



KYORITSU

PACKTEST

INSTRUCTIONS

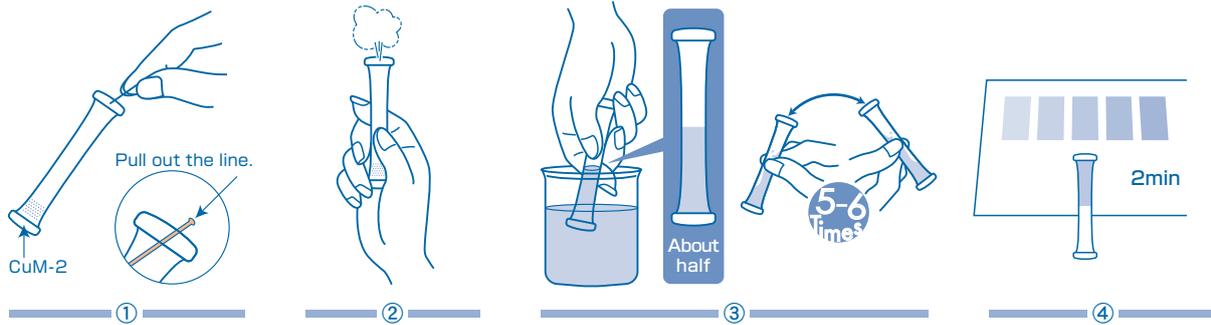
Copper (DDTC)

Model WAK-CuM-2



Diethyldithiocarbamate Visual Colorimetric Method
 Main Reagent: Sodium Diethyldithiocarbamate
 Measuring Range: Cu^{2+} 0.5 - 20 mg/L(ppm)

How to Use



- ① Remove the colored line at the top of the tube to clear the aperture.
- ② Press the tube's side wall to expel the air, and hold the tube.
- ③ Immerse the aperture of the tube into the sample, release the finger to fill the tube halfway. Invert the tube back and forth lightly for 5 to 6 times.
- ④ Compare the actual color in the tube with either top or bottom set of provided Standard Color after 2 min.

How to Read the Result

At the reaction time, compare the color of the tube with Standard Color. The nearest color indicates the concentration value of the analyte in your sample. A color between two standard colors indicates the value between them.

Handling of PACKTEST Before and After Use

- First Aid**
- Eye contact** → Immediately flush eyes with plenty of water.
 - Skin contact** → Immediately flush contacted area with water.
 - Ingestion** → Immediately rinse mouth.

If swallowed the content or any symptom appears, seek medical advice immediately. Please refer to SDS for further information.

Storage Keep unused PACKTEST tubes in the provided preserving bag after opening the laminated package and use them as soon as possible.

Disposal For business use, please follow in a manner consistent with relevant laws and regulations. Otherwise, the tube can be disposed as combustible waste.



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PACKTEST Copper (DDTC)

Feature

This product utilizes the diethyldithiocarbamate absorption spectrophotometry stated in JIS K 0102 52 1, which enables simple measurement of ionic-state (Cu^{2+}) copper in various water samples, including industrial wastewater (Uniform Effluent Standard: 3mg/L). It can also measure EDTA chelated divalent copper ions, making it suitable for measuring effluent of chemical copper plating and more.

Caution

1. This product allows to measure Copper ion (Cu^{2+}) in the sample. If the value including turbidity, precipitation, and complex are required, please dissolve them prior to use.
2. The optimum pH upon reaction will be around 10. If the pH of the sample exceeds 3-10, please neutralize with dilute sodium hydroxide solution or dilute sulfuric acid prior to measurement.
3. A copper standard solution of 50mg/L or more develops a color darker than 20 on the Standard Color, and produces precipitate. When the value is expected to be high, please dilute the sample prior to use.
4. Keep the sample temperature between 15-30°C. If the sample temperature is low, it requires longer reaction time.
5. Ensure that the PACKTEST tube is filled up to half.
6. Partially undissolved reagent will not affect the measurement.
7. When comparing to the Standard Color, please be sure to read under the daylight. It may be difficult to determine the color under the direct sunlight, certain florescent lights, mercury lamp or LED.
8. You can put the line back into the aperture to seal. This will avoid possibility of spilling the content of the tube.

Interference

Standard Color is prepared based on the standard solution. If there are some coexisting substances that may cause interference, please compare the result with official method or standard addition method for verification. Below 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+} , Br^- , Ca^{2+} , Cl^- , F^- , I^- , K^+ , Mg^{2+} , Mo(VI), Na^+ , NH_4^+ , NO_2^- , NO_3^- , PO_4^{3-} , SO_4^{2-} , Zn^{2+} , Anionic Surfactant, Non-ionic Surfactant, Glucose, Residual Chlorine, Silica, Phenol
- ≤500mg/L : Mn^{2+} , Cationic Surfactant
- ≤100mg/L : Cd^{2+} , Cr^{3+} , Pd^{2+}
- ≤10mg/L : Cr(VI), Fe^{3+} , Ni^{2+}
- ≤5mg/L : Co^{2+} , Fe^{2+}

Seawater does not affect the result.

Ethanol less than 20% (w/w) will not affect the result.

【Caution】

- This product is made for analyzing water quality purpose only. Do not use for any other purpose.
 - This product contains small amount of chemicals. Please read instruction manual, GHS labels, SDS, and other necessary document thoroughly prior to use.
 - Please keep this information handy for future reference.
- <Safety>
- Please wash your hands thoroughly before and after the test. Do not inhale the chemical reagents.
 - It is highly recommended to wear protective gloves, eye protection, and mask upon using this product.
 - Avoid release chemical reagents or waste solution to the environment.
- <Storage>
- Please keep this product out of reach of children. Keep it in the dry and dark place at room temperature.
- <Other>
- Please check the expiration date shown on the box, and make sure to use within the date.
 - Specifications are subject to change without notice.



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