

Application Memo

Purity of Diazotization of 4,4'-Diaminodiphenyl Sulfone

Industry	Organic chemical industry
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	JIS K 4101-1993

1. Overview

The purity of diazotization of 4,4'-diaminodiphenyl sulfone is measured according to JIS K 4101-1993 General test method for organic intermediates - 11.6 Diazotization titration – 11.6.2 Direct (General) method. The sample, first hydrochloric acidified, is dissolved with potassium bromide, and is titrated with 0.5mol/L sodium nitrite while maintaining the temperature below 10°C. The endpoint is the maximum inflexion point on the titration curve. The purity of diazotization of 4,4'-diaminodiphenyl sulfone is calculated from the titration volume of 0.5mol/L sodium nitrite.

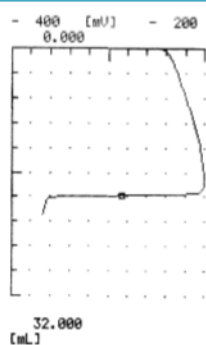
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	pH glass electrode Platinum electrode Temperature compensation electrode

3. Reagents

Titrant	0.5mol/L sodium nitrite
Additive	Pure water, Hydrochloric acid (1+1), Potassium bromide

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Purity (%)
1	1.2023	19.0182	98.592
2	1.2083	19.0851	98.448
3	1.2046	19.0654	98.648
Average			98.562
SD			0.103
RSD(%)			0.105

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