

The effect of road's traffic on marginal soil pollution to lead

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INTRODUCTION

The road traffic has become one of the most serious environmental problems in the main source of pollution of roadside soils[1].heavy metals pollution especially exitense of lead in soils over large areas and long periods of time may cause chronic damages to living organisms and must be carefully monitored one way to determine the extent of environmental contamination is by measuring the levels of lead in soils[2].This study aimed to determine the contamination trends of lead on roadside soils due to vehicular emissions around three most polluted highways in Iran.

MATERIALS AND METHODS

This study was conducted in 2012-2013 soil sampeles were collected from Esfahan – Shiraz, Esfahan – Tehran and Karaj – Chaloos highways. In each highway soil samples were taken from 10 meters of distance of road and 0-5 and 5-10 depth of soil and also,they comparision with control samples of with 100 meter distance.the total concentration of lead in samples was analyzed by ICP-AES. Also the environmental availability of lead in soils was measured. A statistical analysis was carried out using SAS software.

RESULTS AND DISCUSSION

soils sampeles analysis indicated that the main source of contamination was automobile exhausts. The amount of lead soil pollution of soil in the marginal of areas of road has direct relation to the read of traffic road. In this case, the more the traffic road increases the higher the pollution becomes worsen. The construction of lead in studied soil in ten-meter distance from the road to ratio of road sample which is located for 100 meters of the road increased. In according to result, the highest lead concentrations are related to Esfahan – Shiraz highway and also, the lowest lead concentrations are related to Karaj – Chaloos highway.

Keywords

Soil, Roadside pollution, Traffic exhausts, Lead

References

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