

Application Memo

Acid value of Cooking Oil

Industry	Fat and oil
Instrument	Automatic potentiometric titrator
Measurement method	Acid-base titration
Standards	The JOCS Standard methods for the Analysis of Fats, Oils and Related Materials

1. Overview

Measurement of acid value is specified in Standard methods for the analysis of fats, oils and related materials.

The test sample is dissolved in a mixture of benzene and ethanol, and the sample is titrated by potentiometry with the 0.1mol/L potassium hydroxide (2-propanol) solution.

The endpoint is obtained on titration curve. The acid value is calculated from the titration volume up to the endpoint.

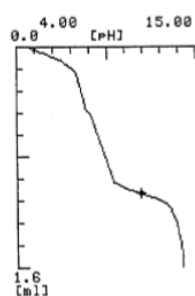
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	pH glass electrode Double junction reference electrode Temperature compensation electrode

3. Reagents

Titrant	0.1mol/L potassium hydroxide (2-propanol) solution
Solvent	Benzene + Ethanol (1+1)

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Acid value (mg/g)
1	5.0627	1.0765	1.0999
2	5.0844	1.0801	1.0992
3	5.1168	1.0887	1.1016
Average			1.1002
SD			0.0012
RSD(%)			0.11

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