Ti Application Note No. T- 15

Title:	**Non-ionic surfactants in liquid household cleaners**

***Summary*:**	Determination of non-ionic surfactants in household cleaners by potentiometric titration with sodium tetraphenylborate using the NIO surfactant electrode.

Sample:	Two different household cleaners

Sample Preparation:	none

Instruments and Accessories:	702, 716 or 736 Titrino or 726 Titroprocessor, 6.0507.010 NIO surfactant electrode and 6.0726.100 reference electrode (bridge electrolyte c(NaCl) = 3 mol/L)

Analysis:	Weigh ca. 0.3 g sample (precision 0.1 mg) into a beaker and dissolve in 10 mL c($BaCl_2$) = 0.1 mol/L. Add ca. 90 mL dist. water and titrate with sodium tetraphenylborate c(STPB) = 0.01 mol/L.

Calculation:

Determination of the calibration factor:

Weigh ca. 0.2 ... 0.3 g of the standard NIO surfactant into a beaker and perform the analysis as described above.

f (mg/mL) = E * 1000 / EP1

EP1 = titrant consumption in mL
f = calibration factor in mg/mL
E = sample weight in g (calculated as 100 % NIO surfactant)

Content determination:

% NIO surfactants = EP1 * f / (10 * C00) - C

C00 = sample weight in g
C = content of cationic surfactants in % (has to be determined in a separate titration)

Remarks:	Results: Sample A: AVG(3) = 5.08 +/- 0.03 % NIO surfactant Sample B: AVG(3) = 5.31 +/- 0.03 % NIO surfactant