



KYORITSU

**PACK TEST**  
ION SELECTIVE

INSTRUCTIONS

# Nickel (DPM)

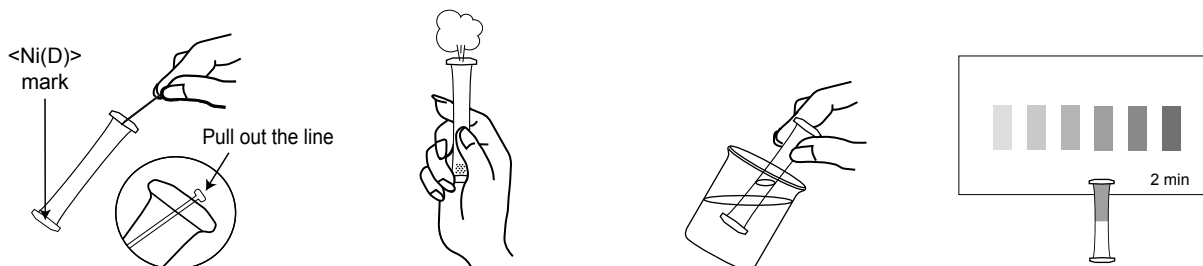
Model WAK-Ni(D)

Nioxime color comparison Method

Main reagent: Nioxime

Range: Ni 0.3 - 10 mg/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 2 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 Nickel(DPM)

### Features

The Nickel(DPM) PACKTEST uses the 1,2-Cyclohexanedione Dioxime (Nioxime) color comparison method. It is suitable to measure dissolved Nickel ion  $\text{Ni}^{2+}$  concentration in various samples like industrial or waste waters.

### Cautions

1. The Nickel(DPM) PACKTEST allows to measure dissolved  $\text{Ni}^{2+}$  ions concentration. If you wish to measure total nickel fraction including suspended particles, you must process samples in order to dissolve solid phases.
2. The normal pH range is 4 - 9. If necessary, adjust the pH with diluted sulfuric acid or sodium hydroxide solution.
3. The reaction color becomes stronger than 10mg/L of standard color when the nickel standard solution is 100mg/L.  
When the standard solution is higher than 200mg/L, a red precipitate will occur, and the reaction color becomes colorless.  
If you suspect a high concentration, make a dilution of your sample.
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  $15^{\circ}\text{C}$  -  $40^{\circ}\text{C}$ . 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:

- $\leq 1000$  mg/L :  $\text{Al}^{3+}$ ,  $\text{B}^{3+}$ ,  $\text{Ba}^{2+}$ ,  $\text{Ca}^{2+}$ ,  $\text{Cl}^-$ ,  $\text{F}^-$ ,  $\text{I}^-$ ,  $\text{K}^+$ ,  $\text{Mg}^{2+}$ ,  $\text{Mn}^{2+}$ ,  $\text{Mo}^{6+}$ ,  $\text{Na}^+$ ,  $\text{NH}_4^+$ ,  $\text{NO}_2^-$ ,  $\text{NO}_3^-$ ,  
 $\text{PO}_4^{3-}$ ,  $\text{SO}_4^{2-}$ ,  $\text{Zn}^{2+}$ , Anionic surfactant, Phenol
- $\leq 500$  mg/L : Residual Chlorine
- $\leq 100$  mg/L :  $\text{Cr}^{3+}$
- $\leq 50$  mg/L :  $\text{Fe}^{3+}$
- $\leq 10$  mg/L :  $\text{Co}^{2+}$ ,  $\text{Cr}^{6+}$
- $\leq 5$  mg/L :  $\text{Fe}^{2+}$ ,  $\text{CN}^-$
- $\leq 3$  mg/L :  $\text{Cu}^{2+}$

The Nickel(DPM) PACKTEST is suitable for sea water samples.