

Soil sample preparation for PIXE analysis

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Abstract

Among a variety of analytical techniques used for elemental analysis of soil samples, PIXE is of increasing attractiveness for the relative ease of sample preparation. In the Nishina Memorial Cyclotron Center (NMCC), powdered internal standard method with palladium carbon has long been adopted for soil sample preparation. However, the method can be heavily laborious when a number of samples need to be handled in a limited time. Here we report an alternative to the method, which takes liquid standard with a few drops of acetone to be homogenized with soil sample in agate mortar. Applicability of the moist method was examined using some standard reference materials. Generally, the results obtained by the method were in satisfactory agreement with the certified values.