



Application Memo Nickel Chloride in Plating Solution

Industry Inorganic chemical industry
Instrument Automatic potentiometric titrator

Measurement method Precipitation titration

Standards

1. Overview

Determination of nickel chloride in plating solution directly from nickel concentration is impossible due to coexistence of nickel sulfate, but it is possible to calculate from chloride ion concentration. The concentration of chloride ion in test sample can be obtained by potentiometry with the 0.1 mol/L silver nitrate solution. Then, the nickel chloride concentration is calculated.

$$NiCl_2 + 2AgNO_3 \rightarrow 2AgCl \downarrow + Ni(NO_3)_2$$

2. Apparatus

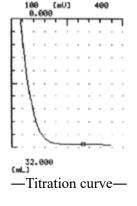
Main unit Automatic potentiometric titrator (preamplifier STD)

Electrode Combined silver electrode (Internal solution: 1mol/L potassium nitrate)

3. Reagents

Titrant 0.1mol/L silver nitrate solution

4. Example



—Measurement results—			
	Sample	Titer	Concentration
	(mL)	(mL)	(g/L)
1	5.0	31.2425	39.70
2	5.0	31.2216	39.68
3	5.0	31.1905	39.64
Average			39.67
SD			0.31
RSD(%)			0.077

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