

Abstract

Research Title : Antibacterial activity of *Shorea roxburghii* G.Don and their active components against food pathogens.

Author : Nilnate Assavasirijinda

Year : 2010

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The antibacterial activity effect of four bark *Shorea roxburghii* G.Don extracts (ethyl acetate, ethanol, methanol and water) against six food pathogens (*Staphylococcus aureus* ATCC 25923 , *Salmonella typhimurium* ATCC 19113, *Bacillus cereus* ATCC 11778, *Escherichia coli* ATCC 25922, *Listeria monocytogenes* ATCC 19115 and *Vibrio parahaemolyticus* ATCC 17802) was investigated by disc diffusion method and MIC (minimal inhibition concentration) and MBC (minimal bactericidal concentration) values were evaluated by broth dilution method. The result showed that the four extracts could inhibit the growth of six food pathogens with MIC of 0.049-25.000 mg/ml and MBC of 0.098-25.000 mg/ml. Exceptional, the water extract does not show antibacterial activity against *E. coli* ATCC 25922 and *S. typhimurium* ATCC 19113. The ethyl acetate extract was the most effective for antibacterial activity against all of the pathogens and ethanol, methanol and water extracts had decreasing antibacterial activity, respectively. Gram-positive bacteria were generally more sensitive to the tested extracts than Gram-negative bacteria with the lowest MIC value 0.049 mg/ml from ethyl acetate extract and the lowest MBC value 0.098 mg/ml from ethanol and methanol extracts against *B. cereus* ATCC 11778.

Keywords: Antibacterial activity, *Shorea roxburghii* G.Don, Food pathogens