

Groundwater treatment by reverse osmosis: Effect of brine recycling on fouling

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ABSTRACT

The aim of this study is focused on the efficiency of groundwater treatment by reverse osmosis (RO). The treated water, which is used for beverage industry, must be according with the standard qualities. In this fact, two reverse osmosis modes were studied. The first one without brine recycling, and the second one with partial brine recycling (50%). The treatment is followed by the measurement of the water permeate flow and the treated water conductivity. The results showed that the second mode carry to membrane fouling. However, in spite of this disadvantage, the second mode compared to the first one, allow to decrease the water consumption by approximately 25% in a year.

Keywords: Reverse osmosis; Fouling; Agroalimentary industry; Groundwater; Recycling of brine

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