Title	Determination of Multi-residue Insecticides of Organochlorine, Organophosphorus, and Pyrethroids in Wheat
Author	Riazuddin, Muhammad Farhanullah Khan, Sajid Iqbal and Muhammad Abbas
Citation	Bulletin of Environmental Contamination and Toxicology, 87, Number 3, 303-306, 2011
Keywords	Insecticides; Domestic wheat; GC-ECD

Abstract

The undesirable effects of green revolution include residues of extensively used pesticides in various food commodities. Several studies showed that pesticides could cause health problems. Keeping in view the problem of pesticide residues in various food commodities, the present study was conducted on domestic stored wheat as well as on imported wheat for the qualitative and quantitative analysis of organochlorine, organophosphorus and pyrethroids. Among the imported wheat, 22.5% samples were found contaminated by organophosphorus (chlorpyrifos 0.073–0.230 μg/g, malathion 0.0419–0.1003 μg/g) and pyrethroids (cypermethrin 0.1404–0.2005 μg/g, permethrin 0.0140–0.0480 μg/g) while in domestic wheat 6.7% samples were found contaminated by pyrethroids (deltamethrin 0.0650–1.2903 μg/g) only. Method used for extraction and analysis of insecticides was validated both by recovery studies and inter laboratory comparison proficiency test. The method recovery results show that the average recovery of the fortified wheat samples was in the range of 73.77%–100.17% with the RSD in the range of 2.21–9.27 whereas, the Z-scores of the inter laboratory comparison proficiency test's result was less than 2.

http://www.springerlink.com/content/66613r35g21q0751/fulltext.pdf