

## The Study of Performance Variance in a Simulated Moving Bed Unit with Varying the Column Properties

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A simulated moving bed (SMB) chromatography system which was developed by UOP is broadly applied in the industrial area for the separation of binary mixture. Under the industrial SMB operation, column properties can be changed by several disturbance factors such as differential pressure and the life time of adsorbant, and consequently it is easily expected that the performance of the SMB system be decreased by these varied the column properties. This study has focused on the performance variance of a conventional four-zone SMB unit (1-1-1-1) with assumed several variation of the column properties which are undergone several kinds of disturbance factor. It was considered three factors - total porosity, bed height and isotherm parameters of mixture components - for the simulation of study, and these were combined.