Removal of Pharmaceuticals from Water by Thin Film of Nano- Composite

Ghrair, Ban (School: Pioneer Educational Schools)

Worldwide, Pharmaceutical compounds, which pass through the human body, animals and pharmaceutical factories into sewage, are unaffected by wastewater treatment plants. Finally, Accumulated in the environment (dames, leaks, soil, and ground water, tap water). However, they can significantly impact aquatic life as well as producing generation of resistant bacteria for the available antibiotic drugs. The previous studies showed that the Carbamazepine is one of the most pharmaceutical residues present in the water resources worldwide. This study aimed to Removal of pharmaceutical residues from water resources, and produce and characterize a thin film of nanomaterials composite as well as protect our Environment. In the present study a thin film of nanomaterials composite was prepared. This study indicates that Carbamazepine can be removed from water by efficiency up to 100% using a thin film in a cost-efficient system. Subsequently, the thin film and pharmaceutical residues can be removed from the system using a magnetic field. Finally, the treated water can pass away safely to the environment. In conclusion, thin film of nanomaterials composite may be a competitive alternative to traditional treatment.

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