Distilled and drinkable water quality produced by solar membrane distillation technology

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ABSTRACT

Scarcity of water for human consumption in many places such as arid and semi-arid regions is well known. This situation has become even more complicated in those areas where there are virtually no energy sources or the electrical grid is too weak or has not been provided. In these cases, the solar membrane distillation (MD) technology is an emerging and promising solution to small distributed desalination systems. Regardless of the technology used for desalination, the water produced by the desalination plant has to fulfil the local requirements on water quality for human consumption. In this work, the main physico-chemical and microbiological characteristics of water produced by two types of solar MD technologies are presented. The necessity to fulfil the European requirements on disinfection and remineralization post-treatment is also considered.

Keywords: Water quality; Membrane distillation

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