

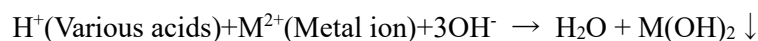
Application Memo

Alkali Consumption of Industrial Effluent

| | |
|--------------------|-----------------------------------|
| Industry | Environmental |
| Instrument | Automatic potentiometric titrator |
| Measurement method | Acid-base titration |
| Standards | JIS K 0102 |

1. Overview

According to JIS K 0102-2019-16, the sample liquid is titrated with 0.1mol/L sodium hydroxide up to pH4.8 and pH8.3. The measurement result is expressed by hydroxide ion (alkali) in mmol/L required to neutralize dissolved acids and metal ion which reacts with alkali or by amount (mg/L) of calcium carbonate equivalent to the alkali.



Where: Various acids mean strong acid, weak acid and organic acid

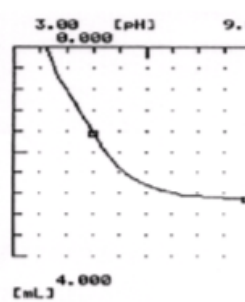
2. Apparatus

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

3. Reagents

| | |
|---------|---------------------------|
| Titrant | 0.1mol/L sodium hydroxide |
|---------|---------------------------|

4. Example



—Titration curve—

—Measurement results—

| | Sample (mL) | Titer (mL) | | Alkali consumption (mmol/L) | |
|---------|----------------|---------------|---------------|--------------------------------|---------------|
| | | EP-1 ph4.8 | EP-2 ph8.3 | EP-1 ph4.8 | EP-2 ph8.3 |
| | | 1 | 100.0 | 1.65 | 2.93 |
| 2 | 100.0 | 1.69 | 2.92 | 1.69 | 2.92 |
| 3 | 100.0 | 1.68 | 2.87 | 1.68 | 2.87 |
| Average | | | | 1.67 | 2.91 |
| SD | | | | 0.02 | 0.03 |
| RSD(%) | | | | 1 | 1 |

Please feel free to contact us for any further information.

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