

## Application Memo

# Lead in Soldering Solution

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

## 1. Overview

Lead of soldering solution is measured as follows: First, add potassium sodium tartrate, hydrogen peroxide solution, pure water and triethanolamine to the sample. Then, add an excessive 0.05mol/L EDTA to react with lead and EDTA. To quantify the remaining EDTA, add buffer and indicator to titrate with 0.05mol/L zinc sulfate. The endpoint is determined by the color change of the indicator on the titration curve. The lead concentration is calculated from the titration volume of zinc sulfate.

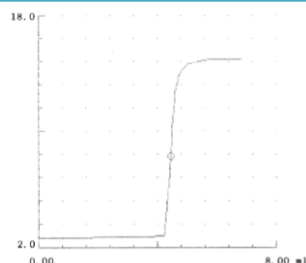
## 2. Apparatus

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

## 3. Reagents

Titrant	0.05mol/L zinc sulfate
Solvent	Pure water
Additive	0.05mol/L-EDTA, 1mol/L potassium sodium tartrate, 30~35% hydrogen peroxide solution, 20% triethanolamine
pH buffer	Ammonium chloride – Ammonia water
Indicator	Eriochrome black T (EBT)

## 4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	Lead (g/L)
1	5.0	4.4839	1.072

Please feel free to contact us for any further information.  
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