

Application Memo

COD of Industrial Effluent from Rubber Manufacturing

Industry	Environmental
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	JIS K 0102

1. Overview

COD (Chemical Oxygen Demand) of industrial effluent from rubber manufacturing plant is determined according to JIS K 0102-2019 -17. In this application memo, COD is measured using automatic potentiometric titrator. Add pure water, diluted sulfuric acid, silver nitrate and potassium permanganate to the sample, and boil. After cooling the sample, add sodium oxalate and titrate with 0.005mol/L potassium permanganate solution up to the inflexion point on the titration curve. COD is calculated from the titration volume of the potassium permanganate solution up to the endpoint.

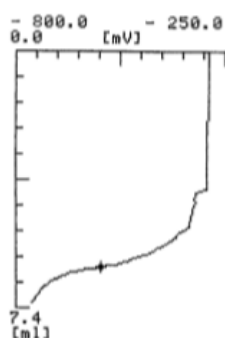
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Combined platinum electrode for COD

3. Reagents

Titrant	0.005mmol/L potassium permanganate solution
Solvent	Pure water
Additive	Sulfuric acid (1+2), Silver nitrate (500g/L), 0.0125mmol/L sodium oxalate

4. Example



—Titration curve—

—Measurement results—

	Sample (mL)	Titer (mL)	COD (mg/L)
1	5.0	6.2563	218.0
2	5.0	6.2971	219.6
3	5.0	6.3250	220.7
Average			219.5
SD			1.4
RSD(%)			0.63

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