



CHLORIDE

Chloride ions exist in a mud system as salts of sodium, magnesium, calcium or potassium. The determination of the chloride ion present in the mud filtrate may give an indication of salt-water flows or the presence of a salt formation or stringer. In mud systems to which salt has been added, chloride ion measurements show the amount of salinity present in the mud.

EQUIPMENT & CHEMICALS

Equipment		Product Code
1.	Silver nitrate solution: 0.0282N for low chloride concentrations 0.282N for high chloride concentrations	EY1150 EY1160
2.	Potassium chromate	EY1130
3.	Sulfuric acid (N/50)	EY1220
4.	Phenolphthalein	EY1120
5.	Pipettes (1 mL)	EN5900
6.	Titration Dish	E10173
7.	Stirring Rod	E10339
8.	Pipette safety bulb	E83102

TEST PROCEDURE

1. Measure 1.0 mL of filtrate into a white titration dish and dilute to convenient volume with distilled water.
2. Add a few drops of phenolphthalein. If a pink color develops add N/50 sulfuric acid until the pink color completely disappears (it is not necessary to record the volume of N/50 sulfuric acid added).
3. Add 4 drops of potassium chromate to obtain a yellow color.
4. Add silver nitrate while swirling or stirring until the color changes from yellow to orange-red (brick red) and persists for 30 seconds.

CALCULATION

1. If 0.0282N silver nitrate is used: $\text{mg/L chloride} = 1000 \times \text{mL silver nitrate added}$
2. If 0.282N silver nitrate is used: $\text{mg/L chloride} = 10000 \times \text{mL silver nitrate added}$