

Application Memo

Total Salinity of Hardened Concrete

Industry	Ores
Instrument	Automatic potentiometric titrator
Measurement method	Precipitation titration
Standards	JIS A 1154, Japan Concrete Institute JCI-SC5

1. Overview

Total salinity of hardened concrete is determined according to Japan Concrete Institute JCI-SC5 Simplified Test Method for Total Salinity of Concrete.

After 2mol/L nitric acid and 30% hydrogen peroxide solution are added to the sample, leave it to cool at room temperature, and titrate the filtered sample liquid with 0.01mol/L silver nitrate up to the endpoint, which is the maximum inflexion point on the titration curve. The concentration of salinity is calculated from the titration volume of silver nitrate.

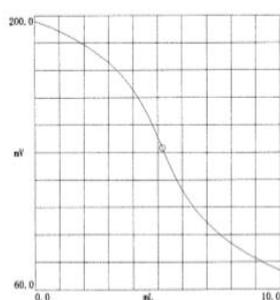
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	Chlorine ion selective electrode, Mercury sulfate reference electrode

3. Reagents

Titrant	0.01mol/L silver nitrate solution
Solvent	Pure water
Additive	2mol/L nitric acid, 30% hydrogen peroxide,

4. Example



—Measurement results—			
	Sample (g)	Titer (mL)	Salinity (ppm)
1	9.9930	5.1883	305.25
2	9.9908	5.1141	300.95
3	9.9935	5.1541	303.22
Average			303.18
SD			2.15
RSD(%)			0.709

Please feel free to contact us for any further information.
 <Contact> Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
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