

## Application Memo

# Salinity of Soy Sauce

Industry	Seasoning
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	Japanese Agricultural Standards

## 1. Overview

Salt-free soluble solid content in soy sauce can be obtained by measuring its salinity. For this purpose, silver nitrate titration using silver electrode is popularly practiced based on Japanese Agricultural Standards – Soy sauce. The diluted sample liquid is titrated with 0.1mol/L silver nitrate solution up to the endpoint, which is the inflexion point on the titration curve. Salinity is calculated from the titration volume of the silver nitrate solution.

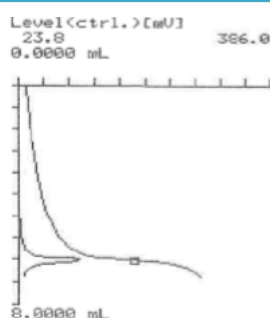
## 2. Apparatus

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

## 3. Reagents

Titrant	0.1mol/L silver nitrate solution
Additive	Pure water
	Nitric acid (1 + 1) (add an equivalent volume of nitric acid to water)
	Tween 20 solution (measure 1~2g Tween 20, and make 100mL in total by adding water)

## 4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	NaCl (%)
1	5.0	6.3459	18.51
2	5.0	6.3561	18.54
3	5.0	6.3480	18.52
Average			18.52
SD			0.015
RSD(%)			0.08

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