

# Anionic Detergents

**Test kit for determination of anionic surfactants in the range 0.1-5.0 mg/L MBAS**

**Method:**

Reference standard is dodecylbenzenesulphonic acid methyl ester (MBAS, 342 g/mol)

**Measurement range:**

0.1–5.0 mg/L MBAS

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

sufficient for 50 tests

30 mL AD-1\*

10 mL AD-2\*

10 mL AD-3\*

2 x 50 mL AD-4 (chloroform)\*

1 comparator Anionic Detergents

1 glass cell with stopper

1 plastic beaker to draw

1 dropper\*

1 plastic syringe 5 mL with tip

**Hazard warning:**

AT-4 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 **10 drops of AD-1** and mix.
3. Add **4 drops of AD-2** and mix.
4. Add with the dropper **2 mL of the AD-4** (chloroform).
5. Close glass cell with stopper, pressing down firmly while shaking vigorously for 30–40 s. After phase separation (approx. 2 min) draw off the upper layer with the plastic syringe and discard.
6. Add **5 mL distilled water\*** and **4 drops of AD-3** to the lower phase in the glass cell and mix by not to vigorously shaking for 30 s.
7. After phase separation (approx. 2 min) check color of lower layer against comparator. To read off small quantities of anionic detergents (weakly colored solution), hold a sheet of white paper 5–10 cm behind glass cell and comparator. After phase separation the lower layer does not always appear homogeneous. Stir slowly with a spatula, glass or metal rod to restore homogeneity. Rinse glass cell and syringe with plenty of water after use. AD-4 (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 cationic surfactants in addition to the anionic ones, equivalent quantities are combined which escape analysis. Sulfide ions must be oxidized prior to the test by the addition of hydrogen peroxide solution. Generally speaking, anionic surfactants (detergents), as a whole, are determined. When analyzing certain anionic surfactants, a correction factor must be used. All results refer to dodecylbenzenesulphonic acid methyl ester (equivalent weight 342).

**Storage:**

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

\* The box does not contain distilled water.