

Application Memo Chlorine Ion in Concrete

Industry	Ores
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	JIS A 1154

1. Overview

Chlorine ion (Cl⁻) of concrete is measured by potentiometric titration with 0.1mol/L silver nitrate. The test sample is obtained from supernatant liquid of crushed concrete, which is dried at 110°C and added with pure water after cooled.

Titrate up to the endpoint, which is the maximum inflexion point on the titration curve. The chlorine ion is calculated from the titration volume of silver solution.

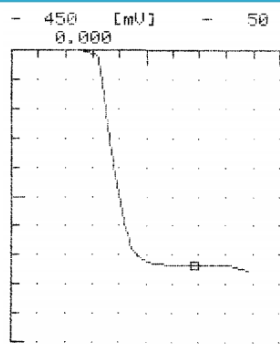
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Silver electrode Mercury sulfate reference electrode

3. Reagents

Titrant	0.1mol/L silver nitrate solution
Additive	Pure water

4. Example



32.000
[mL]
-Titration curve-

-Measurement results-

	Sample (g)	Titer (mL)	Conc. (%)
1	194.13	23.4939	0.1729
2	194.98	24.4004	0.1788
3	195.20	24.9613	0.1827
Average			0.1781
SD			0.0049
RSD(%)			2.8

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