

A Modified Procedure for Isolation of Yeast Mitochondrial DNA

Trayana Nedeva^{a*}, Ventzislava Petrova^a,
Tsonka Hristozova^b and Anna Kujumdzieva^a

^a Department of General and Industrial Microbiology,
Faculty of Biology, The Sofia University "St. Kliment
Ohridski", 8 Dragan Tzankov St., 1164 Sofia, Bulgaria

^b Institute of Microbiology, Bulgarian Academy of Sci-
ences, 26 Acad. G. Bonchev St., 1113 Sofia, Bulgaria.
Fax: +3592668619.

E-mail: nedeva@biofac.uni-sofia.bg

* Author for correspondence and reprint requests

Z. Naturforsch. **57c**, 960–961 (2002);
received June 6/August 9, 2002

mtDNA, RFLP, Yeast

A modified, rapid and inexpensive method for preparation of mitochondrial DNA (mtDNA), suitable for molecular analysis is proposed. It comprises batch cultivation of *Saccharomyces cerevisiae* strain NBIMCC 583 on a simple nutrient medium at 28 °C; permeabilization of cells from late exponential growth phase with cetyltrimethylammonium bromide, mechanical disintegration of the cell wall; preparation of a mitochondrial fraction and subsequent isolation and purification of mtDNA. The amount and the purity of the obtained mtDNA have been checked and its application for molecular analysis proven.

The main advantages of the proposed procedure for isolation of mtDNA are introduction of simple nutrient medium, replacement of the enzymatic lysis of the cell wall by the cheaper mechanical one, avoidance of ultracentrifugation steps and use of harmful chemical substances.