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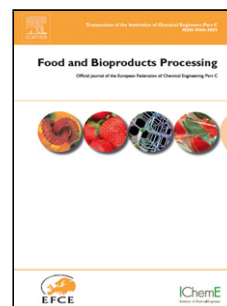
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Valorization of the powdered bread waste hydrolysate as growth medium for baker yeast

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Highlights

- Large amount of waste bread residues of bakeries can be used to generate microbial biomass without costly pretreatment.
- Bread waste hydrolysates contain valuable components for microbial growth.
- At the end of fermentation, the microbial growth reached 2.4×10^8 CFU/ml and sugar and protein depletion exceeded 80%.

Abstract

In this work, the feasibility of baker yeast production using white bread waste is investigated. Grinded and sieved white baguette waste was hydrated and hydrolyzed differently using enzymes preparations to obtain two growth mediums. Medium (I) contained a mixture of alpha amylase and amyloglucosidase; and Medium (II) contained a mixture of alpha amylase, amyloglucosidase and protease enzymes. The clarified media were diluted and supplemented with NH_4SO_4 (3.5 g/l), and KH_2PO_4 (2 g/l). A commercial baker yeast strain was reactivated

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