

Name of Special Session

Chlorinated Paraffins – Pollutants of High Environmental and Health Concern

Chairs and/or Organizers

Dr. Yasuyuki Shibata (National Institute for Environmental Studies, Japan)

Dr. Takumi Takasuga (Ehime Univ./Shimadzu Techno-Research Co., Japan)

Dr. Rainer Malisch (EURL, Germany)

Dr. Ake Bergman (Stockholm Univ./Orebro Univ, Sweden)

Objective

Global pollution by chlorinated paraffins has been of significant and increasing concern in recent years. Among them, short-chain chlorinated paraffins (SCCPs) was added to the Stockholm Convention at its COP-8 in 2017, and is to be monitored in order to identify major sources and exposure routes, to regulate their emissions, and to assess effectiveness of the regulation under the Convention. However, the concern is now increasing regarding both medium and long chain chlorinated paraffins, MCCPs and LCCPs, respectively. Due to its extremely complex congener composition as well as many interferences from other group of chemicals including PCB and OCPs, establishment of reliable analytical method of CPs is a real scientific challenge. The concern addresses also very much exposure levels, (eco-) and toxicological effects of the CPs. Even though the tox data started to be generated decades ago they are still limited. Hence it is of importance to integrate chemical analytical methodology developments, exposure assessments, CP bioaccumulation behavior, and toxicity.

The purpose of this special session is to summarize current activities on the development of analytical methodology of chlorinated paraffins, to identify gaps and technical challenges, to reveal major emission sources, to address human and wildlife levels, to catch up on recent developments of bioaccumulative properties and both ecotoxicological and toxicological properties of CPs. We hope and believe that the session will promote activities further towards the establishment of proper management of CPs.

The special session may comprise three 120 min sessions; one particularly focusing on the challenges and establishment of CPs analysis, including harmonized (or consensus) method

of SCCPs analysis under the Stockholm Convention. The other two session(s) are proposed to integrate exposures, properties, novel ecotoxicology and toxicology achievements.