



## Anion Measurement by Ion Chromatography

### EQUIPMENT

1. Integrion Ion Chromatograph

### REAGENT

1. 45 mM Na<sub>2</sub>CO<sub>3</sub>
2. 14 mM NaHCO<sub>3</sub>

### PROCEDURE

A Thermo Scientific Dionex Integrion ion chromatograph (Sunnyvale, CA, USA) is used with a 25 µl sample loop injector and ASDV automated sampler employed along with a Dionex IonPac AS22 separation column (4 × 150 mm) and IonPac AG22 guard column (4 × 30 mm). The eluent consists of 45 mM Na<sub>2</sub>CO<sub>3</sub> + 14 mM NaHCO<sub>3</sub> at a flow rate of 1.0 ml per minute. A Dionex AERS-500 (4 mm) Anion Self-Regenerating Suppressor is used for conductivity suppression before detection by a Dionex Integrion CD conductivity cell.

The IC method is based on separation of the anions by a separator column containing Dionex low-capacity anion-exchange resin in the HCO<sub>3</sub><sup>-</sup> form and on converting the various anions to their corresponding acids by a suppressor column containing a strong acid cation-exchange resin in the H<sup>+</sup> form.

### REFERENCE

USEPA Method 300, "Determination of Inorganic Anions by Ion Chromatography," in Test Methods For Environmental Monitoring, US Environmental Protection Agency, Washington, DC, USA, 2nd edition, 1993.