

Ti Application Note No. T- 47

Title:	Soaps and anionic surfactants in washing powder by potentiometric two-phase titration
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Summary:	Determination of soaps and anionic surfactants in washing powder by potentiometric two-phase titration with TEGO [®] trant A100 using the Surfactrode Resistant.
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Sample:	Low foam washing powder
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Sample Preparation:	Weigh ca. 19 g sample into a beaker, add ca. 150 mL dist. water, heat the solution and boil it for 3 min. Allow to cool, rinse with dist. water into a 1000 mL volumetric flask, fill the flask to the mark and mix the contents with a magnetic stirrer.
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Instruments and Accessories:	702, 716, 736 or 751 Titrino or 726 Titroprocessor, 727 Titration Stand, 722 Propeller Rod Stirrer, 6.0507.130 Surfactrode Resistant
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Analysis:	<p>The anionic surfactants are titrated at pH = 2.0 and the sum of anionic surfactants and soaps is determined at pH = 10.0.</p> <p>Pipette 10.0 mL of the prepared sample solution into a beaker, add 75 mL dist. water and adjust the pH value to 2.0 with HCl or to 10.0 with NaOH. Now add 10 mL each of ethanol and methyl isobutyl ketone (MIBK). Make sure that the stirring speed is high enough to mix the solution thoroughly and form a stable emulsion, then titrate with c(TEGO[®]trant A100) = 0.004 mol/L.</p>
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Calculation:	$\text{meq} / 100 \text{ g} = \text{EPn} * \text{C01} * \text{C02} / \text{C00}$ <p>EPn = titrant consumption to reach the last EP C00 = ca. 0.19 (g of original sample contained in the sample volume used for the titration) C01 = 0.004 (concentration of the titrant in mol/L) C02 = 100 (conversion factor)</p>
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Remarks:	Results: pH = 2.0: AVG(3) = 17.63 +/- 0.08 meq anionics / 100 g pH = 10.0: AVG(3) = 24.60 +/- 0.05 meq anionics + soaps / 100 g
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