

Production of Antithrombotic Hirudin in *GALI*-Disrupted *Saccharomyces cerevisiae*

박용철, 김명동¹, 이태희, 임형권², 서진호*
서울대학교 식품공학과; ¹Columbia University;
²목암생명과학연구소
(jhseo94@snu.ac.kr*)

A gratuitous strain was developed by disrupting the *GALI* gene (galactokinase) of recombinant *Saccharomyces cerevisiae* harboring the antithrombotic hirudin gene in the chromosome under the control of the *GALI0* promoter. A series of glucose-limited fed-batch cultures were carried out to examine the effects of glucose supply on the hirudin expression in the gratuitous strain. Controlled feeding of glucose successfully supported both cell growth and hirudin expression in the gratuitous strain. The optimum fed-batch culture done by feeding glucose at a rate of 0.3 g h^{-1} produced maximum hirudin concentration of 62.1 mg l^{-1} , which corresponded to a 4.5-fold increase compared with a simple batch culture done with the same strain.