

## Application Memo

# POV of Cooking Oil

Industry	Fat and Oil
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	The JOCS Standard methods for the Analysis of Fats, Oils and Related Materials ISO 3960

## 1. Overview

Peroxide value is determined according to the above standards. Dissolve the cooking oil sample in the mixture of chloroform and acetic acid (1+2) solution while removing the dissolved oxygen by flowing nitrogen gas. After adding potassium iodide and pure water to the sample, free iodine is titrated with 0.01mol/L sodium thiosulfate. The endpoint is the maximum inflexion on the titration curve. Peroxide value is calculated from the titration volume of sodium thiosulfate.

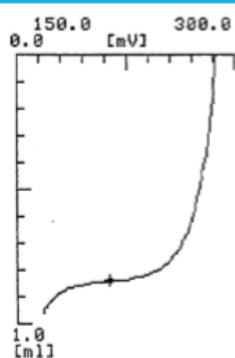
## 2. Apparatus

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

## 3. Reagents

Titrant	0.01mol/L sodium thiosulfate
Solvent	Chloroform and acetic acid (1+2) solution, Pure water
Additive	Saturated potassium iodide
Inactive gas	Nitrogen gas

## 4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	POV (meq/kg)
1	10.0185	0.8453	0.8437
2	10.0310	0.8655	0.8628
3	10.0382	0.8736	0.8703
Average			0.8590
SD			0.0137
RSD(%)			1.59

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