

Evaluation of the autolysed waste of beer fermentation broth as a basal medium for the production of bacterial cellulose and oligosaccharides by *Gluconacetobacter hansenii*

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Gluconacetobacter hansenii PJK is capable of producing bacterial cellulose (BC) and water-soluble glucuronic acid oligomers (WSOS) from the chemically-defined medium. This strain can also produce these metabolites from the supernatant of waste of beer fermentation broth. However, the yield for BC from this medium is not enough for commercial applications. In the current study, the waste of beer fermentation broth was treated in order to carry out the autolysis of the yeast cells present. The supernatant of the resulting autolyzed products was analyzed for elemental composition, glucose concentration, total carbohydrates and total protein contents. Finally, it was evaluated for the production of BC and WSOS in various concentrations using flask culture.

References 1. J. K. Park, Y. H. Park, J. Y. Jung, *Biotechnol. Bioproc. Eng.*, 8, 83-88 (2003). 2. J. K. Park, T. Khan, J. Y. Jung, *Carbohydr. Polym.*, 63, 482-486 (2006).