ABSTRACT

In this study the activation of clinoptilolite zeolite by using unidirectional electric field was carried out. Activation is done to improve the ability of the zeolite to ion adsorption of dissolved salts in water. In this study, testing was carried out by comparing the results of the reduction in salinity between activated zeolites and non-activated zeolites. The water used is a sample of salt water 35,20 *ppt* which is made by mixing 400 ml mineral water with 14,80 gram salt. The treatment of activation using the unidirectional electric field method has been shown to increase the efficiency of zeolite adsorption against dissolved salt ions, with an efficiency of 5.39% in activated zeolites with powder size and 2 mm, which is given a voltage of 8 volts and 15 minutes activation time. In addition to variations in zeolite size, in this study variations in stress values and length of activation were carried out. Addition of voltage and activation time tends to reduce zeolite efficiency. Additionally, in this study it was observed that the value of salinity affect the zeolite adsorption efficiency.

Keywords: natural zeolite, *clinoptilolite,* electric field, adsorptivity, salt ion.