

Application Memo

Metal Ag in Silver Plating Solution

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

1. Overview

Silver (Ag) in the silver plating solution is measured as follows: First, add hydrochloric acid and nitric acid to the sample liquid, and heat it until the yellow gas disappears. Then, leave it to cool. Add pure water and 10% Ferric (II) ammonium sulfate and titrate with 0.1mol/L potassium thiocyanate up to the endpoint, which is the maximum inflexion on titration curve. Silver (Ag) in the silver plating solution is calculated from the titration volume of potassium thiocyanate.

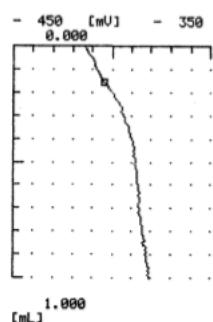
2. Apparatus

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

3. Reagents

Titrant	0.1mol/L(0.1N) potassium thiocyanate
Solvent	Pure water
Additive	HCl(36%), Nitric acid(60%), 10% Ferric(II) ammonium sulfate

4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	AG (g/L)
1	5.0	0.1547	0.3338
2	5.0	0.1756	0.3790
3	5.0	0.1344	0.2900
Average			0.3343
SD			0.0445
RSD(%)			13.3

Please feel free to contact us for any further information.
 <Contact> Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
<http://www.kyoto-kem.com/en/contact/form.php>