KYOTO ELECTRONICS MANUFACTURING CO.,LTD.

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Application Memo

Vitamin C in Lemon tea

Industry	Food & beverage
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	

1. Overview

Japanese Agriculture Standards specify the quantifying method of the vitamin C in a sample by titrations using indophenol. But this method has a practical problem of requiring two tests with different titrants. This memo demonstrates the measurement method using a same titrant. First, known concentration L ascorbic acid is titrated with the indophenol solution. The factor of the indophenol solution is calculated from its titration volume. Then add acetic acid to the diluted lemon tea sample and titrate it with same indophenol solution. The vitamin C concentration in the sample is calculated from the factor and titration volume of the indophenol solution.

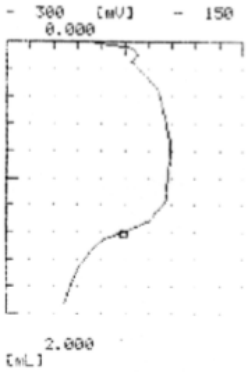
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Combined platinum electrode

3. Reagents

Titrant	Indophenol solution (0.3948g of 2.6-dichlorophenol indophenol dissolved in pure water, made into total 1000mL)
Additive	Acetic acid (special grade)

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Concentration (%)
1	1.0364	1.4030	0.0367
2	1.0567	1.4295	0.0367
3	1.0290	1.4092	0.0371
Average			0.0368
SD			0.0003
RSD(%)			0.7

Please feel free to contact us for any further information.

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