

عنوان مقاله:

Performance of Extended Aeration Biological System in Removal of Organic Matter from Razi Hospital Wastewater during 2015, Iran

محل انتشار:

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خلاصه مقاله:

Background & Aims of the Study: The most important compounds in hospital wastewater are antibiotics, disinfectants, anesthetics, radioactive elements, static cytotoxic agents, other chemicals and hazardous materials that caused to be different domestic sewage. The purpose of this study was the evaluation of performance of extended aeration biological system in pollutants removal from Razi Hospital wastewater treatment plant (WTP), Ahvaz city of Iran. **Materials and Methods:** The hospital wastewater disposal and treatment in Razi hospital have been studied in this cross-sectional research. Total of 12 samples from effluents of wastewater treatment plants were collected and tested for pH, Biological Oxygen Demand (BOD₅), Chemical Oxygen Demand (COD), Total Suspended Solid (TSS) and Total Coliform (TC). EPA standard method was used for conducted trials. Finally, the relationship between results at different months and stations was done, using SPSS18 and descriptive statistics. **Results:** Results shown that parameters average in effluent was pH=7.46, BOD= 48.58 mg/l, COD=99.25 mg/l, TSS=54 mg/l, NH₃=5.65mg/l, Turbidity=29.57 NTU. Also total coliform and fecal coliform of effluent were 46.19 MPN/100 ml and 36.65 MPN/100 ml, respectively. According to results, the percentage of BOD, COD, TSS and TC removal in WTP were 85.21, 82.46, 86 and 90.15. **Conclusion:** Based on these findings, Razi hospital effluent wastewater treatment plant was met at Iran environmental standards for discharge to recipient waters. Based on the result of our study, Extended Aeration Biological System is a comparatively suitable process for BOD, COD, TSS and TC removal from hospital wastewater.

کلمات کلیدی:

Wastewater treatment Hospital wastewater Extended aeration Organic matter Pollutants Ahvaz Iran

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