Abstract

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Pharmaceuticals are biologically active substances used for treatment or prevention of human and animal diseases. Some of these substances remain active even after being excreted from an organism and they can enter the environment. The residues of pharmaceuticals are present not only in rivers, but also in sea, groundwater and in soil, into which the contaminated water and manure are applied. The concentration of pharmaceuticals in water and in soil differ from place to place (it is higher e. g. in close proximity of sewage treatment plants) and from season to season (it depends on levels of precipitations and sunshine). Nowadays, thanks to sensitive analytical methods it is not a problem to detect these xenobiotics even in very small amounts, in which they usually occur in nature (usually in order of units or tens of ng/l or ng/g). However, even these low concentrations might have a negative impact on the life of non-target organisms (e. g. reproduction disorders) and therefore, the calculations, which measure the lever of risk of particular substance, were created and their results are nowadays obligatorily included in the procedure of registration of new pharmaceuticals.

Key words: pharmaceuticals, environment, non target organism