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Czech J. Food Sci.

**A. Kunicka-
Styczyńska:**

Glucose, L-Malic Acid and pH Effect on Fermentation Products in Biological Deacidification

Czech J. Food Sci., 27 (2009): S319-S322

Industrial wine yeasts *Saccharomyces cerevisiae* Syrena, an interspecies hybrid (*S. cerevisiae* × *S. bayanus*) HW2-3 and *Schizosaccharomyces pombe* met 3– 15 h⁺ were examined to determine changes in fermentation profiles in different environmental conditions in YG medium with different concentrations of glucose (2, 6, 40 or 100 g/l), L-malic acid (4, 7 or 11 g/l) and at pH 3.0, 3.5 and 5.0. The results were obtained by HPLC method (organic acids, acetaldehyde, glycerol, diacetyl) and enzymatically (L-malic acid, ethanol). In anaerobic conditions (100 g/l glucose), the optimal parameters for L-malic acid decomposition for *S. cerevisiae* Syrena and the hybrid HW2-3 were 11 g/l L-

malic acid and pH 3.0 and 3.5, respectively. *S. pombe* expressed the highest demalication activity at 40 and 100 g/l glucose, 7 g/l L-malic acid and pH 3.0. The fermentation profiles of selected metabolites of yeast were unique for specific industrial strains. These profiles may help in the proper selection of yeast strains to fermentation and make it possible to predict the organoleptic changes in the course of fruit must fermentation.

Keywords:

wine yeast; *Saccharomyces cerevisiae*; *Schizosaccharomyces pombe*; L-malic acid; biological deacidification

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