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Molecular Biotechnology Programme

Uppsala University School of Engineering

UPTEC X 06 005	Date of issue 2006-01	
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Title (English) Fed-batch cultivation for the expression of Affibody[®] molecules with minimized phosphogluconoylation		
Abstract Recombinant proteins produced in <i>Escherichia coli</i> are susceptible to phosphogluconoylation, a partial post-translational modification first described by Geoghegan <i>et al.</i> in 1999. The modification causes an additional mass of 258 Da and its dephosphorylation results in an excess mass of 178 Da. Homogeneous protein products are desirable and therefore the fraction of modified proteins is unwelcome. The aim of this study was to minimize the abundance of the modification by altering the conditions during fed-batch cultivation. In order to decrease the cell content of the precursor glucose-6-phosphate the carbon source was altered from glucose to glycerol. The influence of the specific growth rate on the modification was also evaluated. Data obtained from several fed-batch and continuous cultivations show that the modified proteins are less abundant on the model protein when glycerol is used as substrate, and when the specific growth rate is high (above 0.30 h ⁻¹).		
Keywords Phosphogluconoylation, <i>Escherichia coli</i> , fed-batch, chemostat, Affibody [®] molecule		
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Project name	Sponsors	
Language English	Security	
ISSN 1401-2138	Classification	
Supplementary bibliographical information	Pages 31	
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