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## **ENVIRONMENTAL BEHAVIOUR AND ASSESSMENT OF PERSISTENT ORGANIC POLLUTANTS**

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### **Abstract**

Persistent organic pollutants (POPs) are chemical substances that persist in the environment, bioaccumulate through the food web, and pose a risk of causing adverse effects to human health and the environment. This group of priority pollutants consists of pesticides, industrial chemicals and unintentional by-products of industrial processes. Synthetic organic chemicals are released into the environment through a range of processes which include: release during the production process, release during use (e.g. pesticides), or accidental release during combustion processes (e.g. dioxins). Persistent organic pollutants are transported across international boundaries far from their sources, even to regions where they have never been used or produced. This paper analyses some aspects regarding the environmental behaviour of POPs, that is determined by environmental conditions such as temperature and soil organic carbon content and by key physical-chemical properties of the compounds, such as the aqueous solubility, the vapour pressure, and the partitioning coefficient between air and water (the Henry's law constant), octanol and water, and octanol and air. Also, modelling approaches are highlighted and discussed.

*Keywords:* persistent organic pollutants, degradation, environment, biodegradation, transport steady state model, dynamic model

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