# ClO-C　Residual Chlorine (High Range)

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

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

## Procedure

1. Press【ClO-C】.
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. Suck the whole amount of the sample in the Cell into the tube and press【Start】at the same time. (Fig.3)
6. Lightly shake the tube in Step 5 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.4)
7. After 1 minute has elapsed, the concentration will be automatically displayed.

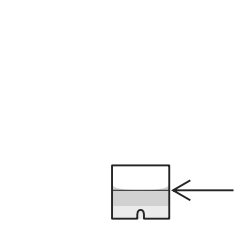
Fig.1

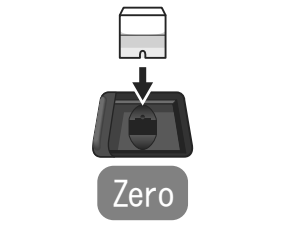

Fig.2

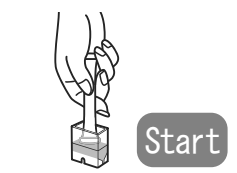

Fig.3

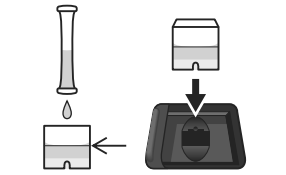
Fig.4

## Caution

1. In this method, the concentration of the total residual chlorine (free residual chlorine + combined residual chlorine) is measured.
2. This residual chlorine is chlorine for disinfection. To measure the concentration of chloride ions ($Cl^-$) such as common salt, refer to "Cl　Chloride".
3. The optimum pH during color development is 4. If the pH of the sample is not within the range from 3 to 9, neutralize the sample with dilute sulfuric acid or dilute sodium hydroxide solution, etc.
4. Perform measurement with the sample temperature set to 15 to 30℃.

## 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 does not affect the measurement.
Reductive substances such as $Fe^{2+}$ and $NO_2^-$ consume residual chlorine.
$NO_2^-$ may serve as an oxidizer and may cause a positive measurement error.
Oxidizing substances such as hydrogen peroxide cause a positive measurement error.

≤ 1000mg/L,: $Al^{3+}$, B (Ⅲ), $Ca^{2+}$, $Cl^-$, $F^-$, $K^+$, $Mg^{2+}$, $Mn^{2+}$, Mo (Ⅵ), $Na^+$, $NH_4^+$, $Ni^{2+}$, $NO_3^-$, $PO_4^{3-}$, $SO_4^{2-}$, $Zn^{2+}$
≤ 200mg/L,: $Ba^{2+}$
≤ 50mg/L,: Cr (Ⅵ), Anionic Surfactant, Phenol
≤ 20mg/L,: $Cr^{3+}$
≤ 5mg/L,: $Fe^{3+}$
≤ 2mg/L,: $Cu^{2+}$

## Information on reagent

Refer to the usage that comes with PACKTEST.
The pH of the solution is about 4.