

## عنوان مقاله:

Optimization of a single step method for synthesise of zeolite A from natural clinoptilolite and industrial grade chemicals

## محل انتشار:

همایش بین المللی ژئولیت ایران (سال: 1387)

تعداد صفحات اصل مقاله: 7

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## خلاصه مقاله:

A powdered natural clinoptilolite-rich tuff was converted to synthetic zeolite A under a hydrothermal condition by addition of appropriate amounts of industrial grade sodium hydroxide and sodium aluminate. Effect of different parameters like as temperature, sodium hydroxide concentration, solid/liquid (S/L) ratio (the ratio of weight of clinoptilolite; g; to the volume of sodium hydroxide solution; ml), and contact time on the final product were investigated. The formation of zeolite A was ascertained by X-ray powder diffraction (XRD) and X-ray florescence (XRF) techniques. According to the results obtained of characterization tests as well as reaction yield evaluation, it is concluded that: temperature of 80 °C, sodium hydroxide concentration of 2N, reaction time of 4 hours, and S/L ratio of 1/18 were the optimized condition to convert the used natural clinoptilolite to zeolite A with highest phase purity and higher production yield.

## کلمات کلیدی:

Zeolite-A, Clinoptilolite, Synthesise, Single Step Method, Hydrothermal

## لینک ثابت مقاله در پایگاه سیویلیکا:

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