

Application Memo

Nickel Sulfate in Alloy Plating Solution

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

1. Overview

After adding 28% ammonia water and MX indicator to the diluted sample, nickel sulfate concentration is measured by titration with 0.05mol/L EDTA solution. The inflexion point by the color change of the indicator on the titration curve is defined as the endpoint. The concentration of nickel sulfate is calculated from the titration volume of EDTA.

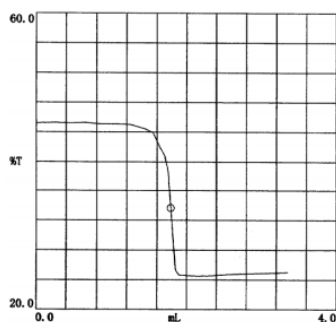
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier PTA)
Electrode	Photometric sensor Interference filter (630nm)

3. Reagents

Titrant	0.05mol/L ethylenediaminetetraacetic acid (EDTA) solution
Indicator	Murexide (MX) indicator: MX 0.2g + potassium sulfate 100g
Additive	28% ammonia water

4. Example



-Titration curve-

-Measurement results-

	Sample (g)	Titer (mL)	Conc. (g/L)
1	1.0	1.7941	193.5
2		1.7883	192.8
3		1.7838	192.2
Average			192.8
SD			0.7
RSD(%)			0.3

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 <Contact> Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
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