

Analytical Procedures on Multi-element Determinations of Airborne Particles for Receptor Model Use

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摘要.

Abstract

A multistage analytical procedure is developed in this investigation to determine 22 elements (Al, As, Ba, Ca, Cd, Cl, Cr, Cu, Fe, K, Mg, Mn, Na, Ni, Pb, S, Sb, Si, Sr, Ti, V, and Zn) on loaded PTFE-filter samples of atmospheric-particulate matter collected by dichotomous samplers, It includes a direct X-ray fluorescence measurement followed by instrumental neutron activation analysis (INAA) or microwave acid digestion of the sample for spectroscopic analysis, ICP-MS was employed for elemental analysis after the digestion, A combination of different analytical methods and standard operational procedures were developed to meet the requirements for receptor model analysis, The quality assurance program includes the intercomparison with the use of alternative methods for accuracy and precision control. [References: 18]