Antibacterial Activity of Combination Extract of Betel Leaf (Piper Betle) and Basil Leaf (Ocimum Basilicum L) Against Vibrio Harveyi and V. Alginolitycus

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Abstract. Betel leaf (Piper betle) and basil leaf (Ocimum basilicum L.) are natural products that can be used as natural antibacterial. Betel leaf extract and Basil leaves contain phenolic compounds, saponins, flavonoids, tannins and oils essential oil which functions as an antibacterial. This study aims to determine antibacterial activity of combination extract of betel leaf (P.betle) and basil leaf (O. basilicum) against Vibrio harveyi and V. alginolyticus. Simplicia betel leaf and basil leaves macerated with 96% methanol. There were three of mixture extract of betel leaf and basil leaf with the following comparison: Treatment A. 1:1 ; Treatment B. 1:2 ; and Treatment C. 2; 1, each treatment with 3 replications. Based on the result diameter of inhibition zone of methanol extract combination showed that the extracts of betel leaf and basil leaf had great inhibitory effect against V. harveyi and V. alginolyticus with a mixture of 2:1 (concentration 0.85 mg/mL) has the highest inhibition zone of 12.6 mm against V. harveyi and a mixture of 1:1 (concentration 14.6 mm with an inhibition zone value of 12.6 mm which was seen at the highest value obtained with a concentration of 0.85 mg/mL (2:1 inhibition zone 12.6 mm in V. harveyi) for (V. alginolitycus 1:1 inhibition zone 14.6 mm). In conclusion, combination plant extracts are of great value as natural antibacterial.

Keyword: combination extract, p. betle, o. basilicum, inhibiotin zone, antibacterial activity.