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Distribution of Organochlorine pesticides in surface water from Hyderabad city, India

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ABSTRACT

Organochlorine Pesticides (OCPs) have stable chemical properties and less biodegradability. OCPs are regarded as persistent organic pollutants; they have high risk to the environment and human health. OCPs have been prohibited in India since 1996, although they are still found in water now days. Water resource is very important in natural environment and essential for agriculture. The samples are extracted by solid phase extraction (SPE) procedure, and are investigated by gas chromatography coupled with quadruple mass spectrometer (GC-q MS). The existence of OCPs in surface water from the study area has been detected with different levels of concentration. The results showed that the contents of ΣHCHs, ΣDDTs and cyclodienes are 2.26 –12.79, 0.72–4.25 and 1.33–6.45 μg L^{-1}, respectively. According to the indicators of the ratio values of (DDD+DDE)/DDT and α-HCH/γ-HCH, the source of pollution and its potential risk are also discussed. In addition, spatial distribution of organochlorine pesticides in this area is also discussed in this article.

Keywords: Distribution; Organochlorine pesticides; Statistical indicators; Solid phase extraction.
