

# Bioreduction of Some Common Carbonylic Compounds Mediated by Yeasts

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Bioreduction of several prochiral carbonylic compounds such as acetophenone (**1**), ethyl acetoacetate (**2**) and ethyl phenylpropionate (**3**) to the corresponding optically active *sec*-alcohols **1a–3a** was performed using wild-type strains of *Pichia pastoris* UBB 1500, *Rhodotorula* sp., and *Saccharomyces cerevisiae*. The reductions showed moderate to excellent conversion and high enantiomeric excess, in an extremely mild and environmentally benign manner in aqueous medium, using glucose as cofactor regeneration system. The obtained alcohols follow Prelog's rule, but in the reduction of **1** with *P. pastoris* UBB 1500 the anti-Prelog enantiopreference was observed.

*Key words:* Yeast, Enantioselective Reduction