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Bioconcentration of tebuconazole fungicide in zebrafish (*Danio rerio*)

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Zebrafish (*Danio rerio*) is ornamental specie that was widely used in studies of pollutants effects and recommended by regulatory agencies in the world as a test organism. This research work investigated the bioconcentration of tebuconazole [(±)-α-[2-(4-chlorophenyl)ethyl]-α-(1,1-dimethylethyl)-1H-1,2,4-triazole-1-ethanol] fungicide in zebrafish under laboratory conditions and a first-order kinetic pesticide dissipation in the water. The concentrations of tebuconazole fitted to an equivalent non-linear kinetic type model which allowed to calculate the following parameters: bioconcentration factor (38.801 kg⁻¹), time to reach maximum fish concentration (6 days), maximum concentration in fish (0.0075 μg mg⁻¹), half life in fish (24 days) and time needed for fish eliminates 95% of the maximum concentration (105 days). These calculations allowed establishing theoretical reference limit values for human consumption of fishes and establishing safe limits for the water pesticide concentration. The data would be also useful in safe strategies associated with fishery activities that are conducting in aquatic regions close to crops using tebuconazole. The information will contribute to enlarge the tebuconazole toxicokinetics database of aquatic organisms.

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