

HOW EXPOSITION OF TOWNSPEOPLE TO PM SHOULD BE MEASURED?

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The main objective of several epidemiological studies was to evaluate influence of air pollution to human health. There is not easy to decide in which points of urban environment measurements have to be done. Evaluation of the informative potential of air pollution results from different sources stands for the aim of this study.

Available results from three fixed measuring stations composing automated monitoring system in the town Krakow (SAS) were compared during 2012 year. Comparisons of mean values of both PM₁₀ and PM_{2,5} were performed for: 1) all hours from two selected days, 2) all days from months with the highest and the lowest pollution, 3) all months of that year. Correlation coefficients for results from three stations differed the more the lowest was pollution and the shortest duration of time.

Portable air dust meters SidePak AM 510 were used for comparison of a few daily means between outdoor and indoor environment. Correlation coefficients of synchronized measurements were significant, but not satisfactorily high. Taking into account that people spend much more time indoor than outdoor and travel through the town any portable PM meters would record respective exposition more specifically than fixed stations. Individual mobile phones are proposed as potentially useful and easy PM collectors, instead of expensive sophisticated devices. Their usefulness for that application is preliminary verified in this paper.

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