

NEXTChem Process Analyzers, Inc.

On-Line Chloride

Industry: Chemical and Semiconductor

Sample Filtration is eliminated, in samples with high solids. For samples requiring dilution ≤ 2 mm particles can easily be handled. For non-dilution samples ≤ 6 mm particles pose no problem. No other system can match this rugged design.

NEXTChem Analyzers can provide accuracy only matched by the most precise laboratory equipment. Our reagent precision pumps deliver titrants with ± 0.001 mL reproducibility. Potentiometric analyses are utilized thus eliminating errors caused by electrode drift.



Analysis of Chloride

Chloride is determined by a precipitation titration. The single inflection point is used to determine the concentration of chloride.

Reactions:

Precipitation Reaction $\text{Cl}^- + \text{AgNO}_3 \rightarrow \text{AgCl} + \text{NO}_3^-$

Reagents:

0.10 N Silver Nitrate, 0.1 N Sodium Hydroxide, 10% Ammonium Chloride (cleaning solution)

Sensor:

Silver/Sulfide Ion Selective Electrode

Detection Limits / Interferences:

Dilution: 122,500 – 24 ppm
Non-Dilution: 1000 – 0 ppm (lower detection limit 1 ppm)
Interferences: Br^- , CO_3^{2-} , OH^- , CN^- , PO_4^{3-} , S^{2-}

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