

## Application Memo

# Chlorine Ion in Dyestuff

Industry	Inorganic chemical industry
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	

## 1. Overview

After adding the dyestuff sample in formic acid and 1,4-dioxane to dissolve and stirring it, add 0.1mol/L sodium chloride to it. Chlorine ion in the sample is measured by potentiometric titration with the 0.01 mol/L solution of mercury acetate (II) dissolved in acetic acid. The endpoint is the maximum inflexion on the titration curve. The concentration of chlorine ion is calculated from the titration volume of the titrant.

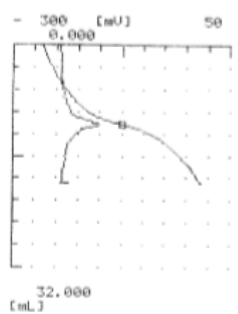
## 2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Silver electrode Mercury sulfate reference electrode (Internal solution: Saturated potassium sulfate)

## 3. Reagents

Titrant	0.01mol/L(0.02N) solution of mercury acetate (II) dissolved in acetic acid
Additive	Formic acid, 1,4-dioxane
Reagent	0.1mol/L sodium chloride

## 4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Chlorine ion (%)
1	0.5075	11.4966	0.2004
2	0.5037	11.4691	0.1981
3	0.5049	11.4059	0.1888
Average			0.1958
SD			0.0061
RSD(%)			3.1

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