

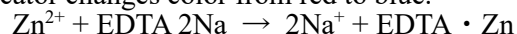
Application Memo

Factor of EDTA Solution

Industry	Inorganic chemical industry
Instrument	Automatic potentiometric titrator
Measurement method	Chelatometric titration
Standards	JIS K 8001

1. Overview

Mol concentration of reference substance used in volumetric analysis is expressed precisely by a number of numeric with and without fraction, of which coefficient is called the factor. According to JIS K 8001-2017, the factor of 0.1mol/L EDTA 2Na solution is determined as follows: First, the 0.1mol/L zinc solution is added with sodium hydroxide to adjust the pH to pH6~8. Then, add the ammoniacal ammonium chloride buffer, and titrate with 0.1mol/L EDTA 2Na up to the endpoint. The factor of 0.1mol/L EDTA 2Na is calculated from the titration volume. The endpoint is automatically found by photometry which detects the point where the EBT (Eriochrome black T) indicator changes color from red to blue.



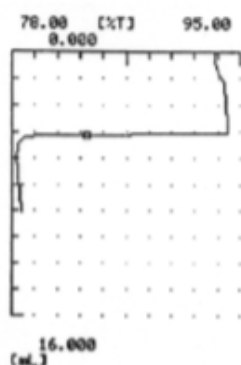
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier PTA)
Detector	Photometric sensor Interference (630nm)

3. Reagents

Titrant	0.1mol/L EDTA2Na solution
Sample	0.1mol/L zinc solution
Additive	100g/L sodium hydroxide solution, Ammonium chloride -Ammonia buffer (pH10)
Indicator	EBT (Eriochrome black T)

4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	Factor
1	25.0	5.0446	0.9982
2	25.0	5.1147	0.9954
3	25.0	5.0778	0.9969
Average			0.9968
SD			0.0014
RSD(%)			0.14

Please feel free to contact us for any further information.

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