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(54) Title of the invention : WATER PURIFICATION DEVICE AND METHOD

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(57) Abstract :

A water purification device (100), comprising: a water filtration unit (102) adapted to perform ultrafiltration on an untreated water received from an untreated water source by applying a pressure on the untreated water to pass through a semi permeable membrane such that the applied pressure causes water molecules, smaller molecules, and ions to filter through the semi permeable membrane to obtain a filtrate; a reabsorption unit (104) adapted to perform a selective reabsorption process to reabsorb minerals from the filtrate such that the minerals are filtered out during the ultrafiltration of the untreated water; an electrolysis unit (108) adapted to perform an electrolysis to remove anions selected from fluorides, sulfates, chlorides, nitrates, or a combination thereof from the filtered water to obtain purified water; and a storage unit (110) adapted to store the purified water.

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