

## Application Memo

# Hydrochloric Acid and Copper Concentration in Etchant

Industry	Non-ferrous metal
Instrument	Automatic potentiometric titrator
Measurement method	Acid-base titration
Standards	

## 1. Overview

The diluted sample is measured by titration with 1mol/L sodium hydroxide solution. The endpoints are the maximum inflexions on the titration curve. The hydrochloric acid and copper concentrations are calculated from sodium hydroxide titration volumes' data at two endpoints.

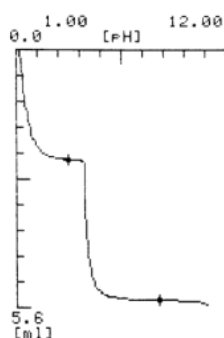
## 2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	pH glass electrode Ceramic reference electrode Temperature compensation electrode

## 3. Reagents

Titrant	1mol/L sodium hydroxide solution
Solvent	Pure water

## 4. Example



-Titration curve-

—Measurement results—

	hydrochloric acid (g/L)	Copper (g/L)
1	87.52	98.82
2	87.47	99.09
3	87.36	98.04
Average	87.45	98.65
SD	0.080	0.55
RSD(%)	0.91	0.55

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 < Contact > Kyoto Electronics Manufacturing Co., Ltd.  
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