

Application Memo

Factor of 1mol/L Hydrochloric Acid

| | |
|--------------------|-----------------------------------|
| Industry | Inorganic chemical industry |
| Instrument | Automatic potentiometric titrator |
| Measurement method | Acid-base titration |
| Standards | JIS K8001 |

1. Overview

Factor measurement of 1mol/L hydrochloric acid solution is specified by JIS K 8001-2017 “General rules for test methods of reagents”. The sodium carbonate solution is titrated with 1mol/L hydrochloric acid solution up to the second endpoint. First endpoint is caused by sodium hydrogen carbonate and second endpoint is caused by sodium carbonate. The factor for standardization of 1mol/L hydrochloric acid is calculated from the titration volume of hydrochloric acid.



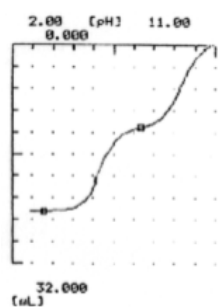
2. Apparatus

| | |
|-----------|--|
| Main unit | Automatic potentiometric titrator (preamplifier STD) |
| Electrode | Combined glass electrode Temperature compensation electrode |

3. Reagents

| | |
|-----------|---------------------------|
| Titrant | 1 mol/L hydrochloric acid |
| Reference | Sodium carbonate |

4. Example



—Titration curve—

—Measurement results—

| | Sample (g) | EP2 (mL) | Factor |
|---------|---------------|-------------|--------|
| 1 | 1.2898 | 24.3092 | 0.9963 |
| 2 | 1.2742 | 24.0696 | 0.9940 |
| 3 | 1.2900 | 24.2882 | 0.9973 |
| Average | | | 0.9959 |
| SD | | | 0.0017 |
| RSD(%) | | | 0.17 |

Please feel free to contact us for any further information.
 <Contact> Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
<http://www.kyoto-kem.com/en/contact/form.php>