DETERMINATION OF Al, Fe, Pb, Ni and Cd CONTENTS IN PM\(_1\) AND PM\(_{10}\) AIRBORNE PARTICULATE MATTERS

Mustafa Şahin DÜNDAR\(^1\), Sinem KAYGALDURAK\(^2\)

\(^1\)Department of Chemistry, Faculty of Arts and Science, Sakarya University 54187 Sakarya, Turkey
\(^2\)Division of Chemistry, Institute of Science, Sakarya University 54187 Sakarya, Turkey

Tel: 0264-295 60 44 Fax: 0264-295 59 50)

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According to final report of European Environment Agency, the road transport is currently the most important source of fine particulate matter emissions (PM\(_{2.5}\) and PM\(_{10}\)) [1]. Besides road transport, energy production, manufacturing industries, residential areas, and agricultural activities are the main sources of air pollution.

The European Commission’s proposal for a directive on ambient air quality and clean air for Europe, which was entered into force in May 2008, introduces new air quality objectives for monitoring requirements for PM\(_{2.5}\). Air quality standards are developed for particulate matters for 2.5 and 10\(\mu\)m sizes. But according to the analysis results, particulate matter which has a 2.5 \(\mu\)m size can not provides enough information because they included particles from mechanical processes and from combustion. PM\(_1\) shows particles below 1 \(\mu\)m being derived almost from combustion. Consequently, instead of analysing 2.5 \(\mu\)m, 1 \(\mu\)m particulate matter produces more useful information for understanding differences between pollution sources [2].

Based on this information, particulate matters (PM\(_1\) and PM\(_{10}\)) and their Al, Fe, Pb, Ni and Cd content analysis were carried out with Flame AAS technique for Adapazarı atmosphere. The results obtained will be presented.

References