



Food Technol. Biotechnol. 47 (2009) 19-26.

ISSN-1330-9862
FTB-1984

original scientific paper

**Production of Microbial Transglutaminase on Media
Made from Sugar Cane Molasses and Glycerol**

*Oscar M. Portilla-Rivera¹, Simón J. Téllez-Luis¹, José A. Ramírez de León¹
and Manuel Vázquez^{2*}*

¹**Department of Food Science and Technology,
UAM Reynosa-Aztlán, Autonomous University of Tamaulipas,
Calle 16 y Lago de Chapala s/n, Col. Aztlán, Reynosa,
MX-88740 Tamaulipas, Mexico**
2

Carbon sources including sugar cane molasses (60 g of total sugars per L), glycerol (60 g/L) and their mixture in a ratio of 1:1 (30 g/L of each) were evaluated. Time course of microbial growth, transglutaminase activity and carbon source consumption were determined every 24 h during 120 h of fermentations at three agitation speeds (200, 300 or 400 rpm). The results showed that with the increase in agitation speed, the biomass concentration increased up to 8.39 g/L in the medium containing sugar cane molasses alone or the mixture of molasses and glycerol. The highest transglutaminase activity was obtained at 400 rpm in the medium containing a mixture of molasses and glycerol, reaching 0.460 U/mL, while in the medium containing sugar cane molasses alone, the activity was 0.240 U/mL, and using glycerol alone it was 0.250 U/mL. These results show that sugar cane molasses is a suitable medium for transglutaminase production when it is combined with glycerol.

Key words: transglutaminase, glycerol, glucose, sugar cane molasses

*Corresponding author: E-mail: manuel.vazquez@usc.es

 [PDF Full Text](#)

Last Updated: 03/26/2009 02:35:05
