ABSTRACT

IN VITRO ANTACIDS AND ANTIFLATULENCE ACTIVITIES OF SECANG WOOD ETHANOL EXTRACT SYRUP (*Caesalpinia sappan* Linn.)

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This study aimed to prove the neutral acid and anti-flatulent activities of Secang wood (Sappan Lignum) which has been formulated in antacid syrup used *in vitro* artificial gastric acid neutralization test based on Wu modification method, and anti-flatulence foam removal test based on Rezak *in vitro* method.

The result of antacid activities group test of formula 1, formula 2 and formula 3 of secang wood ethanol extract syrup concentration 0,5% ; 1% and 2% showed positive acid neutralization activities with average duration of 35.15 ± 5.78 minutes for formula 1; 91,03 ± 6,76 minutes for formula 2 and 36,79 ± 1,93 minutes for formula 3. The activities result of anti-flatulence group test of formula 1, formula 2 and formula 3 of secang wood ethanol extract syrup concentration 0,5%; 1% and 2% showed foam removing activities with foam level rest 1.1 ± 0.05 cm for formula 1; 0.9 ± 0.12 cm for the formula 2 and 1.3 ± 0.06 cm for the formula 3.

From One Way Anova and Post Hoc statistic analysis test continued by Least Significant Difference (LSD) test method. The p valued of the whole formulas for antacids and anti-flatulence activities was 0.000 ($p < 0.05$), which showed a significant difference between the dosage of secang wood ethanol extract syrup compared to the negative control (syrup without extract). So the three dosages of formula 1,

formula 2 and formula 3 can be stated had significant antacid and anti-flatulence activities.

Thus can be concluded that secang wood ethanol extract syrup have antacid and anti-flatulence activities. And among the three formulas, formula 1 showed the most effective activity compared with others.

Keywords : *Caesalpinia sappan Linn.*, antacids, anti-flatulence