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**TRANSFORMATION OF FLOCCULENT
SACCHAROMYCES CEREVISIAE CELLS FOR
PRODUCTION OF AN EXTRACELLULAR
ASPERGILLUS NIGER β -GALACTOSIDASE**

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In Portugal, one million liters of cheese whey are daily produced. The pollution caused by this by-product of the dairy industry is enormous due to its high BOD level (60000mg/L). The major components of cheese whey are lactose and proteins. The proteins have high nutritional value and can be used in food industry but a profitable use for lactose has to be found. From the possible alternatives for lactose valorization, the alcoholic fermentation is undoubtedly an attractive one. The success of this process depends on the development of a continuous fermentation system using flocculent yeast strains.

This work describes the transformation of a flocculent and a non-flocculent *S. cerevisiae* strains with a plasmid harboring a lacA gene of *Aspergillus niger* which codes for β -galactosidase. The results are discussed in terms of active β -galactosidase produced and secreted.

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