

The current look on the service market shows that nowadays every, even small city, has at least a few or a number of beauty salons, which differs in the character of offered treatments. Such availability in the market is the feedback to the client's needs. The cosmetic treatment available at a typical salon covers face and skin cleaning, manicure and pedicure, hand skincare, make-up and others. Each of these activities is connected with mechanical and chemical treatment of skin, nails, and other body parts. All these treatments are connected with the emission of a significant amount of a wide spectrum of chemical compounds (mostly the ingredients of cosmetics) into the beauty salons interiors. Moreover, in presence of heat sources like dryers or, for example, ultraviolet radiation, these compounds can react and transform into other compounds, which are more or less hazardous for the beauty salons workers and occupants. The crucial factor for the air quality inside beauty salons will also be the chemical composition of the outdoor air.

The quality of indoor air inside beauty salons will be characterized by better or worse conditions depending on the geographical location of each salon, its topography, meteorological conditions and, finally, the proximity and intensity of the impact of various sources of pollutant emissions.

Having all above in mind, it is clear that description of the sources and transformations of the priority air pollutants inside the salons together with proper understanding of the health effects among their users is a very important issue. Among those pollutants especially dangerous are fine particulate matter (PM_{2.5}), polycyclic aromatic hydrocarbons (PAHs) and selected organic compounds (i.e. benzene, toluene, ethylbenzene, xylenes (BTEX)). Most research in the area of air quality inside beauty salons and barber shops was conducted in the context of microbiological contamination.

In the framework of the proposed project we planned to investigate and describe the origin, changes and impact of particulate matter and selected organic compounds inside beauty salons on the exposure level and health of their occupants. The most important element of the project, however, will be to clarify whether the internal emission of PM and gaseous pollutants occurring in certain types of non-production spaces causes significant/measurable changes in the content of PM-bound and gaseous PAHs and the qualitative and quantitative changes in the characteristics of BTEX compounds founded indoors. An answer to the question - whether the ventilation conditions and migration of atmospheric air into the beauty salons are responsible for the concentration of hazardous organic compounds in indoor air will also be given.