Abstract

Assessing DDTs and PCBs Risk in Snails

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It has been reported historically that hundreds of tons of DDT and PCB were imported and used in Cambodia and can currently be found in the local markets though they were banned by law long ago. Some research reports have shown their presence in sediment, fish and other aquatic animals in Cambodian water ways. As a result, DDTs and PCBs were suspected to be in filter-feeders such as snails which are part of the food chain for these animals. They are also popular snack foods for Khmer people and so may have presented a health risk. Snail samples from three locations: Mekong River basin, Tonle Sap Great Lake, and Cheung Ek Lake, were collected during the period from February to May 2010. DDTs and PCBs were extracted from the samples by hexane:pentane (1:1) mixture and separated from interfering molecules by a gravity-flow cleanup column packed with glass wool, neutral, basic, acidic silica gel sequentially, then eluted with hexane:methylene chloride (1:1) mixture. Finally, the solutions of prepared samples were analyzed with High Performance Liquid Chromatography (HPLC). Each sample was extracted and cleaned up 3 times and also injected in triplicate. The amount of DDTs and PCBs were under the minimum detection limit (???) of the method used. Therefore, it can be said that the level of the DDTs and PCBs in snails of the studied sites has not reached a harmful level.