

ENZYMATIC PROCESS FOR THE FRACTIONATION OF BAKER'S YEAST CELL WALL (SACCHAROMYCES CEREVISIAE)

CHEMA BORCHIANI¹, FABIENNE FONTEYN², GUILHEM JAMIN², MICHEL PAQUOT³, CHRISTOPHE BLECKER¹, PHILIPPE THONART²

1: Université de Liège, Gembloux Agro-Bio Tech, Unité de Science des Aliments et Formulation, Passage des Déportés 2, B-5030 Gembloux, Belgium

2: Université de Liège, Gembloux Agro-Bio Tech, Unité de Bioindustries, Passage des Déportés 2, B-5030 Gembloux, Belgium

3: Université de Liège, Gembloux Agro-Bio Tech, Unité de Chimie Analytique, Passage des Déportés 2, 5030 Gembloux, Belgium

Mots Clés / Keywords : β -Glucans; Baker's yeast; Saccharomyces cerevisiae; Enzymatic process; Yield; Chemical properties.

Résumé / Abstract :

β -glucans, homopolymers of glucose, are widespread in many microorganisms, mushrooms and plants. They have attracted attention because of their bioactive and medicinal functions. One important source of β -glucans is the cell wall of yeasts, especially of the baker's yeast *Saccharomyces cerevisiae*. Several processes for the isolation of β -glucans using alkali, acid or a combination of both, result in degradation of the polymeric chains. In this paper, we have an enzymatic process for the isolation of glucans from yeast cell walls. As a result, β -glucans were obtained at a yield of 71.94% of the original ratio in the yeast cell walls. Therefore, this isolation process give best yield and high β -glucan content compared to traditional isolation methods. Furthermore, results showed that the each extraction step of β -glucan had significant effects on its most chemical properties.

