

PRETREATMENT OF CLINOPTILOLITE IN ION EXCHANGE PACKED BEDS

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ABSTRACT

The impact of the operational and chemical conditions of pretreatment upon the effective capacity of clinoptilolite has been investigated. Pretreatment tests have been performed in an ion exchange packed bed. The parameters examined were the volumetric flow rate, the concentration, the total volume, and the pH of the pretreatment solution. Furthermore, the effect of flow mode was investigated (upflow and downflow conditions). An optimal flow rate and a minimum concentration were determined, for downflow mode, for a pretreatment that leads to a high effective capacity of the material. Lower pH value and upflow operation resulted to higher effective capacity.