

Application Memo

Acidity of Concentrated Lemon Juice

| | |
|--------------------|-----------------------------------|
| Industry | Food & beverage |
| Instrument | Automatic potentiometric titrator |
| Measurement method | Acid-base titration |
| Standards | ISO750 |

1. Overview

Determination of acidity of fruit juice is popularly practiced by potentiometric acid-base titration using a glass electrode. After pure water is added, titrate with 0.1mol/L sodium hydroxide up to pH8.3, and the titration volume is converted to citric acid. Juices containing granules such as concentrated lemon juice requires filtering.

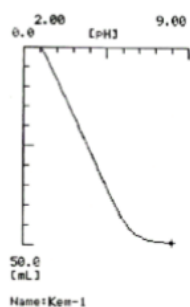
2. Apparatus

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

3. Reagents

| | |
|---------|---------------------------|
| Titrant | 0.1mol/L sodium hydroxide |
| Solvent | Pure water |

4. Example



—Titration curve—

—Measurement results—

| | Sample (g) | Titer (mL) | Acidity (w/w%) |
|---------|---------------|---------------|-------------------|
| 1 | 4.999 | 49.4754 | 6.316 |
| 2 | 4.994 | 49.4444 | 6.318 |
| 3 | 4.998 | 49.4588 | 6.315 |
| Average | | | 6.317 |
| SD | | | 0.002 |
| RSD(%) | | | 0.03 |

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