

Ti Application Note No. T- 13

Title: Cationic surfactant (cetrimid) in antiseptic disinfectant

Summary: Determination of the cationic surfactant «cetrimid» in an antiseptic disinfectant by potentiometric titration with sodium dodecylsulphate using the «Ionic Surfactant» electrode.

Sample: Antiseptic disinfectant solution

Sample Preparation: 1:10 dilution with dist. water

Instruments and Accessories: 702, 716 or 736 Titrino or 726 Titroprocessor, 6.0507.120 «Ionic Surfactant» electrode and 6.0733.100 reference electrode

Analysis: Pipette 5.00 mL of the prepared sample solution and 5 mL buffer pH = 10 into a beaker, add ca. 40 mL dist. water and titrate with sodium dodecylsulphate $c(\text{Na DDS}) = 0.01 \text{ mol/L}$.

Calculation: 1 mL $c(\text{Na DDS}) = 0.01 \text{ mol/L}$ corresponds to 3.364 mg cetrimid.

$$\% \text{ cetrimid} = \text{EP1} * \text{C01} * \text{C02} * \text{C03} / \text{C00}$$

EP1 = titrant consumption in mL
C00 = 0.5 (mL of original sample contained in the sample volume used for the titration)
C01 = 3.364
C02 = titre of the titrant
C03 = 0.1 (conversion factor for %)

Remarks: Result: $\text{AVG}(7) = 3.16 \pm 0.03 \%$ cetrimid