

Characterization Of Residential Exposure To Chlorpyrifos And Diazinon

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Exposures to chlorpyrifos and diazinon in residential microenvironment in AZ were estimated using the indirect method of exposure calculation by combining measured concentrations in multiple media with time subjects spent indoors, dietary and non-dietary items they consumed, and areas they touched using the database generated by the NHEXAS-AZ study. Four-stage probability sampling design for sample selection, robust method for treatment of censored data, sampling weight for unbiased estimates of population parameters, and deterministic models for inhalation, dietary and non-dietary ingestion, and dermal exposures were used in this study. The distribution of in-residence exposure to chlorpyrifos and diazinon appears to be log-normal or nearly log-normal. Exposures to chlorpyrifos and diazinon vary by pesticide and route as well as by various demographic characteristics of the subjects. Comparisons of exposure to pesticides were investigated among subgroups of demographic categories, including gender, age, minority status, education, family income, household dwelling type, year the dwelling was built, pesticide use, and carpeted areas within dwellings. From the hypothesis test, a clear pattern could not be established using exposure differences between several subpopulation groups. Depending on the route, several other determinants of exposure to pesticides were identified, including gender, family income, type of house structure, minority status, pesticide use during the sampling week, year dwelling was built, and others.