



Review

**Membrane Fabrication, Characteristics and Filtration Process
for the Removal of Aqueous-Electrolytes/Heavy Metal
Ions from Wastewater: A Short Review**

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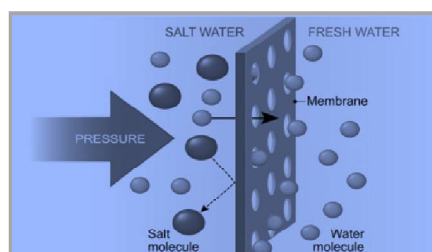
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ABSTRACT

Membrane filtration (MF) is a pressure-driven separation process that employs a membrane for both mechanical and chemical sieving of particles, as well as also uses to remove particles from waste water. This process is very similar to conventional sand or media filters where the suspended solids are removed, but generally dissolved solids are not removed, but membrane is a material that separates substances, when a driving force is applied across the membrane. Membrane processes are increasingly used for removal of bacteria, microorganisms, particulates, and natural organic material, which can impart colour, tastes, and odours to water and react with disinfectants to form disinfection by-products. The basic technology behind MF is using a semi-permeable membrane to separate a liquid into two distinct streams. Filtration membranes are essentially micro porous barriers of polymeric, ceramic or metallic materials which are used to separate dissolved materials (solutes), colloids, or fine particulate from solutions. To remove aqueous-electrolytes/heavy metal ions from wastewater many conventional techniques such as membrane filtration, reverse osmosis, ion exchange, chemical precipitation, electro dialysis, electrochemical treatment, and adsorption technique have been employed. The membrane filtration for wastewater is a promising new avenue. With increasing pollution of water bodies as well as increasing complexities related to removal of heavy waste from water, membrane filtration can be a cost-effective, compact, and time-efficient solution.

Graphical Abstract



Indicated the Separation of electrolyte solution
through reverse osmosis membrane

Keywords: Membrane filtration, Conventional, Microporous barriers, Aqueous-electrolytes/ heavy metal ions, Sand filters,.