

Master's or Bachelor's thesis / Internship

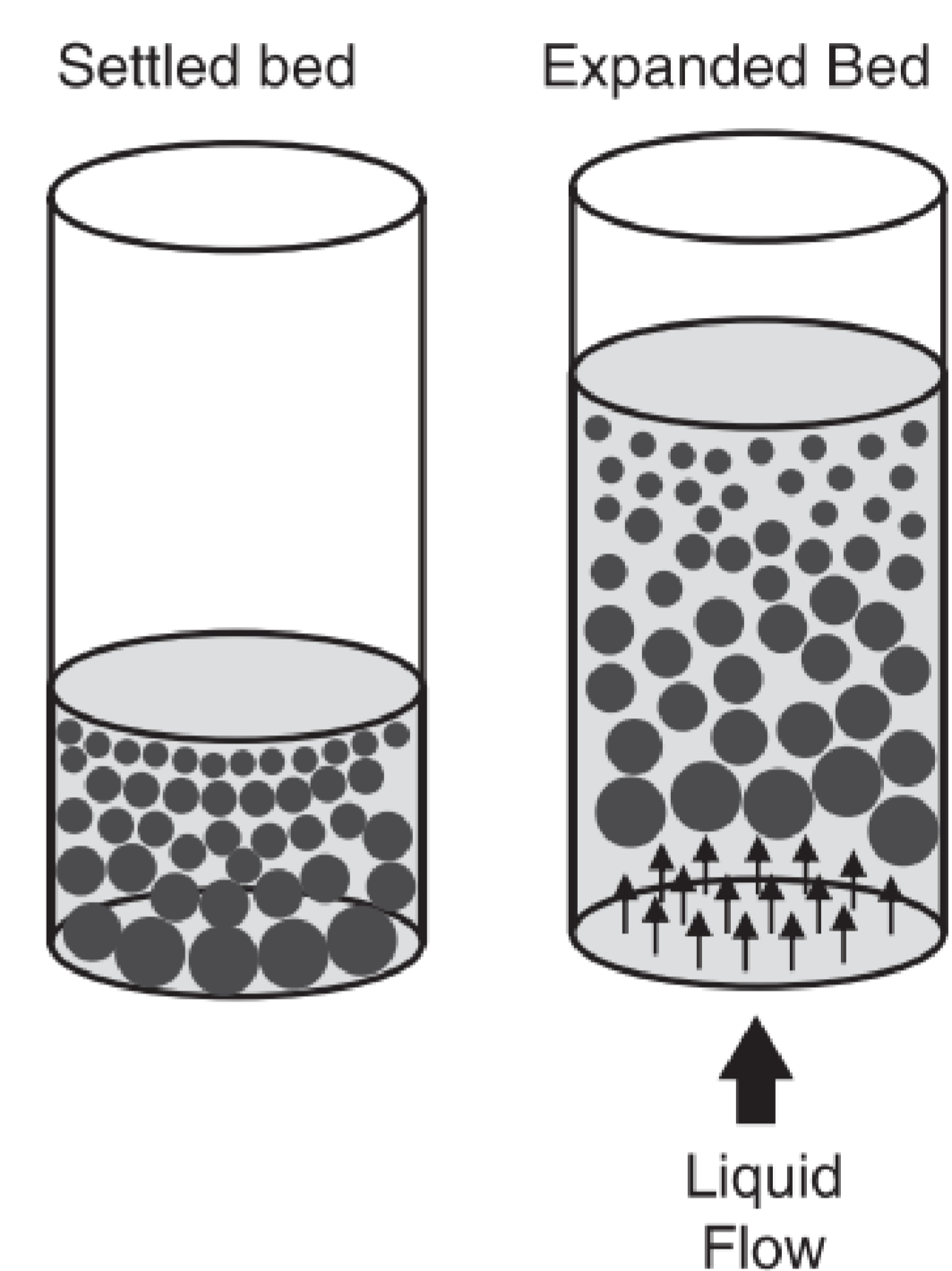
Yeast separation through Expanded Bed Chromatography

Keywords: Yeast – Expanded Bed Chromatography – Separation – Ligand

Project Description

In current practice, only heterogeneous yeast cultures in terms of cell age are used for fermentation processes. However, the age of the yeast cells significantly influences fermentation performance, the duration of fermentation, and the formation of aroma compounds. In order to better understand the influence and investigate the effects on the product, a non-invasive separation technology for the preparative age-specific separation of brewer's yeast is being developed.

Thereby, a bi-functional ligand is used to separate mother and daughter cells. On the one hand, the ligand binds specifically to mother cells; on the other hand, to chromatography materials. Through Expanded Bed Chromatography (EBC) mother and daughter cells are finally separated from each other.



Koppejan et al. (2018), DOI: 10.1002/jctb.5595.

Profile

- Independent and structured way of working
 - Experience with laboratory work
 - Student in the field of biology, biotechnology, biochemical engineering, chemistry or similar
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- Start: From now
 - Language: German/English

Tasks

- Functionalization of particles - Optimization
- Stability tests of functionalized particles
- Cultivation of yeast cells
- Evaluation of stress resistance of yeast cells
- Implementation of EBC

Contact

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