DETERMINATION OF HEAVY METALS IN CAR PARK DUSTS BY FLAME AAS: A BCR-SEQUENTIAL EXTRACTION PROCEDURE

Hüseyin ALTUNDAĞ, Mustafa Ş. DÜNDAR, Seçil DOĞANCI

Department of Chemistry, Faculty of Science and Art, Sakarya University, 54187 Sakarya, Turkey
(altundag@sakarya.edu.tr, Tel: 0 264 2956059, Fax: 0 264 2955950)

Key Words: Sequential Extraction, Heavy Metals, Car Park, Dust, Flame Atomic Absorption Spectrometry

The aim of this work was to elucidate the amount of metals released at each step by using sequential extraction technique for deposited dust samples in car parks. The mobilisation of metals, in particular toxic heavy metals, has caused the increase of their concentrations in the environment [1,2]. The investigation of metal contents of car park dust samples is crucial for heavy metal pollution originated from traffic, particularly lead and recently platinum group elements used in catalytic convertors for the purpose of reducing the pollutants coming from automobile emissions [3]. A four-stage BCR-sequential extraction procedure for determination of extractable heavy metals was applied to dusts samples collected from campus area car parks of Sakarya University, Turkey [4,5]. The validation of the results was performed by using a standard reference material, BCR 701, to certify the experimental results obtained and to evaluate the reliability of the method used. Collected dust samples were analyzed for Cu, Fe, Ni, Pb, Cd, Zn, and Cr by using flame atomic absorption spectrometric technique. The obtained results will be presented.

References