

Application Memo

Amino Group in Dyestuff

Industry	Paint, Adhesive
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	

1. Overview

In this memo, we show how to titrate aromatic primary amine in dyestuff with nitrous acid and quantify it by generating diazonium salt. After adding concentrated hydrochloric acid to the sample, titrate it to the equivalence point with 0.1 mol/L sodium nitrite solution while keeping it at 15°C or less. The equivalence point is the inflection point on the titration curve and the content of nitrogen present as amino group is calculated from the titration amount of sodium nitrite solution.

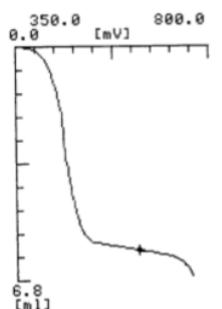
2. Apparatus

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

3. Reagents

Titrant	0.1mol/L sodium nitrite
Solvent	Pure water
Additive	Concentrate hydrochloric acid

4. Example



—Measurement results—

	Sample (g)	Titer (mL)	Amino group (%)
1	0.1075	6.3061	8.213
2	0.1035	5.9786	8.087
3	0.1035	6.1142	8.270
Average			8.190
SD			0.094
RSD(%)			1.1

Please feel free to contact us for any further information.
 < Contact > Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
<http://www.kyoto-kem.com/en/contact/form.php>