

ENVIRONMENTAL LEVELS OF NITRO-PAHs IN TOTAL SUSPENDED
PARTICULATE MATTER IN UPPER SILESIA (POLAND)

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Abstract: Nitrated polycyclic aromatic hydrocarbons (nitro-PAHs) may be formed during combustion of Diesel and gasoline fuel and may be produced in gas-phase reactions of polycyclic aromatic hydrocarbons (PAHs) with oxides of nitrogen. These compounds can form a significant fraction of the mainly direct-acting mutagenic compounds present in extracts of ambient air particles. Using own analytical method of nitro-PAHs determination, concentrations of total PAHs, nitro- and dinitro-PAHs in urban and non-urban area of three cities of Upper Silesia in Poland were measured. The dependence between concentration of PAHs and nitro-PAHs in urban and non-urban area as well as their distribution depending on roadway distance were searched. The study showed a significant influence of road transport on the levels of nitro-PAHs concentration.