

## Application Memo

# Determination of EDTA

Industry	Organic chemical industry
Instrument	Automatic potentiometric titrator
Measurement method	Chelatometric titration
Standards	

## 1. Overview

This application memo introduces quantification of EDTA (tetra-sodium ethylenediaminetetraacetate tetrahydrate:  $C_{10}H_{12}N_2O_8Na_4 + 4H_2O$ ) by chelatometric titration. After alkalified with sodium hydroxide and adding diluted indicator, the EDTA sample is titrated with 0.02mol/L calcium chloride using photometric sensor. The endpoint is determined by the color change of the indicator. The EDTA concentration is calculated from the titration volume of 0.02mol/L calcium chloride.

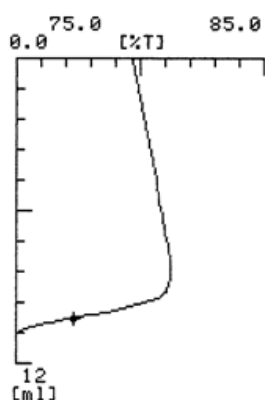
## 2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier PTA)
Electrode	Photometric sensor Interference filter (530nm)

## 3. Reagents

Titrant	0.02mol/L calcium chloride
Solvent	Pure water
Reagent	1mol/L sodium hydroxide
Indicator	NN diluted with potassium sulfate <sup>®</sup>

## 4. Example



—Titration curve—

—Measurement results—

	Sample (g)	Titer (mL)	EDTA conc. (%)
1	3.0420	10.2524	3.0467
2	3.0097	10.1496	3.0486
3	3.0267	10.2180	3.0519
Average			3.0491
SD			0.0026
RSD(%)			0.086

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