

# Experimental investigation of ethanol separation by reverse osmosis: The reverse osmosis regeneration step of the Manipulated Osmosis Desalination process



The purpose of the research was to investigate the recovery efficiency of an ethanol draw solution in the reverse osmosis regeneration step of the Manipulated Osmosis Desalination (MOD) process. The research found that the ethanol rejection of the tested membranes is not enough to ensure the completely recover of the draw solution. These results are helpful to investigate the key factors of the low ethanol rejection such as the chemical affinity for the membrane polymer and the high tendency to form hydrogen bonding, in order to develop grafted or cross-linked membranes which might arrive at higher ethanol rejection values. In addition, hybrid water-ethanol separation processes involving a Reverse Osmosis unit and another unit type could be studied in order to reach a complete recover of the draw solution in the MOD process to conform the product water to the World Health Organization (WHO) standards.

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**Experimental investigation of ethanol separation by reverse osmosis: The reverse osmosis regeneration step of the Manipulated Osmosis Desalination process** **Experimental investigation of ethanol separation by reverse osmosis** Experimental investigation of ethanol separation by reverse osmosis (Gatto, regeneration step of the Manipulated Osmosis Desalination (MOD) process. **Ergebnisse zu: Separation** Previous experimental work and a commercial plant using FO for desalination are also given. Reverse osmosis (RO) is a membrane separation process, shown in Fig. Investigating suitable draw agent with a reliable regenerating method The purpose of adding SO<sub>2</sub> or alcohol was to lower the water **Search results for Reverse Osmosis - MoreBooks!** 4 ????? ?????? (?????) 2014 Experimental investigation of ethanol separation by reverse regeneration step of the Manipulated Osmosis Desalination (MOD) process In addition, hybrid water-ethanol separation processes involving a Reverse Osmosis **Experimental investigation of ethanol separation by reverse osmosis** Experimental investigation of ethanol separation by reverse osmosis osmosis regeneration step of the Manipulated Osmosis Desalination (MOD) process. **Search results for reverse osmosis - MoreBooks!** Experimental investigation of ethanol separation by reverse osmosis von osmosis regeneration step of the Manipulated Osmosis Desalination (MOD)

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