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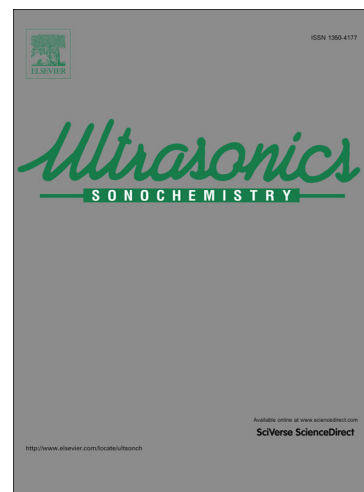
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**Effects of low-intensity ultrasound on the growth, cell membrane permeability and ethanol tolerance of *Saccharomyces cerevisiae***

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**Abstract**

Effects of low-intensity ultrasound (at different frequency, treatment time and power) on *Saccharomyces cerevisiae* in different growth phase were evaluated by the biomass in the paper. In addition, the cell membrane permeability and ethanol tolerance of sonicated *Saccharomyces cerevisiae* were also researched. The results revealed that the biomass of *Saccharomyces cerevisiae* increased by 127.03% under the optimum ultrasonic conditions such as frequency 28 kHz, power 140 W/L and ultrasonic time 1 hour when *Saccharomyces cerevisiae* cultured to the latent anaphase. And the membrane permeability of *Saccharomyces cerevisiae* in latent anaphase enhanced by ultrasound, resulting in the augment of extracellular protein, nucleic acid and

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