

## The Bacteriocin Produced by Lactic Acid Bacteria as an Antibacterial of Sub Clinic Mastitis on Dairy Cows

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**Abstract :** The aim of this study is to know the bacteriocin as antimicrobial activity produced by Lactic Acid Bacteria (LAB) as Antibacterial of Sub Clinic Mastitis on Dairy Cows. The antimicrobial is produced by LAB which isolates from cattle intestine can inhibit the growth Staphylococcus aureus, Steptococcus agalactiae an Escherichia coli which were caused by dairy cattle subclinical mastitis. The failure of this bacteria growth was indicated by the formation of a clear zone surrounding the colonies on Brain Heart Infusion Agar plate. The bacteriocin was produced by Lactic Acid Bacteria (LAB) as antimicrobial, which could inhibit the growth of indicator bacteria Staphylococcus aureus, S.agalactiae and E.coli. This study was also developed bacteriocin to be used as a therapeutic of subclinical mastitis on dairy cows. The method used in this study was isolation, selection and identification of LAB using Mann Rogosa Sharp Medium, followed by characterization of the bacteriocin produced by LAB. The result of the study showed that bacteriocin isolated from beef cattle's intestine could inhibit the growth Staphylococcus aureus, S. agalactiae, an Escherichia coli, which was indicated by clear zone surrounding the colonies on Brain Heart Infusion Agar plate. Characteristics of bacteriocin were heat-stable exposed to 80 0C for 30 minutes and 100 °C for 15 minutes and inactivated by proteolytic enzymes such as trypsin. This approach has suggested the development of bacteriocin as a therapeutic agent for subclinical mastitis in dairy cattle.

**Keywords :** lactic acid bacteria, bacteriocin, staphylococcus aureus, S. agalactiae, E. coli, sub

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