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Production of Bacteriocin by *Staphylococcus* sp. NPSI 38 in Koji Extract Medium with Rice Protein Hydrolyzate and Its Growth-inhibitory Activity against Hiochi-bacteria

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Enhanced production of bacteriocin by *Staphylococcus* sp. NPSI 38 (NPSI 38) using koji extract medium was investigated. The bacteriocin produced by NPSI 38 in MRS medium was found to be effective for inhibiting the growth of *Lactobacillus hilgardii* NBRC 15886^T, one of the representative hiochi-bacteria. In cultivations using test tubes without pH control, meat extract and Polypepton were effective for bacteriocin production by NPSI 38 with 10% (v/v) koji extract medium. When the koji extract medium supplemented with hydrolyzate of a rice protein preparation was used instead of meat extract and Polypepton, NPSI 38 produced 160 U/ml of bacteriocin in the cultivation with pH control, which was almost as high as that (156 U/ml) observed in cultivation using MRS medium with pH control. When the cells of *L. hilgardii* NBRC 15886^T collected at logarithmic growth and stationary phases were inoculated into fresh modified MRS medium with 11 U/ml of the bacteriocin, negligible cell growth was observed, irrespective of different growth phases of cells inoculated. Little or no increase in cell concentrations in the media containing bacteriocin showed that the action of the bacteriocin produced by NPSI 38 was bacteriostatic against the hiochi-bacterium.

Keywords: [bacteriocin](#), [hiochi-bacteria](#), [Lactobacillus hilgardii](#), [koji extract medium](#),

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