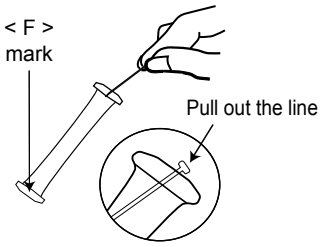
KYORITSU **PACK TEST** ION SELECTIVE **INSTRUCTIONS**

Fluoride (Free)

Model WAK-F

Lanthanum Nitrate, Alizarin Complexon Method
Main reagent: Lanthanum Nitrate, Alizarin Complexon
Range: 0 - ≥8 mg F^- /L (ppm)

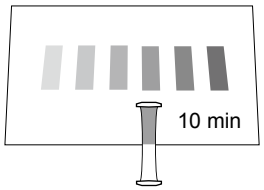
How to use



(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 10 times.



(4) After 10 minutes, 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 Fluoride (Free)

Features

The Fluoride PACKTEST is based on the colour made by formation of a complex between fluoride and lanthanum-alizarin complexon. With the Fluoride PACKTEST, free fluoride ion concentration can be measured easly in sample containing few coexisting substances like distillate solution, natural water etc. Borofluoride ion can not be measured using Fluoride PACKTEST.

Cautions

1. The Fluoride(Free) PACKTEST can only measure fluoride ion state (F^-) .
2. The reaction color becomes weak when fluoride concentration is higher than 40 mg/L. In this case, we recommend to dilute the sample with the pure water.
3. Adjust a pH out of the range 3 - 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°C - 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 use 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 : Cl^-, I^-, K^+, Na^+, NH_4^+, NO_3^-, SO_4^{2-}, Phenol, Formaldehyde, Anionic surfactant
≤ 500 mg/L : B^{3+}, SO_3^{2-}
≤ 200 mg/L : CN^-
≤ 100 mg/L : Mn^{2+}, PO_4^{3-}
≤ 50 mg/L : NO_2^-
≤ 20 mg/L : Ag^+
≤ 10 mg/L : Cr^{3+}, Cr^{6+}
≤ 5 mg/L : Residual Chlorine
≤ 1 mg/L : Sn^{2+}
≤ 0.5 mg/L : Fe^{2+}, Fe^{3+}, Mo^{6+},Pb^{2+}
Trace element concentration: Al^{3+}, Co^{2+}, Cu^{2+}, Ni^{2+}, Zn^{2+}

The Fluoride(Free) PACKTEST is not suitable for sea water samples.

Fluorine can form a fluoro-complex and precipitate when metal elements like aluminum, iron and alkaline earth metals (Ba^{2+}, Ca^{2+} and Mg^{2+}). In this case, Fluorine PACKTEST result could be unusable.