

COMPARATIVE ANALYSIS OF TWO METHODS FOR CURING *PED*⁺ PLASMID PCP289 FROM *PEDIOCOCCUS ACIDILACTICI* MTCC 5101

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Abstract: The DNA-intercalating agents, ethidium bromide and ascorbic acid (vitamin C), were used to eliminate plasmid DNA from *Pediococcus acidilactici* MTCC 5101, a lactic acid bacteria. The strain was grown in the presence of 0.03 mM ethidium bromide or 1 mM ascorbate for 18 hours at 42°C, which resulted in the loss of its ability to produce pediocin, a plasmid-specified trait. Agarose gel electrophoresis of plasmid DNA and spot-on-lawn assay showed concomitant loss of an 8.9 kb plasmid pCP289 coding for pediocin from these colonies. Since ascorbic acid is a readily available, shows less effect on cell viability, non-hazardous and more efficient compound in contrast to ethidium bromide, the possibility of its use in determining plasmid-encoded traits in food grade lactic acid bacteria is also proposed.

Key words: Curing, ethidium bromide, ascorbic acid, *Pediococcus acidilactici* MTCC 5101

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