

## Magnetic Susceptibility Measurements of Urban Areas in Denizli City and Showing the Distributions of Heavy Metal Pollution

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**Abstract :** Three hundred and fifty soil samples were collected around the urban and residential area, for the purpose of a magnetic susceptibility study on pollution in Denizli City, Turkiye. Measurements of volume-specific magnetic susceptibility ( $\kappa$ ) and mass-specific magnetic susceptibility ( $\chi$ ) show a significant variation range from place to place collected soil samples. In this study, we did a primary magnetic study near the high heavy traffic pollution in a part of Denizli city, Turkiye which was said the most polluted city in Aegean Region of Turkey. The magnetic susceptibility measurements increased from the garden area to residential area and reached the high levels near the industrial areas of the city. Magnetic particle concentration and grain size sourced exhaust gasses, and other pollution sources increase with the increasing distance from a residential area, indicating the high traffic road area.

**Keywords :** magnetic susceptibility, pollution, magnetic particle, Denizli

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