

The objective of this work was to replace the conventional pretreatment of reverse osmosis by coupling ultrafiltration with adsorption onto activated coffee-like adsorbent material. Adsorption was achieved on activated carbon prepared from a waste of coffee. A protocol of preparation is described as well as a characterization of the activated coffee. Physical and chemical activation was done. The development of a porous texture was proved by scanning electron micrography. A study of adsorption kinetic shows that the new material has a high adsorption capacity. The ultrafiltration–adsorption coupling is a good pretreatment for reverse osmosis