

The invention relates to the technology of purification and protection of water resources and may be used for softening water. A process for softening water consists in its passing through a cation exchanger for the purpose of removing calcium and magnesium ions and regeneration of the filter with the use of 10 % solution of sodium chloride at that a natural sorbent, modified zeolite, is used as a cation exchanger. Zeolite is modified by treating zeolite with 9-10 % solution of sodium chloride at the temperature of 87-90 °C for 6 hours, continuous mixing and drying at the temperature of 120-500 °C. Removal of calcium and magnesium ions is carried in three stages until their content is in accordance with the specifications 0.02 mg-eq/l. The process proposed allows one to reduce water hardness from 5.4 to 0.02 mg-eq/l in accordance with the specifications.