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CHARACTERIZATION OF ROAD DUST IN THE KANDY URBAN AREA

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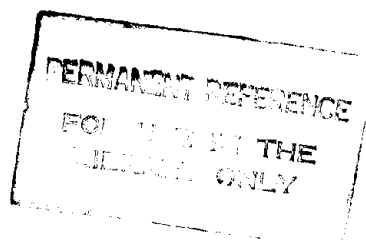
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ABSTRACT

Dusts settled nearby main roads with considerably high traffic volumes were collected to investigate the chemical composition of them. The magnetic fraction of the dust was also measured to delineate pollution. The distance from the road edge, the height above the ground level and traffic conditions were considered during the sampling.

Magnetic materials in samples studied are characteristically high (up to 25.16 wt. %). It indicates that the anthropogenic activities can affect the composition of the dust in the urban area. The recorded values of Pb (up to 15.50 $\mu\text{g/g}$), Cu (up to 13.50 $\mu\text{g/g}$), Cr (up to 5.32 $\mu\text{g/g}$) in dust are below the acceptable levels. However, measured Zn values are greater than those of road dust

analyzed elsewhere. Lower concentrations of Ca, Mg, K and Na compared to soil imply that most of dusts in the study area are generated from anthropogenic activities.

Concentrations of metal ions depend on the proximity to the road edge and the height of the location of dust settlement. The maximum concentrations of both Pb and Fe were observed at 1m height above the ground level and their concentrations decrease with the increase of distance and height. In contrast, concentrations of Cr, Cu and Zn show a positive correlation with the height.