

## Application Memo

# Hydroxyl Value of Fat and Oil

Industry	Fat and oil
Instrument	Automatic potentiometric titrator
Measurement method	Acid-base titration
Standards	JIS K 0070

### 1. Overview

Hydroxyl value of fat and oil is determined by titration as follows. A test sample added with acetylizer is first warmed in glycerin bath. After cooling, add pure water to resolve acetic anhydride, of which test liquid again is warmed in glycerin and cooled. Then, add ethanol and titrate with 0.5mol/L potassium hydroxide + ethanol up to the endpoint. The endpoint is determined by the inflexion point on the titration curve. The hydroxyl value is calculated from the titration volume of potassium hydroxide + ethanol.

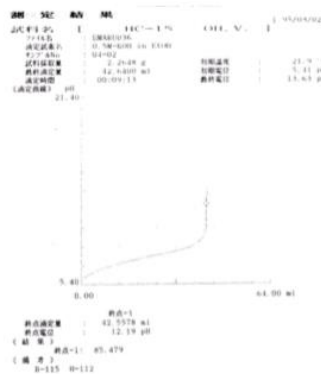
### 2. Apparatus

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

### 3. Reagents

Titrant	0.5mol/L potassium hydroxide + ethanol solution (f = 0.9960)
Solvent	Pyridine, Ethanol, Acetic anhydride

### 4. Example



—Measurement results—

	Sample (g)	Titer (mL)	Hydroxyl value (mg/g)
1	2.2648	42.5578	85.479

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