



KYORITSU

PACKTEST INSTRUCTIONS

Chlorine Dioxide

Model : WAK-ClO₂

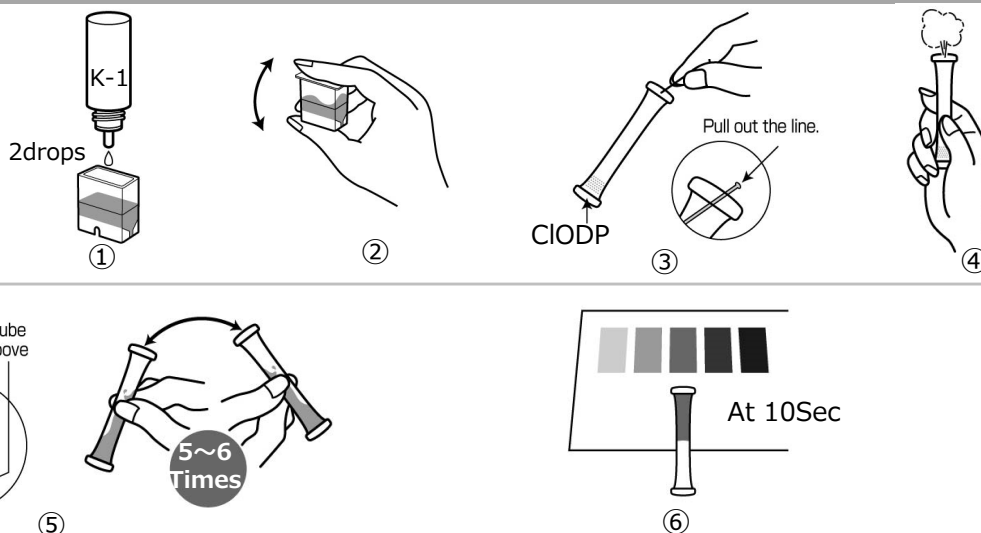
DPD Visual Colorimetric Method with Glycine

Main reagent : Glycine and N,N-Diethyl-*p*-Phenylenediamine Sulfate

Range : 0.2 – 10 mg/L (ppm)

How to Use

※ If no residual chlorine is present in sample, K-1 reagent is not required.
(refer to Caution 1. on back side)



- ① Fill the Cell (PACKTEST Square Cup) up to the line (1.5mL) with sample and add 2 drops of K-1 Reagent (Bottle).
- ② Close the cap and shake the Cell for 2 to 3 times.
- ③ Remove the colored line at the top of the tube to clear the aperture.
- ④ Press the tube's side wall to expel the air and hold the tube.
- ⑤ 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.
- ⑥ At 10sec, place the tube on the provided Standard Color as shown to compare color.

How to Read the Result

After 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 indicate the value between them.


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Handling of PACKTEST Before and After Use

First Aid

Eye Contact → Immediately flush eyes with plenty of water.

Skin/Cloth 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. Depending on the storage condition, the reagent may deteriorate in several days especially under the hot and humid weather.

Disposal

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

PACKTEST Chlorine Dioxide

Caution

1. If there is no residual chlorine present in the sample, chlorine dioxide can be measured without adding K-1 reagent. (You can omit the procedure ① and ② on "How to Use".) Check the presence of residual chlorine by comparing the measured values with and without K-1 reagent added.
When residual chlorine is present : gives higher readings on w/o adding K-1 reagent.
When residual chlorine is NOT present : both readings will be the same.
2. The optimum pH upon reaction will be around 6. If the pH of the sample exceeds 3-10, please neutralize with dilute sodium hydroxide solution or dilute sulfuric acid prior to measurement. When sample pH exceeds 3-10, the color will be weak.
3. If the concentration of chlorine dioxide is high, the color develops strongly up to around 200mg/L, but the color fades at higher concentration, and becomes pale yellow or colorless above 600mg/L.
4. Keep the sample temperature between 15-40°C. If the sample temperature is low, it requires longer reaction time.
5. Ensure that the PACKTEST tube is filled up to half.
6. Even the reagent is not completely dissolved, it will not affect the reading.
7. Colorimetry should be performed immediately after 10 seconds. After the reaction time, the color development becomes stronger. Especially if residual chlorine, chlorite ions, etc. are expected to coexist, strictly adhere to this time.
8. 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.
9. 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 a color development when adding each of the single substances to the standard solution.

≤1000mg/L	will not affect	... Ca^{2+} , Cl^- , F^- , I^- , K^+ , Mg^{2+} , Mn^{2+} , Na^+ , NH_4^+ , NO_3^- , SO_4^{2-} , Zn^{2+} , Chlorite ion, Chlorate ion
≤500mg/L	"	... PO_4^{3-}
≤250mg/L	"	... Al^{3+} , Ni^{2+}
≤10mg/L	"	... Cu^{2+} , Fe^{3+} , Phenol
≤5mg/L	"	... Residual Chlorine
Any Level	will affect	... Cr(VI) , Fe^{2+} , NO_2^-

Seawater does not affect the result.

CN^- , Fe^{2+} , NO_2^- and other reducing agents consume chlorine dioxide.
 Cr(IV) , Fe^{3+} and other oxidizing substances may develop color to cause positive false reading.
When I^- coexists, residual chlorine also develops color.

【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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