

## Application Memo

# Ferric Salt in Etchant

Industry	Iron and steel
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	JIS K 8142

## 1. Overview

The method for measuring the ferric salt concentration in the etchant is shown below. As a pretreatment, add hydrochloric acid, pure water, and potassium iodide to the precisely weighed sample in an Erlenmeyer flask, and seal with a stopper. After leaving the flask in a cold dark room for more than 5 minutes, titrate the free iodine (I<sub>2</sub>) with 0.1mol/L sodium thiosulfate to determine the ferric salt concentration.

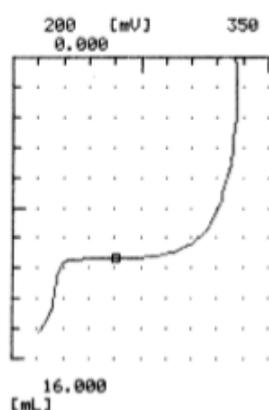
## 2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Combined platinum electrode

## 3. Reagents

Titrant	0.1mol/L sodium thiosulfate
Additive	Hydrochloric acid (2+1), Potassium iodide

## 4. Example



—Titration curve—

—Measurement results—			
	Sample (g)	Titer (mL)	FeCl <sub>3</sub> (%)
1	5.0123	10.7095	34.739
2	5.0123	10.7095	34.739
3	5.0123	10.6983	34.703
Average			34.727
SD			0.021
RSD(%)			0.060

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