

Effects of pH, NaCl and Teating on the Antibacterial Stability of Kecombrang

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Abstract

The effect of pH (4-9), NaCl concentration (1-5%), temperature and heating time (80, 100 and 121⁰C for 10, 20 and 30 minute) on the antibacterial effectivity of ethyl acetate and ethanol kecombrang extract were analysed. Both ethyl acetate and ethanol extracts showed antibacterial activity at pH 4-8, but its activity gradually decreased at higher pH. At pH 9, only ethanol extract still showed antibacterial activity. Addition of 1-4% NaCl on ethyl acetate and ethanol extract still showed antibacterial activity. Heating the extracts at 80-100⁰C for 10-30 minutes and 121⁰C for 10 minutes did not haves significantly affect on the antibacterial activity of both ethyl acetate and ethanol extracts. Application of ethyl acetate extract at the concentration of 1 and 3 MIC on minced meat were still effective to reduce the viable bacteria until 7 days and 5 MIC was still effective until 9 days.

Key words : Kecombrang, pH, NaCl, temperature and heating time, antibacteria