

Application Memo

Determination of Potassium Dihydrogen Phosphate

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

1. Overview

Potassium dihydrogen phosphate is determined by titration with 1mol/L sodium hydroxide after the sample is added with sodium chloride and dissolved in water.

Titration goes up to the endpoint which is the maximum inflexion on the titration curve.

The concentration of potassium dihydrogen phosphate is calculated from the titration volume of sodium hydroxide.

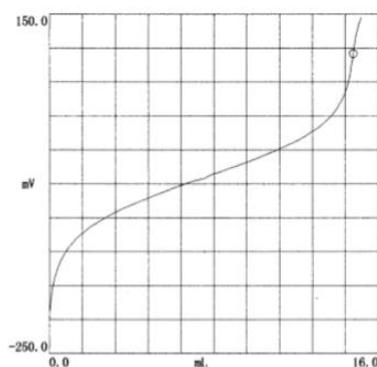
2. Apparatus

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

3. Reagents

| | |
|---------|-------------------------------------|
| Titrant | 1mol/L sodium hydroxide (f = 1.003) |
| Solvent | Pure water, Sodium chloride |

4. Example



—Titration curve—

—Measurement results—

| | Sample (g) | Titer (mL) | Concentration (%) |
|---------|---------------|---------------|----------------------|
| 1 | 2.0163 | 14.7831 | 100.077 |
| 2 | 2.0043 | 14.6382 | 99.690 |
| 3 | 2.0048 | 14.6760 | 99.923 |
| Average | | | 99.897 |
| SD | | | 0.195 |
| RSD(%) | | | 0.195 |

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