

# Cationic Detergents

**Test kit for determination of cationic surfactants in the range 1–20 mg/L CTAB**

**Method:**

Reference standard is *N*-Cetyl-*N,N,N*-trimethylammonium bromide (CTAB, 365 g/mol)

**Measurement range:**

1–20 mg/L CTAB

**Contents of test kit (\*refill pack):**

sufficient for 50 tests

30 mL KD-1\*

7 g KD-2\*

2 x 50 mL KD-3 (chloroform)\*

1 comparator Cationic Detergents

1 glass cell with stopper

1 plastic beaker to draw test sample

1 dropper\*

1 measuring spoon 85 mm\*

**Hazard warning:**

KD-3 contains chloroform 90–100 %.

H351, H361 Suspected of causing cancer. Suspected of damaging fertility or the unborn child.

P201, P202, P280, P308+313, P405 Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/eye protection. IF exposed or concerned: Get medical advice/attention. Store locked up. For further information ask for a safety data sheet.

**Instructions for use:**

1. Rinse glass cell several times with the test sample and fill to 5 mL mark.
2. Add **12 drops of KD-1** and mix.
3. Add **1 level spoon of KD-2** and mix.
4. Add with the dropper **2 mL of the KD-3** (chloroform).
5. Close glass cell with stopper, pressing down firmly while shaking vigorously for 30–40 s. After phase separation (approx. 2 min) check color of lower layer against comparator. To read off small quantities of cationic detergents (weakly colored solution), hold a sheet of white paper 5–10 cm behind glass cell and comparator. Rinse glass cell with plenty of water after use. Residues of the dye which may remain in the glass cell after repeated use can be removed readily with a soap solution. KD-3 (chloroform) do not empty into drain (→ solvent deposit).

The method can be applied also for the analysis of sea water.

**Disposal:**

Collect the organic phase as chlorinated hydrocarbon containing waste disposal. Please observe local regulations concerning waste. The water phase can be flushed into drains with plenty of water.

**Interferences:**

If the water contains anionic surfactants in addition to the cationic ones, equivalent quantities are combined which escape analysis. Generally speaking, cationic surfactants, as a whole, are determined. When analyzing certain cationic surfactants (detergents), a correction factor must be used. All results refer to *N*-Cetyl-*N,N,N*-trimethylammonium bromide (equivalent weight 365).

**Storage:**

Store the test kit in a cool (< 25 °C) and dry place.