

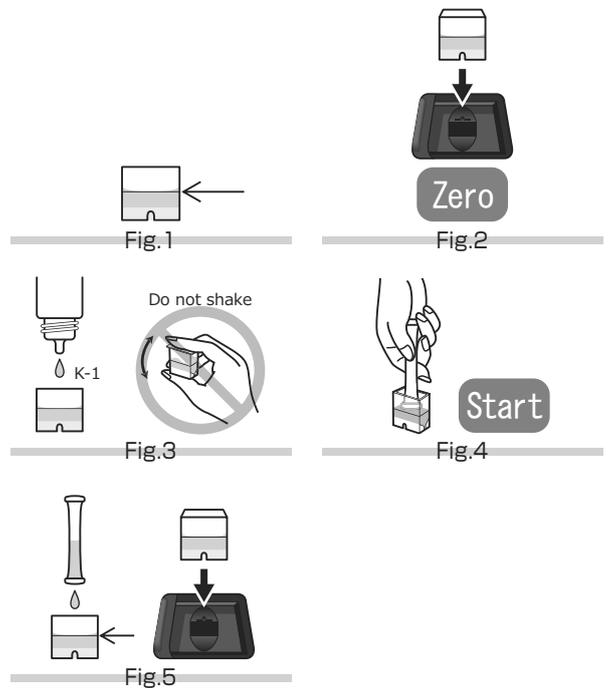
S Sulfide (Hydrogen Sulfide)

Color development: None → Light blue → Blue
Method : Methylene blue Method
Range : 0.05 — 0.80 mg/L(ppm)
Reagent : WAK-S K-1 (Dropper) , Tube
Reaction time : 3 min. after drawing sample into the tube.

Cell : PACKTEST Square Cup
Wavelength : 670 nm, 620 nm

Procedure

1. Press [S].
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 two 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 3 minutes have elapsed, the concentration will be automatically displayed.



CAUTION

1. In this method, the concentration of sulfur in the hydrogen sulfide (H_2S), ionized hydrogen sulfide (HS^-) and sulfide ion (S^{2-}) states is measured. It is not possible to measure the concentration of sulfuric acid and sulfurous acid.
2. In the case where the sulfide existing in the sample is considered sulfide ions (S^{2-}) only, the obtained result can be converted into the concentration of hydrogen sulfide by multiplying it by 1.06.
3. The optimum pH during color development is 2. If the pH of the sample is not within the range from 2 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°C.

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.

Oxidizing substance or reductive substance may affect the measurement.

If metallic ions are mixed with sulfide ions, metallic sulfide is produced and it cannot be detected as sulfide ions any longer. In this case, perform separation of metallic sulfide by referring to the JIS method or others.

Except for Heavy metal ions:

- ≤ 100mg/L.: B (III), Ca^{2+} , Cl^- , F^- , K^+ , Mg^{2+} , Na^+ , NH_4^+ , NO_3^- , PO_4^{3-} , SO_4^{2-} , Phenol, Anionic Surfactant
- ≤ 10mg/L.: I^-
- ≤ 1mg/L.: NO_2^- , SO_3^{2-}
- < 1mg/L.: Residual Chlorine

Heavy metal ions:

- ≤ 10mg/L.: Al^{3+} , Ba^{2+} , CN^- , Co^{2+} , Cr^{3+} , Fe^{2+} , Fe^{3+} , Ni^{2+} , Zn^{2+}
- ≤ 5mg/L.: Mn^{2+} , Mo (VI)
- ≤ 1mg/L.: Cr (VI)
- < 1mg/L.: Cu^{2+}

Information on reagent

Refer to the usage that comes with PACKTEST.

The pH of K-1 reagent and the solution is 2 or less.