

# **Abstract**

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## **The Simulation of Natural Gas Liquids (NGL) Separation Using Series of Distillation Columns**

In this paper, simulation of NGL train consisting of four distillation columns has been performed by using Aspen-Hysys. The main objective of this research is studying the different factors that enhance the separation process efficiency such as changing the number of trays, reflux ratio and the feed tray location. Simulation results showed that the design of distillation column with 40 trays is the proper design for this study giving the optimum results and reduces the capital cost. The results also showed that number of trays has an important role in the separation process efficiency where the lowest heat duties and the highest composition for top products were obtained at the highest number of trays