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Efficiency of Modified Granular Activated Carbon Coupled with Membrane Bioreactor for Trace Organic Contaminants Removal

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Abstract : The aim of the study is to improve removal of trace organic contaminants dissolved in activated sludge by the process of filtration with membrane bioreactor combined with modified activated carbon, for a maximum removal of organic compounds characterized by low molecular weight. Special treatment was conducted in laboratory on activated carbon. Tow reaction parameters: The pH of aqueous middle and the type of granular activated carbon were very important to improve the removal and to motivate the electrostatic Interactions of organic compounds with modified activated carbon in addition to physical adsorption, ligand exchange or complexation on the surface activated carbon. The results indicate that modified activated carbon has a strong impact in removal 21 of organic contaminants and in percentage of 100% of the process.

Keywords : activated carbon, organic micropolluants, membrane bioreactor, carbon
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