

Non-suppressed Ion Chromatography

Two methods are well known as ion chromatography measurement : the suppressed conductivity method and the non-suppressed conductivity method. In the suppressed conductivity method, a special device (suppressor) installed after the analytical column is needed for removing the opposite ionic substances in the sample. The Non-suppressed conductivity method can be easily performed only by adding a conductivity detector and IC columns to an ordinary HPLC system without using a suppressor.

Merit of non-suppressed method.

Since the use of a suppressor is unnecessary, the system is simple and inexpensive.

Demerits of non-suppressed method.

1. Background conductivity is rather high.
(anion analysis: 200 to 250 micro-S/cmFS, cation analysis: 1,000 to 2,500 micro-S/cmFS)
2. Sensitivity is rather low. Detection sensitivity is about tens ppb and minimum sample concentration is about hundreds ppb.
3. The usable eluent is limited to low-conductivity solvents such as phthalic acid.

