

# Degradation kinetics of chlorpyrifos and diazinon in volcanic and non-volcanic soils: influence of cyclodextrins

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© 2018, Springer-Verlag GmbH Germany, part of Springer Nature. The intensive use of insecticides such as chlorpyrifos (CPF) and diazinon (DZN) in the agricultural activities worldwide has produced contamination of soils and/or transport to non-target areas including their distribution to surface and groundwaters. Cyclodextrins (CDs) have been proposed as an alternative in remediation technologies based on the separation of contaminants from soils because they could allow a higher bioavailability for their degradation with a low environmental impact. In this work, the degradation pattern of CPF and DZN and the formation and dissipation of the major degradation products 3,5,6-trichloro-2-pyridinol (TCP) and 2-isopropyl-6-methyl-4-pyrimidinol (IMPH) was established in four agricultural volcanic and non-volcanic soils belonging to Andisol, Ultisol, and Mollisol orders. Both pesticides were highly adsorbed in these soils, consequently, with a greater probability of contaminating them. In co