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Carbon fluxes underlying sugar/acid mixture consumption in *Debaryomyces hansenii*.

Alexandra Nobre, Cândida Lucas and Cecília Leão
Centro de Ciências do Ambiente, Departamento de Biologia
Universidade do Minho, 4710-252 Braga, Portugal

Many commercial bioprocesses make use of lignocellulosic materials, which contain, besides sugars, other compounds, namely acetic acid, withdrawn from the raw material chemical hydrolysis. The ability of *Debaryomyces hansenii* to utilise different sugars and sugar/acid mixtures was previously evaluated¹. From that work the consumption of glucose/xilose mixtures was diauxic while when either sugar was mixed with acetic acid the consumption of the two substrates was simultaneous, suggesting that one is being used for carbon and the other for energy sources.

The purpose of this work was to elucidate the biochemical fluxes underlying sugar/acid mixture consumption, for which activity of several enzymes was determined in cells grown on either glucose, xylose, acetic acid alone or mixtures of two of these substrates. The enzymes were chosen according to their representativeness of xylose initial metabolism, pentose phosphate pathway, glycolysis, gluconeogenesis, alcoholic fermentation, Krebs cycle and glyoxylate bypass. Results concerning the regulation of these metabolic pathways will be presented.

1. Nobre, A., Lucas, C. and Leão, C. (1999) Appl. Environm. Microbiol. 65: 3594-3598.