

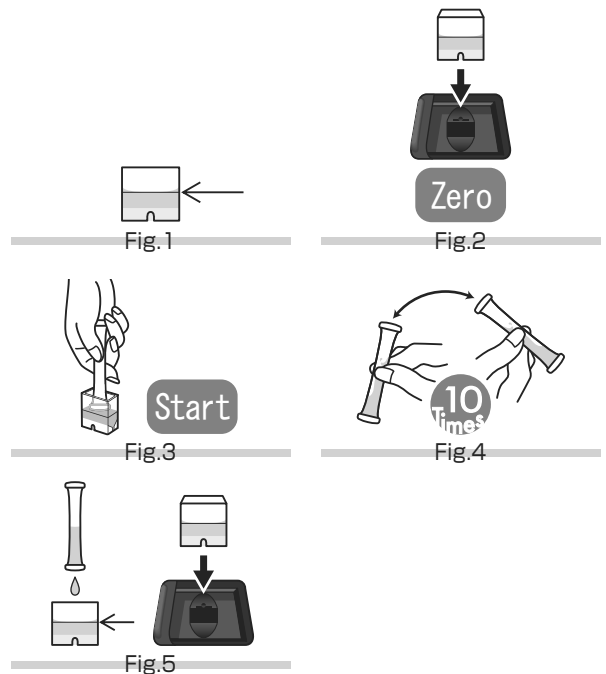
Cu-M Copper (DDTC)

Color development: None → Yellow Brown
Method : DDTC
Range : 0.5 — 5.0 mg/L(ppm)
Reagent : WAK-CuM Tube
Reaction time : 3 min. after drawing sample into the tube.

Cell : PACKTEST Square Cup
Wavelength : 451 nm, 550 nm

Procedure

1. Press **[Cu-M]**.
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 about 10 times. (Fig.4)
7. Gently return the solution in the tube to the Cell, set it again in the cell box. (Fig.5)
8. After 3 minutes have elapsed, the concentration will be automatically displayed.



CAUTION

1. In this method, the concentration of ionized copper (Cu^{2+}) in the sample is measured.
2. The optimum pH during color development is 9. If the pH of the sample is not within the range from 5 to 9, neutralize the sample with dilute sulfuric acid or dilute sodium hydroxide solution, etc.
3. Perform measurement with the sample temperature set to 15 to 30°C.
4. If the concentration of copper in the sample is 10mg/L or less, the result is displayed as "OVER". However, note that if the concentration is 15mg/L or higher, precipitation of Cu-DDTC occurs and result may be obtained from a sample exceeding the measurement range.
5. Do not shake the tube strongly that may cause negative measurement error.

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.

≤ 1000mg/L.: Al^{3+} , B (III), Ba^{2+} , Ca^{2+} , Cl^- , F^- , I^- , K^+ , Mg^{2+} , Mn^{2+} ,
Mo (VI), Na^+ , NH_4^+ , NO_2^- , NO_3^- , PO_4^{3-} , SO_4^{2-} , Zn^{2+} ,
Anionic Surfactant, Silica
≤ 500mg/L.: Phenol
≤ 25mg/L.: Fe^{2+} , Fe^{3+} , Residual Chlorine
≤ 10mg/L.: CN^- , Cationic Surfactant
≤ 5mg/L.: Co^{2+} , Cr^{3+} , Cr (VI), Ni^{2+}

Seawater does not affect the measurement.

Information on reagent

Refer to the usage that comes with PACKTEST.
The pH of the solution is about 9.