

Application Memo

Determination of Cationic Surfactant

Industry	Cosmetics & soap
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	

1. Overview

The density of the sample prepared to a concentration of 0.04 mol/L is measured. The prepared sample is diluted and is titrated with 0.04mol/L n-dodecylbenzenesulfonic acid sodium using PCD-500. The endpoint is the maximum inflexion on the titration curve. The cationic surfactant concentration is calculated from the sample density and the titration volume of the n-dodecylbenzenesulfonic acid sodium.

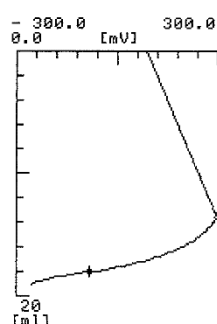
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD) Particle changer detector unit (PCD-500)
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3. Reagents

Titrant	0.04mol/L n-Dodecylbenzenesulfonic acid sodium
Solvent	Pure water

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Density (g/cm ³)	Titer (mL)	Concentration (%)
1	4.9984	1.01522	18.0789	91.776
2	5.0045	1.01522	18.1119	91.832
3	5.0030	1.01522	18.1301	91.951
Average				91.853
SD				0.089
RSD(%)				0.097

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