

Engineering Conferences International ECI Digital Archives

Integrated Continuous Biomanufacturing II

Proceedings

Fall 11-2-2015

Continuous downstream processing of a monoclonal antibody using Periodic Counter Current Chromatography (PCC) and Straight Through Processing (STP)

Hans Blom

GE Healthcare, hans.blom@ge.com

Christer Eriksson

GE Healthcare

Annika Forss

GE Healthcare

Helena Skoglar

GE Healthcare

Follow this and additional works at: http://dc.engconfintl.org/biomanufact_ii

 Part of the [Biomedical Engineering and Bioengineering Commons](#)

Recommended Citation

Hans Blom, Christer Eriksson, Annika Forss, and Helena Skoglar, "Continuous downstream processing of a monoclonal antibody using Periodic Counter Current Chromatography (PCC) and Straight Through Processing (STP)" in "Integrated Continuous Biomanufacturing II", Chetan Goudar, Amgen Inc. Suzanne Farid, University College London Christopher Hwang, Genzyme-Sanofi Karol Lacki, Novo Nordisk Eds, ECI Symposium Series, (2015). http://dc.engconfintl.org/biomanufact_ii/126

This Conference Proceeding is brought to you for free and open access by the Proceedings at ECI Digital Archives. It has been accepted for inclusion in Integrated Continuous Biomanufacturing II by an authorized administrator of ECI Digital Archives. For more information, please contact franco@bepress.com.

Continuous Downstream Processing of a Monoclonal Antibody using Periodic Counter Current Chromatography (PCC) and Straight Through Processing (STP)

Hans Blom, GE Healthcare

Hans.blom@ge.com

Christer Eriksson, GE Healthcare

Annika Forss, GE Healthcare

Helena Skoglar, GE Healthcare

Key Words: Monoclonal antibody, Periodic counter current chromatography, Straight through processing

There is an increased interest to perform process intensification in order to reduce costs and improve throughput in the development and production of monoclonal antibodies (MAbs). One solution to these demands can be to implement continuous or semi-continuous downstream processing. New emerging technologies such as periodic counter-current (PCC) chromatography and straight through processing (STP) are entering the market. Here, these two technologies were evaluated in a continuous three step chromatography MAb process. The capture step was performed with protein A media (resin) on a 3 column PCC chromatography system followed by two polishing steps which were connected in series with an in line conditioning step in between. The three step process was performed using MAb from fed-batch cell culture. Results will also be presented based on the purification of MAb from a perfusion cell culture using PCC setup for the capture step.