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Title (English)

Evaluation of the 96-well format for screening of chromatographic buffer conditions

Title (Swedish)

Abstract

An important part in the development of monoclonal antibody (mAb) purification processes is the optimization of the capture step with Protein A. In this step the mAb is captured and host cell proteins (HCP) are removed in a washing procedure, giving a mAb purity of 98% in one single step. In this study different intermediate wash buffers for the Protein A based chromatography media MabSelect SuRe were tested. This was performed by screening of different wash buffers using the 96-well format. The results were then verified with chromatography. Different buffer additives such as detergents, solvents, amino acids, etc. in combination with 0.5M NaCl at pH 7.0 gave a significant decrease in HCP levels in the eluates without decreasing the recovery. The correlation between the 96-well format and the chromatography was good. Thus, the 96-well format can be used as a time saving and consistent method for screening of different buffer conditions.

Keywords

Monoclonal antibodies, Protein A, Host cell proteins, 96-well format

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