THE HEXACHLOROCYCLOHEXANE PESTICIDE IN RADICAL SELF-PURIFICATION OF THE AQUATIC ENVIRONMENT

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Abstract. The pesticide hexachlorocyclohexane (HCH) is the representative of the class of organochlorine pesticides, which have toxic properties, are resistant to decomposition and have a storage capacity. The influence of HCH on the processes of radical self-purification of water bodies was studied on model systems that allow to explain the mechanisms and processes of chemical transformation of substances occurring in natural waters, as well as to reveal the kinetic characteristics of the processes of radical self-purification of water bodies. HCH plays a dual role for aquatic ecosystems. From a biological point of view, it is a difficult degrading substance that can accumulate in living organisms and sediments. And from chemical view in the surface layer of water under the influence of light, HCH vigorously generates radicals, which is a favourable factor for the implementation of self-purification processes involving free radicals.

Keywords: natural water, radical self-purification, pesticide hexachlorocyclohexane (HCH), chemical transformation, kinetic characteristics.