

## Chlorides Test Procedure

This test determines the chloride ion present in the drilling fluid filtrate and may be an indication of salt-water contamination or drilling through a salt formation. Also in mud systems where salt has been added this test will show chloride ion concentration.

### Supplies

1. Silver Nitrate solution: 0.0282N for low Chloride concentrations  
0.282N for high Chloride concentrations
2. Potassium chromate
3. Sulfuric acid (N/50)
4. Phenolphthalein
5. Pipettes (1 ml or 2 ml)
6. Titration Dish
7. Stirring Rod
8. Pipette safety bulb

### TEST PROCEDURE

1. Measure 1.0 mL of filtrate into a titration dish and dilute to convenient volume (50ml) with distilled water.
2. Add 2-3 drops of Phenolphthalein and if pink color appears add N/50 Sulfuric Acid until the pink color completely disappears. Volume of N/50 does not need to be recorded.
3. Add 4 drops of Potassium Chromate to turn solution yellow.
4. Titrate with silver nitrate while swirling the dish or stirring with stir rod until the color goes from yellow to orange-red and remains for 30 or more seconds.

### CALCULATIONS

If 0.0282N Silver Nitrate is used:  $\text{mg/L Chloride} = 1000 \times \text{mL Silver Nitrate added}$

If 0.282N Silver Nitrate is used:  $\text{mg/L Chloride} = 10000 \times \text{mL Silver Nitrate added}$