

Investigation on Recovery of Fumaric Acid from Crude Fermentation Mixture using Acidified Precipitation

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In this study, as an effort to develop a new integrated bio-process for the production of fumaric acid, a separation and purification process was investigated to isolate fumaric acid effectively from crude fermentation mixture. The type and concentration of acid added were examined and it was found that H_2SO_4 was more effective than HCl and the optimum concentration was determined as 0.35 N. In addition, the time course experiment were carried out to optimize the time for acidification and centrifugation. Acidification for 15 min and centrifugation for 60 min gave the highest recovery yield and Fumaric acid could be recovered up to 81.0% yield under optimized conditions.