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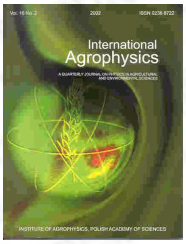

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previous paper back to paper's list next paper

Optimization of selenium accumulation in Rhodotorula rubra cells by treatment of culturing medium with pulse electric field

(get PDF)

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abstract Electroporation was used as a method for Rhodotorula rubra biomass enrichment in selenium. The highest selenium accumulation in yeast cells was achieved after 10 min pulse electric field (PEF) exposure of 16 h shaken culture. Multiple PEF exposure of yeast culture did not favour selenium accumulation. Optimization of selenium concentration in a medium resulted in an over two-fold increase of its accumulation in cells. About three-fold increase of dead yeast cells was recorded in analysed range of selenium concentrations.

keywords selenium, biomass, Rhodotorula rubra, pulse electric field