

## **Effect of Chemical Stabilisation of Sewage Sludge on the Fate of PAHs – Ewa Wiśniowska**

### **Summary**

The results of investigations on PAHs concentration changes during chemical stabilisation of sewage sludge with Fenton's reagent (1 g of solid  $\text{FeSO}_4 \cdot 7\text{H}_2\text{O}$  and 10 to 500  $\text{cm}^3$  of  $\text{H}_2\text{O}_2$  (30%) per  $\text{dm}^3$ ; for 2 hours at  $20 \pm 1^\circ\text{C}$ ) are presented. Raw and digested sewage sludge was chemically stabilised. Extraction of PAHs from the solid phase was performed using an ultrasonic method (with cyclohexane: dichloromethane mixture). To extract micropollutants from the supernatant cyclohexane: dichloromethane: methanol mixture was used). The results obtained suggest that PAH concentration changes in chemically stabilised sewage sludge are dependent not only on the chemical oxidant dose but also on the kind of sewage sludge (raw or digested) treated. However, no linear correlation was found between PAH concentrations and the dose of oxidant. A high correlation was observed between PAH concentrations in the supernatant and their water solubility.