Antibacterial Activity Of (Syzygium Polyanta And Amaryllifolius) Leaf Extracts

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Abstract

The objectives of this research were to study antibacterial activities of syzgium polyanta (Ã¢â‚¬Å“SalamÃ¢â‚¬Â) and Pandanus amaryllifolius (Ã¢â‚¬Å“PandanÃ¢â‚¬Â) leaf extracts and the effect of wet heating (100^0, up to 60 min) on their antibacterial activities against staphylococcus aureus, bacillus subtillis, pseudomonas aeruginosa and Escherichia coli. Salam and pandan leaves powder was extracted using hot water (70^0C, 2 h), ethanol, ethanol/ethylacetate (1:1, v/v), and ethlacetate bt soxhlet (3x8 h) separately. Each residue was further extracted using the same solvent by shaker (250 rpm, 24 h). finally filtrates were mixed and evaporated to produce the extract. Salam leaf ethanol extract (yield 11.50%) showed highest antibacterial activity especially towards P. aeruginosa (diameter of inhibitor 6.5 mm/mg) and B. subtilis (6.3 mm/mg). Pandan leaf erhanol/ethylacetate extract (yield 15.61 %) also showed antibacterial activity towards P. aeruginosa (4.25 mm/mg) and B. subtilis (3.2 mm/mg). In general, salam leaf extracts showed higher antibacterial activity than pandan leaf extracts. Pandan and salam leaf water extracts had no antibacterial activity. Escerichia coli was more resistant to the extracts compared Staphylococcus aureus, bacillus subtilis, and pseudomonas aeruginosa. Antibacterial activity of salam leaf ethylacetate extract decreased 6.55%, lower than that of pandan leaf ethylacetate extract (18.48%) after heating 100^0C for 10up to 60 min.

Key words : *salam, pandan, antibacterial activity.*