



# Chloride (Low Range)

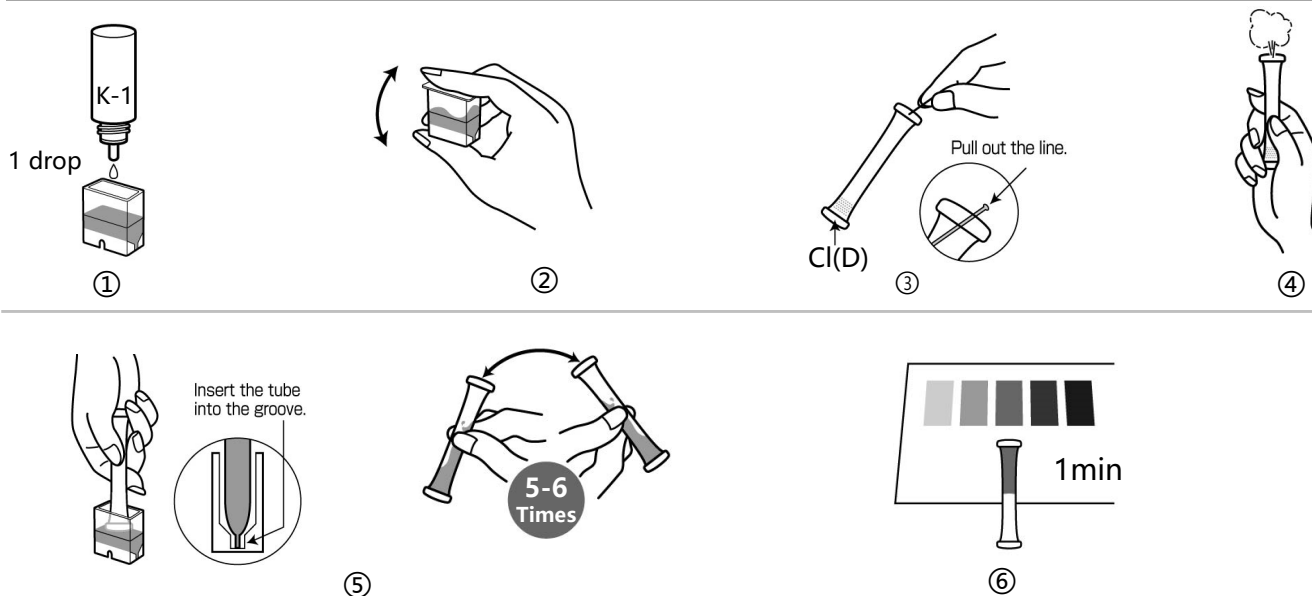
Model: WAK-Cl(D)

## Silver Nitrate Visual Colorimetric Method

Main Reagent: fluorescein, Silver nitrate

Measuring Range: 0 -  $\geq 50$  mg/L (ppm)

### How to Use



- ① Fill the Cell (PACKTEST Square Cup) up to the line (1.5mL) with sample and add 1 drop 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 Cell, pressing it against the bottom, and release finger to take all the sample from the Cell into the tube. Invert the tube back and forth lightly for 5 to 6 times.
- ⑥ After 1min, place the tube on the provided Standard Color as shown to compare the 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.

## 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

Use PACKTEST tubes as soon as possible after opening the laminated package. K-1 Reagent and reagent inside PACKTEST tube are highly sensitive to light, so store in a dark place.

### 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 Chloride (Low Range)

### Caution

1. This product only measures chloride ion ( $\text{Cl}^-$ ) in the sample.
2. If the chloride concentration is higher than 50 mg/L, a precipitate will occur. Please, shake the tube lightly before comparing the reaction color.
3. If the chloride concentration is higher than 150 mg/L, red or white precipitation will occur. If concentration is 500-1000 mg/L, white precipitation generates more, and the color may look lighter. Please be aware no color will be generated if concentration exceeds 1000mg/L. When the value is expected to be high, please dilute the sample prior to use.
4. Use the following products to measure chlorine for disinfection in tap water (residual chlorine derived from chemicals, like sodium hypochlorite)  
Residual Chlorine (Free) PACKTEST Model: WAK-CIO-DP  
Residual Chlorine (High Range) PACKTEST Model: WAK-CIO (C)
5. The optimum pH upon reaction will be around 7. If the pH of the sample exceeds 6-9, please neutralize with dilute sodium hydroxide solution or dilute sulfuric acid prior to measurement.
6. Keep the sample temperature between 15-30°C. If the sample temperature is low, it requires longer reaction time.
7. Ensure that the PACKTEST tube is filled up to half.
8. Partially undissolved reagent will not affect the measurement.
9. 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.
10. 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.

$\leq 1000\text{mg/L}$	will not affect	...	$\text{B(III)}$ , $\text{F}^-$ , $\text{K}^+$ , $\text{Na}^+$ , $\text{NH}_4^+$ , $\text{Ni}^{2+}$ , $\text{NO}_2^-$ , $\text{NO}_3^-$ , $\text{SO}_4^{2-}$ , $\text{Zn}^{2+}$ , Phenol
$\leq 100\text{mg/L}$	..	...	$\text{Cu}^{2+}$ , Anionic surfactant
$\leq 50\text{mg/L}$	..	...	$\text{Al}^{3+}$
$\leq 10\text{mg/L}$	..	...	$\text{PO}_4^{3-}$
$\leq 5\text{mg/L}$	..	...	$\text{Ag}^+$ , $\text{Mo(VI)}$
$\leq 1\text{mg/L}$	..	...	$\text{Cr(VI)}$ , $\text{Fe}^{3+}$ , $\text{I}^-$ , $\text{S}_2\text{O}_3^{2-}$ , $\text{SO}_3^{2-}$ , Residual Chlorine

Seawater contains a large amount of chloride ions.

If ions like bromide ions, iodide ions, cyanide ions, carbonate ions coexist, color develops to similar to chloride ion to cause positive false reading.

Sulfite ions, thiosulfate ions and sulfide ions also interfere, so use hydrogen peroxide to oxidize prior to use.

## **【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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