## عنوان مقاله:

Modelling and simulation of p-xylene separation by simulated moving bed chromatography

## محل انتشار:

دومین کنفرانس ملی زئولیت ایران (سال: 1394)

تعداد صفحات اصل مقاله: 2

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## خلاصه مقاله:

In this study, separation of para-xylene (PX) from C8 isomers by adsorption on a completely potassiumexchanged Y zeolite in a simulated moving bed (SMB) in industrial scale is modelled and simulated. In the model,adsorption isotherm is Langmuir type and in mathematical model, axial dispersion and linear driving force for masstransfer were considered. Aspen chromatography software was used for mathematical solution of differential equations.Optimization in the simulation leads to find the operating condition of the SMB such as beds switching time andrecycle flow in order to get high purity and recovery of p-xylene. The obtained results of simulation were verified withan operational plant .data. The purity and recovery of about 99.7 % and 96% were obtained that were in agreement withthe plant data

## کلمات کلیدی:

Adsorption; Para-xylene; Simulation; SMB; Zeolite