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(54) Title: ION EXCHANGE MEMBRANE COMPOSITION AND METHODS FOR THE CONCENTRATION OF PERFLUOROALKYL SUBSTANCES

FIG. 1

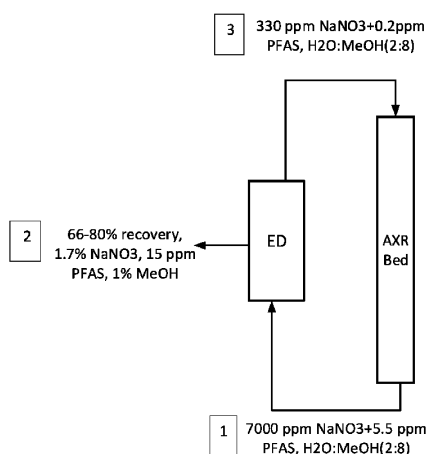


FIG. 2

(57) Abstract: Methods of treating a waste stream containing perfluoroalkyl substances (PFAS) are disclosed. The methods include directing the waste stream to a dilution compartment of an electrochemical separation device, directing a treatment stream to a concentration compartment of the electrochemical separation device, and applying a voltage across the electrodes to produce a dilute stream substantially free of the PFAS and a concentrate stream. At least one of the waste stream and the treatment stream comprises a water miscible organic solvent. Methods of concentrating PFAS from a wastewater are also disclosed. PFAS concentration systems are also disclosed. The systems include a column comprising an ion exchange resin and an electrochemical separation device having a dilution compartment fluidly connected to an outlet of the column. Methods of facilitating treatment of a waste stream containing PFAS are also disclosed.

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