

Fully automatized high-throughput enzyme library screening using a robotic platform.

Dörr M, Fibinger MP, Last D, Schmidt S, Santos-Aberturas J, Böttcher D, Hummel A, Vickers C, Voss M, Bornscheuer UT (2016) Fully automatized high-throughput enzyme library screening using a robotic platform. *Biotechnol Bioeng* 113(7), 1421-1432.

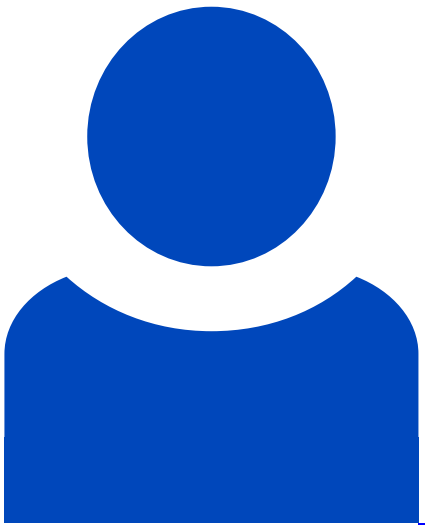
[Details](#)



Abstract

A fully automatized robotic platform has been established to facilitate high-throughput screening for protein engineering purposes. This platform enables proper monitoring and control of growth conditions in the microtiter plate format to ensure precise enzyme production for the interrogation of enzyme mutant libraries, protein stability tests and multiple assay screenings. The performance of this system has been exemplified for four enzyme classes important for biocatalysis such as Baeyer-Villiger monooxygenase, transaminase, dehalogenase and acylase in the high-throughput screening of various mutant libraries. This allowed the identification of novel enzyme variants in a sophisticated and highly reliable manner. Furthermore, the detailed optimization protocols should enable other researchers to adapt and improve their methods. *Biotechnol. Bioeng.* 2016;113: 1421-1432. © 2016 Wiley Periodicals, Inc.

Leibniz-HKI-Autor*innen



Daniel Last

[Details](#)

Identifier

doi: 10.1002/bit.25925

PMID: 26724475