

Application Memo

Quantification of Diammonium Cerium (IV) Nitrate

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

1. Overview

The test sample is added with dilute sulfuric acid and ferroin indicator, and titrated with 0.1mol/L diammonium ferric sulfate solution up to the endpoint, which is the maximum inflexion on the titration curve. The concentration of diammonium cerium (IV) nitrate is calculated from the titration volume of the diammonium ferric sulfate solution.

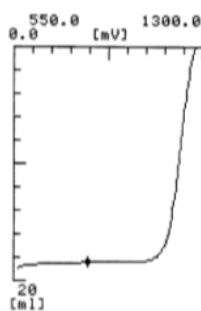
2. Apparatus

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

3. Reagents

Titrant	0.1mol/L diammonium ferric sulfate
Solvent	Pure water
Additive	Sulfuric acid, Ferroin indicator

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Concentration (%)
1	2.0057	18.5321	51.00
2	2.0122	18.5951	51.02
3	2.0111	18.5479	50.91
Average			50.98
SD			0.06
RSD(%)			0.1

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