

Application Memo

Quantification of Copper in Plating Solution

Industry	Nonferrous metal
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	

1. Overview

Here we demonstrate quantification of copper in plating solution by titration not general chelatometry with EDTA but redox titration with sodium thiosulfate. First, add pure water, 30% acetic acid, 10% ammonium acetate and potassium iodide to sample liquid, and titrate with 0.01mol/L sodium thiosulfate. The endpoint is the max inflexion on the titration curve. The concentration of copper is calculated from the titration volume of sodium thiosulfate.

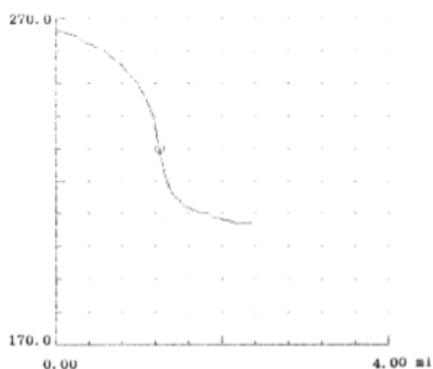
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Platinum electrode Ceramic reference electrode

3. Reagents

Titrant	0.01mol/L sodium thiosulfate (f = 1.005)
Solvent	Pure water, 30% acetic acid, 10% Ammonium acetate, Potassium iodide

4. Example



—Titration curve—

—Measurement results—			
	Sample (g)	Titer (mL)	Copper (ppm)
1	0.3017	1.2664	2681
2	0.3046	1.2584	2638
3	0.3023	1.2652	2673
Average			2664
SD			22
RSD(%)			0.84

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>