Name of Special Session

S9. Flame Retardants in Human Tissues; Implications for Human Exposure

Chairs and/or Organizers

Prof. Adrian Covaci (University of Antwerp, Belgium)
Dr. Mohamed Abdallah (University of Birmingham, U.K.)

Objective

Flame Retardants (FRs) are a group of anthropogenic chemicals, used extensively to flame-proof a broad range of consumer products. These chemicals can enter the environment through spills, leaching and volatilization during their production, use and disposal or recycling. Current understanding is that human exposure to FRs can occur via a multitude of pathways, including: ingestion, inhalation and dermal contact. This has raised concerns over the potential adverse health effects arising from such exposure, such as: endocrine disruption, neurodevelopmental and reproductive toxicity and even cancer. Such concern has triggered several recent national and International initiatives to monitor the levels and profiles of FRs in human tissues including: milk, plasma and urine. Assessment of human tissue concentrations/profiles of FRs through human biomonitoring aims to improve the current understanding of internal human exposure to these hazardous chemicals and the possible toxic implications for such exposure. This is necessary to inform policy makers on the required management and mitigation strategies to minimize the risk of these chemicals to public health and the environment.

S7: "The Biotic Exposome of Emerging Flame Retardants in the Global Environment" focuses on FRs in the biotic exposome and in the global environment and biota.
S8: "Legacy and Emerging Flame Retardants: Biotransformation and Bioavailability" focuses on FR metabolism and bioavailability only.
S9: "Flame Retardants in Human Tissues; Implications for Human Exposure" focuses on FRs/biomarkers in human matrices (blood, urine and milk) and thus no non-human information.