

## Application Memo

# Free Cyanide in Silver Plating Solution

Industry	Iron and steel
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	

## 1. Overview

The method for measuring the concentration of free cyanide in silver plating solution which contains cyanide is shown below. Potassium iodide (KI) as an indicator is added to the sample solution which is first alkalified with ammonia water, and the sample is titrated with the 0.1mol/L silver nitrate solution up to the endpoint. The titration volume is then converted to potassium cyanide to obtain the free cyanide concentration.

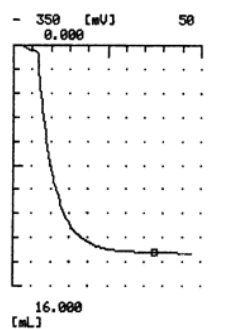
## 2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Combined silver electrode (Internal solution: 1mol/L potassium nitrate solution)

## 3. Reagents

Titrant	0.1mol/L silver nitrate solution
Additive	10% potassium iodide 10% ammonia water

## 4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	Free cyanide (g/L)
1	5.0	13.7884	36.20
2	5.0	13.9800	36.71
3	5.0	13.8839	36.45
Average			36.45
SD			0.25
RSD(%)			0.69

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>