

Application Memo

Chlorine Ion in Copper Sulfate

| | |
|--------------------|-----------------------------------|
| Industry | Inorganic chemical industry |
| Instrument | Automatic potentiometric titrator |
| Measurement method | Precipitation titration |
| Standards | |

1. Overview

Chlorine ion in copper sulfate solution is measured by potentiometric titration with the 0.01mol/L silver nitrate solution. The endpoint is the maximum inflexion on titration curve. The chlorine ion concentration is calculated from the titration volume of silver nitrate up to the endpoint.

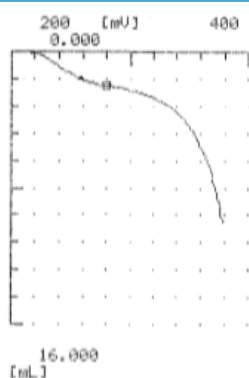
2. Apparatus

| | |
|-----------|--|
| Main unit | Automatic potentiometric titrator (preamplifier STD) |
| Electrode | Combined silver electrode |

3. Reagents

| | |
|---------|--|
| Titrant | 0.01mol/L silver nitrate solution |
| Solvent | Pure water |
| Reagent | Sodium chloride, Copper sulfate pentahydrate |

4. Example



—Titration curve—

—Measurement results—

| | Sample (g) | Titer (mL) | Chlorine ion (ppm) |
|---------|---------------|---------------|-----------------------|
| 1 | 99.992 | 2.0420 | 7.271 |
| 2 | 99.994 | 2.1133 | 7.525 |
| 3 | 99.992 | 2.1179 | 7.542 |
| Average | | | 7.446 |
| SD | | | 0.151 |
| RSD(%) | | | 2.03 |

Please feel free to contact us for any further information.
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