International Journal of Environmental and Ecological Engineering Vol:8, No:5, 2014

Residue and Ecological Risk Assessment of Polybrominated Diphenyl Ethers (PBDEs) in Sediment from CauBay River, Vietnam

Authors: Toan Vu Duc, Son Ha Viet

Abstract: This research presents the first comprehensive survey of congener profiles (7 indicator congeners) of polybrominated diphenyl ethers (PBDEs) in sediment samples covering ten sites in CauBay River, Vietnam. Chemical analyses were carried out in gas chromatography-mass spectrometry (GC-MS) for tri- to hepta- brominated congeners. Results pointed out a non-homogenous contamination of the sediment with ∑7 PBDE values ranging from 8.93 to 25.64ng g-1, reflecting moderate to low contamination closely in conformity to other Asian aquatic environments. The general order of decreasing congener contribution to the total load was: BDE 47 > 99 > 100 > 154, similar to the distribution pattern worldwide. PBDEs had rare risks in the sediment of studied area. However, due to the propensity of PBDEs to accumulate in various compartments of wildlife and human food webs, evaluation of biological tissues should be undertaken as a high priority.

Keywords: residue, risk assessment, PBDEs, sediment

Conference Title: ICEBESE 2014: International Conference on Environmental, Biological, Ecological Sciences and

Engineering

Open Science Index, Environmental and Ecological Engineering Vol:8, No:5, 2014 waset.org/abstracts/1021

Conference Location: London, United Kingdom

Conference Dates: May 26-27, 2014