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TITLE: ELECTROCHEMICAL PROCESS FOR PURIFYING HYDROXIDE COMPOUNDS

ABSTRACT

In one embodiment, the invention relates to a process for purifying solutions containing a hydroxide compound, including the steps of: (A) providing an electrochemical cell containing an anode, a cathode, a cation selective membrane and an anion selective membrane, wherein the cation selective membrane is positioned between the cathode and the anion selective membrane, and the anion selective membrane is positioned between the cation selective membrane and the anode, thereby defining a feed compartment between the cation selective membrane and the anion selective membrane, a recovery compartment between the cathode and the cation selective membrane, and a water compartment between the anion selective membrane and the anode; (B) charging a solution of an ionic compound at a first concentration to the water compartment, and water to the recovery compartment; (C) charging a solution of the hydroxide compound at a second concentration to the feed compartment; (D) passing a current through the cell to produce the hydroxide compound at a third concentration in the recovery compartment; and (E) recovering hydroxide compound from the recovery compartment.

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