A novel anionic electrodialysis membrane can be used to remove nitrate and nitrite from wastewater

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ABSTRACT

A recently developed anionic membrane has been found to be highly efficient for electrodialysis, a process commonly used to remove ions from aqueous solution. Nitrate ions are often present in too high a concentration in wastewater, therefore we investigated this electrodialysis system for their removal from aqueous solution. The good selectivity of the membrane for nitrate anions is shown by acid–base and spectrophotometric measurements, and also by comparison with the removal of acetate anions. This membrane itself is easy to prepare, shows good characteristics and could find applications in large electrodialysis units.

Keywords: Anionic exchange membrane; Electrodialysis; Nitrate; Nitrite; Acetate; COD

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