

### Study on Production of Bacteriocin by *Lactococcus lactis* MTCC440

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#### ABSTRACT

The present study deals with the production, purification and molecular weight determination of bacteriocin particularly Nisin from *Lactococcus lactis* MTCC 440 and its antagonistic activity against various pathogens were assessed. *Lactococcus lactis* MTCC 440 strain were screened for production of Nisin in M-17 broth. The crude extract obtained in M-17 broth was precipitated using ammonium sulphate method. The Nisin so obtained was partially purified by dialysis. Further the bacteriocin purified was separated by SDS PAGE and its molecular weight was found to be 3kDa. Antibioassay studies showed inhibition against *Staphylococcus aureus* (20mm), *Micrococcus luteus* (11mm) and *Bacillus cereus* (11mm). Thus the purified Nisin can be used as a preservative in food industries.