

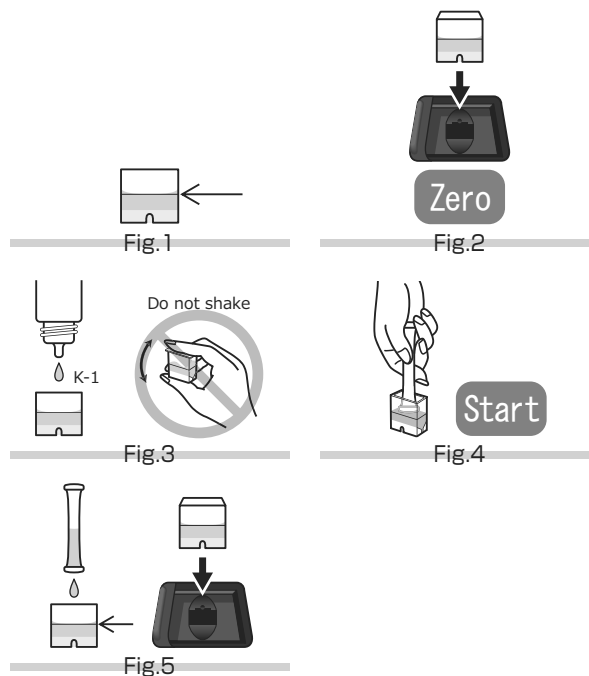
NaClO₂ Sodium Chlorite

Color development: None → Yellow → Orange → Red brown
Method : Potassium Iodide
Range : 2 — 500 mg/L(ppm)
Reagent : WAK-NaClO₂ K-1 (Dropper) , Tube
Reaction time : 1 min. after drawing sample into the tube.

Cell : PACKTEST Square Cup
Wavelength : 470 nm, 600 nm

Procedure

1. Press **[NaClO₂]**
2. Press **[OK]** to switch to the photometry window.
3. Fill the Cell with the sample for 1.5 mL (up to line). (Fig.1)
4. Put the Cell in the cell box and press **[Zero]**. (Fig.2)
5. Add four droplets of K-1 reagent. (Fig.3)
6. Immediately suck the whole amount of the sample in the Cell into the tube and press **[Start]** at the same time. (Fig.4)
7. Lightly shake the tube in Step 6 from 5 to 6 times, return the solution in the tube to the Cell in a gentle manner, set it again in the cell box. (Fig.5)
8. After 1 minute has elapsed, the concentration will be automatically displayed.



Caution

1. In this method, the concentration of residual chlorine and chlorine dioxide is also measured.
2. As chlorine gas may be generated during measurement, be sure to perform measurement while ventilating the air.
3. The optimum pH during color development is 1. Neutralize a sample of pH 10 or greater with dilute sulfuric acid.
4. Perform measurement with the sample temperature set to 15 to 30°C.
5. After the K-1 reagent is added in Step 5 of "Procedure", do not shake the Cell, but immediately suck the sample into the tube. If the Cell is shaken or it takes time before the sample is sucked, the result may become low.

Influence of coexisting substance

The stored calibration curve has been created by using the standard solution. If the influence of other substance is considered, check the measurement value by comparing it with the official method or by standard addition method. The right chart is the list of interference data for acceptable level by adding each of the single substances to the standard solution.

Seawater and tap water do not affect the measurement.

The residual chlorine and chlorine dioxide also make color development and cause positive error. Oxidizing substances such as hydrogen peroxide cause a positive measurement error. Reductive substances such as Fe²⁺ and NO₂⁻ consume sodium chlorite. NO₂⁻ may serve as an oxidizer and may cause a positive measurement error.

When the sample contains starch, the color may develop to brown to black, disabling measurement.

≤ 1000mg/L.: Al ³⁺ , B (III), Ca ²⁺ , F ⁻ , I ⁻ , K ⁺ , Mg ²⁺ , Mn ²⁺ , Mo (VI), Na ⁺ , NH ₄ ⁺ , Ni ²⁺ , NO ₃ ⁻ , PO ₄ ³⁻ , SO ₄ ²⁻ , Zn ²⁺ , Amino acid, Glucose, Phenol, Silica, Sodium Chlorate
≤ 100mg/L.: Anionic Surfactant
≤ 20mg/L.: Albumin
≤ 10mg/L.: Ba ²⁺ , Starch
≤ 5mg/L.: Cu ²⁺ , Fe ³⁺
≤ 1mg/L.: Fe ²⁺ , Residual Chlorine
< 1mg/L.: Cr (VI)

Information on reagent

Refer to the usage that comes with PACKTEST.

The pH of K-1 reagent and the solution is about 1.