

Senthil Kumar, K.
Masunaga, S.
Kannan, K.
Paramasivan, O.N.
Shanmugasundaram, V.P.
Nakanishi, J.
Giesy, J.P.

Key words; PCDDs, PCDFs, Dioxin-like PCBs, humans, wildlife

Presenter: K. Senthil Kumar, Yokohama National University

Author to contact

K. Senthil Kumar

Graduate School of Environment and Information Sciences

Yokohama National University, 79-7 Tokiwadai, Hodogaya-ku

Yokohama 240-8501, Japan, T +81-45-339-4371, F +81-45-339-4373

Senthil@ynu.ac.jp

Preference: poster, 1B wildlife toxicology

Levels of Dioxins, Furans, and PCBs in Humans, Meat, Fish and Wildlife Samples from India. Senthil Kumar, K.*, Masunaga, S., Kannan, K., Paramasivan, O.N., Shanmugasundaram, V.P., Nakanishi, J., Giesy, J.P. Graduate School of Environment and Information Sciences, Yokohama National University, Tokiwadai, Hodogaya-ku, Yokohama, Japan, National Food Safety and Toxicology Center, Michigan State University, East Lansing, MI, USA, Kovai Medical Center and Hospitals, Avinashi Road, Coimbatore, Tamil Nadu, India, K. G. Hospital and Post Graduate Medical Institute, Arts College Road, Coimbatore, Tamil Nadu, India. Levels of PCDDs, PCDFs and non- and mono-*ortho*-substituted dioxin-like PCBs were determined in tissues of humans, and wildlife samples collected from various locations in India. PCDDs/DFs were found in most of the samples analyzed with the liver of spotted owl containing the highest concentration of 3300 pg/g, fat wt. 2378-substituted PCDDs and PCDFs were found in human fat tissues at concentrations ranging from 170 to 1300 pg/g, fat wt. Among fishes, meat and wildlife samples analyzed, concentrations of PCDDs/DFs were found in the following order: country chicken > goat/lamb fat > fishes > river dolphins > predatory birds. Hepta-CDDs and OCDD were the major PCDD homologs found in humans, fishes, meat products and dolphins. 2378-Tetrachlorodibenzo-*p*-dioxin (TCDD) equivalents (TEQs) of PCDDs/DFs were greater than those of PCBs in selected fish, dolphin and human samples. To our knowledge, this is the first report of PCDDs and PCDFs in human tissues, fishes, meat and wildlife collected from India.