



KYORITSU

PACKTEST

INSTRUCTIONS

# Cationic Surfactants

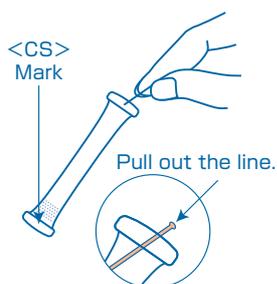
Model WAK-CS

ECR-Aluminium Visual Colorimetric Method

Main reagent: Erio chrome Cyanine R and Aluminum Salt

Range: 0 - 50 mg/L(ppm)

## How to Use



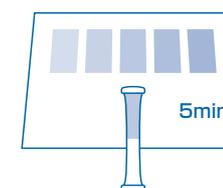
① Remove the colored line at the top of the tube to clear the aperture.



② Press tube's side wall to expel air, and hold the tube.



③ Immerse the aperture of the tube into the sample and release to fill the tube halfway. Invert the tube back and forth for 5-6 times.



④ After 5min, compare the actual color in the tube with provided Standard Color.

## How to Read the Test

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 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 ingesting 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 could deteriorate in several days, especially under the hot and humid weather.

**Disposal** For business use, please follow in a manner consistent with Federal, State, and Local Regulations. Otherwise, the tube can be disposed as combustible waste.

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## PACKTEST Cationic Surfactant

### Caution

1. This product only measures cationic surfactants in the sample. Anionic and non-ionic surfactants will not be detected.
2. Result is converted by the same way as JIS K 0102:2016 appendix 1 (Reference) V, tetradecyl dimethyl benzyl ammonium chloride (C<sub>23</sub>H<sub>42</sub>ClN).
3. The optimum pH upon reaction will be around 6. If the pH of the sample exceeds 5–9, it needs to be neutralized with diluted Sulfuric Acid or diluted Sodium Hydroxide solution prior to use.
4. When concentration value of cationic surfactant standard solution is 200mg/L, the color will turn about the same as “50mg/L”, and the color will fade if it exceeds 500mg/L. For instance, the color will be about 20mg/L when the actual concentration is at 500mg/L. If the concentration is expected to be very high, please dilute the sample prior to measurement.
5. Keep temperature of the sample between 15–40°C. If the temperature is lower, it will take longer for reaction time.
6. Ensure that the PACKTEST tube is filled up to the half.
7. Even the reagent is not completely dissolved, it will not affect the reading.
8. When comparing to the Standard Color, please be sure to read under the daylight or equivalent light source. It may be difficult to determine the closest color under the direct sunlight, certain florescent lights, mercury lamp, or LED.
9. You can put the line back into the tube to seal. This will avoid possibility of spilling the content of the tube.

### Interference

Standard Color is prepared using Benzyldimethyltetradecylammonium Chloride as 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 : B(III), Ba<sup>2+</sup>, Ca<sup>2+</sup>, Cl<sup>-</sup>, I<sup>-</sup>, K<sup>+</sup>, Mg<sup>2+</sup>, Mn<sup>2+</sup>, Na<sup>+</sup>, NH<sub>4</sub><sup>+</sup>, NO<sub>2</sub><sup>-</sup>, NO<sub>3</sub><sup>-</sup>, SO<sub>4</sub><sup>2-</sup>, Ascorbic Acid, Phenol, Formaldehyde
- ≤500mg/L : Co<sup>2+</sup>, Fe<sup>3+</sup>, Zn<sup>2+</sup>, Albumin
- ≤200mg/L : Ag<sup>+</sup>, CN<sup>-</sup>, Fe<sup>2+</sup>
- ≤100mg/L : Ni<sup>2+</sup>, Residual Chlorine, Non-ionic Surfactant
- ≤50mg/L : Cu<sup>2+</sup>
- ≤10mg/L : Cr(VI), F<sup>-</sup>, PO<sub>4</sub><sup>3-</sup>, Hydrazine
- ≤5mg/L : Cr<sup>3+</sup>, Citric Acid
- ≤3mg/L : Mo(VI)
- <1mg/L : Anionic Surfactant

Seawater does not affect the result.

Ethanol less than 10% (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 breathe 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, cool, and dark place.
- <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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