Separation of Maximum Azeotropes by Batch Extractive Distillation: Feasibility Studies

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Abstract
Our former method for the assessment of the feasibility of extractive distillation in a batch rectifier was extended for the investigation of the separation of maximum azeotropes. The method is based on the calculation of the still path and possible composition profiles of the column sections. The sequence of the separation steps was determined, then limiting values and the influence of the most important parameters were investigated. The calculations were performed to the mixture acetone–chloroform using benzene and toluene as solvent. The benefits of the continuous feeding of the solvent were verified by rigorous simulation, as well.

Keywords: Batch homoazeotropic distillation, extractive distillation, feasibility studies.