

Fractionation of particulate and vapor phase fluoride in urban atmosphere

Abstract

The distribution of fluoride between particulate and gaseous phases in the urban atmosphere of an industrialized city has been investigated. A new method was developed for collection of gaseous and particulate phase of fluoride. A comparison was made between the results obtained from the proposed method with those obtained from the traditional method using mixed cellulose ester (MCE) and showed an excellent agreement. The proposed method was applied for fractionation of fluoride in urban atmosphere. The seasonal variation in concentrations of gaseous and particulate fluoride in the atmosphere of the city was also investigated and showed higher concentrations of fluoride fractions in autumn and winter seasons.

Keyword: Air pollution; Atmospheric fluoride; Ion selective electrode