

EFFECT OF  $K_L a$  ON THE PRODUCTION OF CYTOCHROME b5

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Oxygen transfer to the fermentative media is an important factor on the production of high added value metabolites by aerobic cultures. This is the case of recombinant proteins.

To study the effect of the volumetric oxygen transfer coefficient ( $K_L a$ ) on the production of cytochrome b5, some batch fermentations were carried out with *Escherichia Coli* TBI, which is a genetically modified bacteria with the plasmid pUC13. This vector contains the gene for the cytochrome expression and confers bacterial resistance to ampicillin.

A 2l fermenter filled with 1.5 l of medium with 0.1 g/l of ampicillin was used. In order to obtain different values of  $K_L a$ , the stirring and aeration rates were varied from 100 to 300 rpm and 0.3 to 1 vvm, respectively.

The results showed the existence of a linear correlation between  $K_L a$  values (70 to 189 hr<sup>-1</sup>) and final cytochrome b5 concentration.