

Application Memo

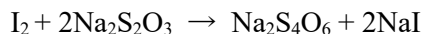
Peroxide Value (POV) of Soybean Oil

Industry	Food
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	The JOCS Standard Methods for the Analysis of Fats ISO 3960

1. Overview

Measurement of peroxide value (POV) of soybean oil is demonstrated in this application. The test sample is first dissolved in a mixture of chloroform and acetic acid (2:3). By flowing nitrogen gas through the sample to dispel residual oxygen, add potassium iodide, and then titrate free iodine with 0.01mol/L sodium thiosulfate.

The endpoint is determined by the maximum inflexion on the titration curve. POV is calculated from the titration volume of sodium thiosulfate.



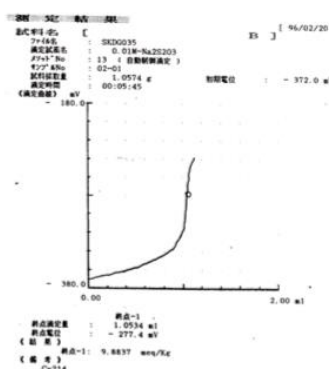
2. Apparatus

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

3. Reagents

Titrant	0.01mol/L sodium thiosulfate (f = 1.005)
Solvent	Mixture of chloroform and acetic acid (2:3) Saturated potassium iodide Nitrogen gas

4. Example



—Measurement results—

	Sample (g)	Titer (mL)	POV (meq/Kg)
1	1.0574	1.0534	9.8837

—Titration curve—

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