عنوان مقاله:

Detection of Five Antibiotics by Passive Sampling in Isfahan Water Treatment Plant

محل انتشار:

اولین کنفرانس بین المللی نمونه برداری و پالایش آلاینده های محیط زیست (سال: 1395)

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خلاصه مقاله:

Introduction. This study aimed to survey five human and veterinary antibiotics based on SPE-LC-MS-MS technology in a water treatment plant in Isfahan. passive and grab sampling methods were used in the detection of selected antibiotics. Materials and Methods. grab and passive samples were taken from the influent and effluent of a water treatment plant. The samples were extracted by using solid-phase extraction (SPE),and extracts were analyzed by liquid chromatography tandem mass spectrometry (LC-MS-MS). Results. The results showed that enrofloxacin, oxytetracycline, and tylosin were not detected in none of the samples. However, ampicillin was detected in the grab and passive samples taken from the influent (source water) of the plant, and ciprofloxacin was detected in passive samples taken from the influent and effluent (finished water) of the plant. Conclusion. The results imply that passive sampling is a better approach than grab sampling for the investigation of antibiotics in aquatic environments

کلمات کلیدی:

passive and grab sampling, antibiotic, water treatment plant