Model WAK-Fe^{2+}

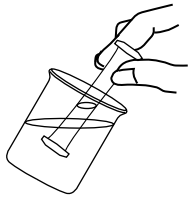
o-Phenanthroline color comparison Method
Main reagent : *o*-Phenanthroline
Range: 0.2 - 10 mg Fe^{2+}/L (ppm)

How to use

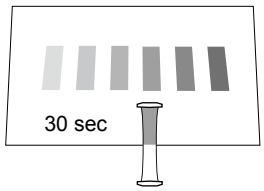


(1) Remove the line to clear the aperture from the top of the tube.

(2) Press the sides of the tube to expel approximately half of volume. Maintain pressed.



(3) Immerse the tube in the sample. Release the sides to fill the tube up to the half. Shake the tube lightly a few times.



(4) After 30 seconds, put the tube on the color chart as shown and compare with the standard colors.

How to read the test

After the reaction time, compare the color of the tube with the standard colors. The nearest color indicates the measured value of the sample. A color between two standard colors indicates a value between the two standard values.

Care in handling of PACKTEST before and after use

Keep PACKTEST out of the reach of children.
Keep PACKTEST in a cool, dry and dark place.
PACKTEST should be thrown with burnable garbage. Conform to the legislation of waste management.
Use a package as soon as possible after opening.
The PACKTEST tube must not be opened before and after use.

First Aid Measures

Eye contact → Immediately rinse eyes with water for at least 15 minutes. Consult a physician.
Skin contact → Immediately flush skin with water.
Ingestion → Immediately rinse mouth. Consult a physician.
In case of doubt, consult a physician.

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PACKTEST Iron(Divalent)

Features

The Iron(Divalent) PACKTEST is based on the colour made by the formation of a complex between *o*-phenanthoroline and divalent iron ion Fe^{2+}. The Fe^{2+} PACKTEST is suitable for the measurement of Fe^{2+} ion concentration from various samples like industrial waste water, environmental water, and so on.
For drinking water, which usually contains low iron concentration, we recommend to use the Iron (Divalent) (Low range) PACKTEST WAK-Fe^{2+}(D), range: 0.1- 2 mg Fe^{2+}/L.
If you wish to measure both Fe^{2+}(Divalent iron) and Fe^{3+}(Trivalent iron), we recommend to use the Iron PACKTEST WAK- Fe, range 0.2 - 10 mg Fe/L).

Cautions

1. This PACKTEST allows only to measure divalent iron ion Fe^{2+}. If you wish to measure total iron fraction including suspending particles of a sample, for example: “rusty water”, we recommend to process samples with sulfuric acid before to use the Iron PACKTEST WAK- Fe.
2. Adjust a pH out of the range 2 - 9 with diluted sulfuric acid or sodium hydroxide solution.
3. Ensure that PACKTEST tube is filled up to the half.
4. Partially undissolved reagent will not affect the measurement.
5. Keep sample temperature in the range 15 - 40°C. Lower temperature necessitates longer reaction time.
6. Read the test under a daylight type lamp.
7. Put the line back into the aperture after using to prevent reagent spilt.

Interferences

Standard colors were determined from standard solutions. However, coexisting substances will cause inaccurate results. The list below reports ion concentrations under which ones interferences are insignificant:

< 1000 mg/L : Al^{3+}, As^{3+}, B^{3+}, Ba^{2+}, Ca^{2+}, Cd^{2+}, Cl^{-}, CN^{-}, Cr^{3+}, F^{-}, I^{-}, K^{+}, Mg^{2+}, Mn^{2+}, Na^{+}, NH_4^{+}, NO_2^{-}, NO_3^{-}, Pb^{2+}, PO_4^{3-}, SO_4^{2-}, Phenol
< 250 mg/L : Ni^{2+}
< 100 mg/L : Hg^{2+}, Sn^{2+}, Zn^{2+}
< 20 mg/L : Co^{2+}, Cu^{2+}
< 10 mg/L : Fe^{3+}
< 1 mg/L : Cr^{6+}, V^{5+}, Residual chlorine

The Iron(Divalent) PACKTEST is not suitable for sea water samples.