

**Poster Number**

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<b>Topic</b>	Effect assessment
<b>Title</b>	<b>Derivation of Environmental Risk Limits for Polycyclic Aromatic Hydrocarbons (Pahs) Based on Internal Residues</b>
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**Summary:** In this study the environmental risk limits) for ecosystems for 16 well-known polycyclic aromatic hydrocarbons (PAHs) were derived in an alternative way. For this goal, the knowledge was used from previous research on the environmental risk limits of mineral oil that was suitable for PAHs as well. The environmental risk limits are derived based on the calculated concentration of substances in the organisms after they have taken up the substances from the water (for sediment and soil: water in sediment or soil moisture). This method is based on the assumption that certain effects of all 16 PAHs occur at the same concentrations in organisms that live in water, soil and sediment. Because PAHs cause effects in the same way, the concentrations can be added together. This provides insight into the effect of all PAHs simultaneously, as they occur in the environment (toxic unit approach).

The internal effect concentration of PAHs does not differ between organisms in soil, water and sediment. In contrast, large differences between the effect concentrations of the substances outside the organisms were observed. Especially the effect concentrations between soil or sediment on the one hand and water on the other hand were different, and also the effect concentrations of individual PAHs in water. The harmful effects of the substances are thus largely determined by the extent to which a substance is partitioned between water, soil and sediment, and is taken up from water (equilibrium partitioning). Measurements of concentrations of substances in the environment would thus be better based on concentrations in (pore) water.