



KYORITSU

PACK TEST
ION SELECTIVE

INSTRUCTIONS

Manganese

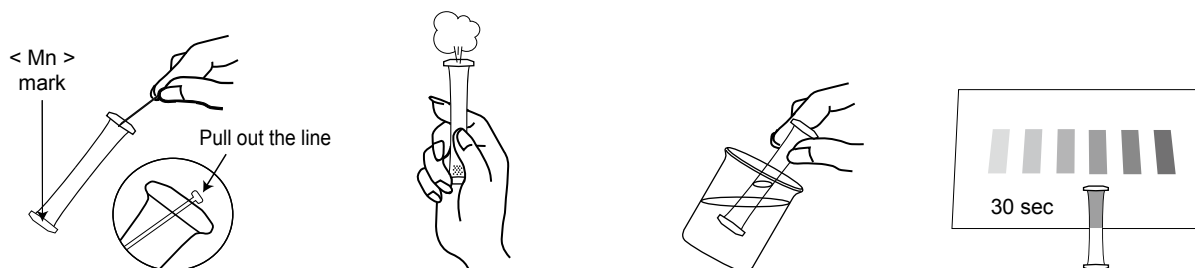
Model WAK-Mn

Potassium Periodate color comparison Method

Main reagent: Potassium Periodate

Range: 0.5 - 20 mg Mn/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.

**KYORITSU CHEMICAL-CHECK Lab., Corp.**37-11, DEN-ENCHOFU 5 CHOME, OHTA-KU, TOKYO 145-0071 JAPAN
FAX: 81-3-3721-0666 <http://kyoritsu-lab.co.jp>

PACKTEST Manganese

Features

The Manganese PACKTEST is based on the color comparison of a reaction between potassium periodate and manganese. The Manganese PACKTEST allows to measure manganese ion concentration, from divalent up to heptavalent ions. It is suitable for industrial waste water or environmental water.

Cautions

1. The Manganese PACKTEST allows to measure dissolved manganese ions (from divalent up to heptavalent). If you wish to measure total manganese fraction including suspended particles, you must process samples in order to dissolve solid phases.
2. The normal pH range is 5 - 9. If necessary, adjust the pH with diluted sulfuric acid or sodium hydroxide solution. The best value is the range 6 - 7.
3. An emphasised yellowish color indicates an incorrect pH value. In this case, we recommend to check pH and to retry.
4. Ensure that PACKTEST tube is filled up to the half.
5. Partially undissolved reagent will not affect the measurement.
6. Keep sample temperature in the range 15°C - 40°C. Lower temperature necessitates longer reaction time.
7. Read the test under a daylight type lamp.
8. 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 : Al³⁺, As³⁺, B³⁺, Ba²⁺, Ca²⁺, Cl⁻, F⁻, K⁺, Mg²⁺, Mo⁶⁺, Na⁺, NH₄⁺, NO₂⁻, NO₃⁻, PO₄³⁻, SO₄²⁻, Zn²⁺, Formaldehyde
- ≤ 250 mg/L : Ni²⁺, Pb²⁺
- ≤ 100 mg/L : Cd²⁺
- ≤ 50 mg/L : Co²⁺, Cu²⁺, Fe²⁺, Fe³⁺, Sn²⁺, Phenol, Residual Chlorine
- ≤ 20 mg/L : Cr³⁺, Cr⁶⁺
- ≤ 10 mg/L : CN⁻, I⁻

The Manganese PACKTEST is suitable for sea water samples.
Reductive chemical can interfere.