Metrohm

Ti Application Note No.   T- 10

Title:	**Anionic surfactants in shower lotions and shampoos**

Summary:	Determination of anionic surfactants in shower lotions and shampoos by potentiometric titration with TEGO®trant A100 using the «Ionic Surfactant» electrode.

Sample:	Different commercially available products

Sample Preparation:	none

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

Analysis:	Weigh ca. 120 ... 200 mg sample (precision 0.1 mg) into a titration beaker. Dissolve in 5 mL methanol and 10 mL buffer pH = 3.0 and make up the solution to ca. 60 mL with dist. water. Titrate with c(TEGO®trant A100) = 0.004 mol/L.

Calculation:	a) mmol/g anionics = EP1 * C01 * C03 * C30 / C00 b) % anionics = EP1 * C01 * C02 * C30 / (C04 * C00) EP1 = titrant consumption in mL C00 = sample weight in mg for a) and in g for b) C01 = 0.004 (concentration of the titrant in mol/L) C02 = M(anionic surfactant) in g/mol C03 = 1000 (conversion factor) C04 = 10 (conversion factor for %) C30 = titre of the titrant

Remarks:	To calculate the content of anionics in % the molar mass of the anionic surfactant contained in the sample must be known. **Results:** Shampoo A: AVG(6) = 11.44 +/- 0.06 % anionics Shampoo B: AVG(5) = 0.3344 +/- 0.0011 mmol/g anionics Shampoo C: AVG(5) = 0.2941 +/- 0.0011 mmol/g anionics Shower lotion: AVG(5) = 0.3188 +/- 0.0012 mmol/g anionics