

# Efficient evaluation of cellulose digestibility by *Trichoderma reesei* Rut-C30 cultures in online monitored shake flasks.

Antonov E, Wirth S, Gerlach T, Schlembach I, Rosenbaum MA, Regestein L, Büchs J (2016) Efficient evaluation of cellulose digestibility by *Trichoderma reesei* Rut-C30 cultures in online monitored shake flasks. *Microb Cell Fact* 15(1), 164.

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## Abstract

Pretreated lignocellulosic biomass is considered as a suitable feedstock for the sustainable production of chemicals. However, the recalcitrant nature of cellulose often results in very cost-intensive overall production processes. A promising concept to reduce the costs is consolidated bioprocessing, which integrates in a single step cellulase production, cellulose hydrolysis, and fermentative conversion of produced sugars into a valuable product. This approach, however, requires assessing the digestibility of the applied celluloses and, thus, the released sugar amount during the fermentation. Since the released sugars are completely taken up by *Trichoderma reesei* Rut-C30 and the sugar consumption is stoichiometrically coupled to oxygen uptake, the respiration activity was measured to evaluate the digestibility of cellulose.

## Involved units

[Bio Pilot Plant](#) [Miriam Agler-Rosenbaum](#) [Read more](#)

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**Identifier**

**PMID:** 27686382