

## **CHARACTERIZATION OF INDOOR AND OUTDOOR DUST FROM MAJOR CITIES IN BULGARIA – PRELIMINARY RESULTS**

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The influence of different industrial and technological activities on the human health and methods for prevention and fast detection of causes for the most widely spread diseases due to polluted environment are subject of extensive scientific research. Application of magnetic proxy methods for evaluation of the degree of pollution of urban indoor and outdoor environment in major cities in Bulgaria will be presented. Magnetic susceptibility of dust material was calculated as mass-specific values and per unit area. Mass specific susceptibility of the material gathered both from internal space and streets shows close resemblance to the locality and suggests that source of the main dustfall is regional and not so dependent on the specific differences between outdoor and indoor environments. Considering magnetic signal per unit area, there is clear separation between clean and polluted districts in towns. It is expressed both in dust from indoor and outdoor sites, which implies that major controlling factor is atmospheric fallout of dust particles. SEM examination reveals the presence of plenty of irregular metallic particles, containing Fe, Pb, Cu, Ni, etc. Samples from outdoor environments are characterized by significantly higher amount of spherules from industrial emissions in comparison with samples from indoor locations.

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