

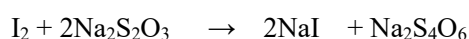
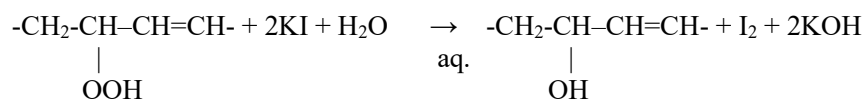
Application Memo

Peroxide Value of Cone Oil and Silicone Oil Mixture

Industry	Fat and oil
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	

1. Overview

Fats form peroxides at the onset of oxidation. Peroxide values indicate the degree of oxidation in the early stages and are generally determined by titration with iodine. Titration with iodine utilizes a reaction in which peroxide reacts with potassium iodide to liberate iodine as shown in the following chemical formula. After reacting the mixture of corn oil and silicone oil with excess potassium iodide, the liberated iodine is titrated with sodium thiosulfate to determine the peroxide value.



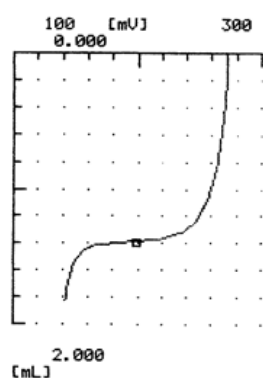
2. Apparatus

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

3. Reagents

Titrant	0.01mol/L sodium thiosulfate standard solution
Solvent	Mixture of chloroform and acetic acid (2+3) Potassium iodide (Saturated solution)

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Peroxide value (meq/Kg)
1	10.106	1.3929	1.3631
2	10.164	1.4112	1.3734
3	10.119	1.4073	1.3756
Average			1.3707
SD			0.0067
RSD(%)			0.49

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