

## SUMMARY

The present study is designed to investigate the enhanced production of amino acids by bacterial strains isolated from different natural sources including sewage water, fresh milk, honey, yoghurt and soil.

Sixty five bacterial isolates were isolated from these natural sources were screened with basic media. Nineteen isolates were found to be producers of amino acids. These isolates were grown in different fermentation media to enhance amino acid production. Amino acids produced were analysed using acid ninhydrin method. Out of nineteen, six strains were good producers of methionine, cysteine, glutamic acid and valine. Out of these six, one isolate was from soil sample and was good producer of methionine, cysteine, glutamic acid and valine. From milk samples two isolates were selected which gave good yield of methionine, tyrosine and glutamic acid. From honey samples only one isolate produced methionine, cysteine and glutamic acid in significant amount, while sewage water which was rich in bacteria provided two good producers of methionine, cysteine, glutamic acid, valine and lysine. Optimum temperature and optimum pH for each producer strain was determined. Six bacterial strains A1,A9, H,M2,M3 and S6 which produced amino acids in significant amount. These isolates were identified on the basis of morphological and biochemical tests and also by ribotyping. Growth curves for all these isolates were prepared by inoculation of LB broth.

Different fermentation media were used for enhancing the production of amino acids. These media with different composition were based on glucose, urea and molasses and were important for increased production of amino acids by the isolates. These media were not expensive and are economical to use for the commercial production of these amino acids.