

## Application Memo

# Surfactant in Calcium Carbonate Slurry

Industry	Environmental
Instrument	Automatic potentiometric titrator
Measurement method	Ion association titration
Standards	

## 1. Overview

Here we demonstrate the determination of the anionic surfactant by using the particle changer detector unit (PCD-500) and the automatic potentiometric titrator. This method does not use toxic chloroform, and the endpoint is found automatically without using an indicator. This method makes use of quantitative ionic reaction and determines the endpoint by stoichiometry. The ion concentration can be obtained with good precision based on the same principle as the Epton Method.

First, the test sample is filtered and diluted with pure water and titrated with 0.0025mol/L diallyl dimethyl ammonium chloride using PCD-500. The sudden change is the endpoint of titration. The concentration of anionic surfactant is calculated from the titration volume.

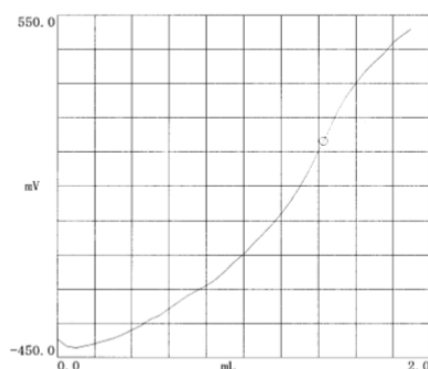
## 2. Apparatus

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

Titrant	0.0025mol/L diallyl dimethyl ammonium chloride (f = 1.00)
Solvent	Pure water

## 4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Surfactant (mL/g)
1	2.0408	1.4359	0.7036
2	2.0358	1.4330	0.7039
3	2.0322	1.4276	0.7025
Average			0.7033
SD			0.0007
RSD(%)			0.1

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