

Application Memo

Silver in Silver Plating Solution

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

1. Overview

After adding pure water and 15% sodium sulfide solution to the sample and heated, the precipitate is filtered. Silver concentration in the precipitate dissolved in concentrated nitric acid and water is measured by titration with 0.1mol/L ammonium thiocyanate solution. The endpoint is the maximum inflexion on the titration curve. The silver concentration is calculated from the titration volume of the titrant.

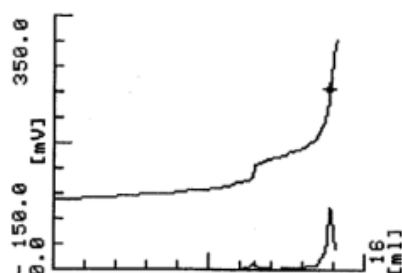
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Silver electrode Mercury sulfate reference electrode

3. Reagents

Titrant	0.1mol/L ammonium thiocyanate solution
Solvent	Pure water
Indicator	15%(w/v) sodium sulfide solution, Concentrated nitric acid

4. Example



-Titration curve-

-Measurement results-

	Sample (mL)	Titer (mL)	Conc. (g/L)
1	5.0	14.2680	30.79
2		14.2854	30.83
Average			30.81

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