

Application Memo

Purity of Magnesium Chloride

Industry	Inorganic chemical industry
Instrument	Automatic potentiometric titrator
Measurement method	Chelatometric titration
Standards	JIS K 8159, ISO 6353-2

1. Overview

The purity of magnesium chloride is determined according to JIS K 8159-2017 Magnesium chloride hexahydrate by titration with 0.1mol/L EDTA2Na after the sample diluted with water and warmed at 40°C is added with ammoniacal ammonium chloride buffer and Eriochromeblack T indicator. The endpoint is the maximum inflexion on the titration curve. The concentration of magnesium chloride is calculated from the titration volume of EDTA2Na solution.

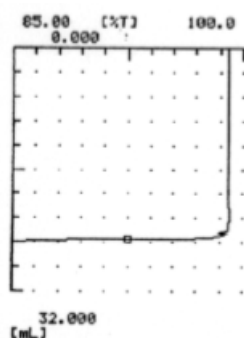
2. Apparatus

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

3. Reagents

Titrant	0.1mol/L EDTA2Na
Solvent	Pure water
Buffer	Ammoniacal ammonium chloride buffer (Dissolve 7g ammonium chloride in 57mL ammonia water and 100mL water)
Indicator	EBT (Eriochromeblack T)

4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	Magnesium chloride (%)
1	0.5105	25.1731	100.95
2	0.5006	24.5943	100.58
3	0.5145	25.1907	100.24
Average			100.59
SD			0.36
RSD(%)			0.35

Please feel free to contact us for any further information.
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