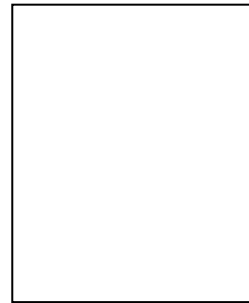


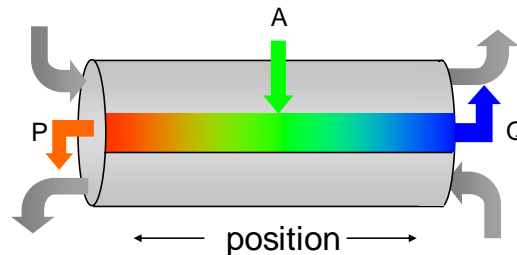
## Liquid-liquid chromatographic systems for enzymatic reactions

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### Description

A large number of enzymatic conversions suffer from their poor equilibrium position. This leads to non-efficient processes in which the substrate is activated, used in an excessive amount, or recycled. All these options have their own specific drawbacks. In chromatographic reaction, simultaneous conversion and separation of the reaction products occur. Separation of the reaction products theoretically leads to improved degree of conversion of equilibrium limited reactions. In this thesis, two types of chromatographic reaction: batch chromatographic reaction and continuous chromatographic reaction using liquid-liquid two-phase systems were explored.



### Dissertation

Jeroen L. den Hollander, Liquid-liquid chromatographic systems for enzymatic reactions, PhD thesis, Delft University of Technology, 2001. <http://resolver.tudelft.nl/uuid:00d44596-0723-4e8c-9132-3cdc1f332f86>

### Publications from the dissertation

1. J.L. den Hollander, Y.W. Wong, K.Ch.A.M. Luyben, L.A.M. van der Wielen, Non-separating effects in a centrifugal partition chromatographic reactor for the enzymatic production of L-amino acids, [Chem. Eng. Sci. 54 \(1999\) 3207-3215](#).
2. J.L. den Hollander, M. Zomerdijk, A.J.J. Straathof and L.A.M. van der Wielen, Continuous penicillin G hydrolysis in countercurrent water - butyl acetate biphasic systems, [Chem. Eng. Sci., 57 \(2002\) 1591-1598](#).
3. J.L. den Hollander, A.J.J. Straathof, and L.A.M. van der Wielen, Performance of fractionating reactors in the absence of rate limitations, [J. Chem. Technol. Biot. 79 \(2004\) 1025-1035](#).
4. J.L. den Hollander, A. Aversente, M.B. Diender, A.J.J. Straathof and L.A.M. van der Wielen, Discrete countercurrent contacting: An experimental method for developing continuous countercurrent reactors, [Ind. Eng. Chem. Res. 44 \(2005\) 231-235](#).