

method developed for the extraction of Azithromycin from environmental samples (Ramot)


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Hospital wastewaters (HWW) provide a significant point-source of pharmaceuticals into the environment, especially for substances that occur at much higher concentrations in HWW than in urban wastewater. Cytotoxic or cytostatic anti-cancer drugs, derived from oncology wards, are known to be carcinogenic, mutagenic and fetotoxic. Anti-cancer pharmaceuticals are usually found in HWW. Due to their genetically violent character, they must be considered as potentially harmful environmental contaminants to be eliminated at their point-source to avoid contamination of the aquatic water cycles. Most hospitals do not treat their wastewaters prior to discharging them to the municipal wastewater treatment plants (WWTP).

The technology may provide a tool-box that allows to choose the optimal combination of technologies and respective process parameters to ideally treat a site-specific HWW with its specific contaminants and bulk organic constituents. The additional advantage of the suggested technology is the potentially diversified use of the treated wastewater since pathogens are removed by submerged membranes. Instead of limited release of the wastewater to the municipal sewage system, we propose ways to reuse treated HWW within the hospital for landscape irrigation and in lavatories. The solutions can be transferred to and applied in other hospitals.

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