

ABSTRACT

THE EFFECT OF VARIATIONS IN SUSPENDING AGENTS ON EFFERVESCENT CHITOSAN GRANULE SUSPENSION FROM MANGROVE CRAB (*Scylla serrata*) SHELLS ON REDUCING CHOLESTROL LEVELS IN VITRO XANTHAN GUM : CMC-Na (Wet Granulation Method)

Cindy Rahmadani

Crabs have chitin content in their shells which is processed into chitosan proven to be effective in lowering cholesterol levels by combining it with bile secreted by the liver. Chitosan is less soluble in water so it is made in the form of an effervescent granule suspension where the combined results of acid and base compounds when added to water will experience a carbonation reaction. This study was made into two variations of formulas with different suspension materials, namely Xanthan gum (F1) and CMC-Na (F2) with a concentration of 1% having high viscosity. Then an in vitro test of the Lieberman-Burchard reagent was carried out. The cholesterol reduction test was carried out using a UV-Vis spectrophotometer with a wavelength of 412 nm. In the cholesterol reduction percentage test, F1 obtained an average cholesterol reduction percentage ($29.4\% \pm 1.44$) and F2 obtained an average cholesterol reduction percentage ($18.42\% \pm 1.937$) while the positive control obtained a cholesterol reduction percentage of ($17.9\% \pm 1.689$), this shows that F1 has a greater value in reducing cholesterol levels in the chitosan effervescent granule suspension of mangrove crab shells. In the normality test, F1 and F2 have sig values of $0.000 \leq 0.05$ which indicates that the data is not normally distributed. In the homogeneity test, the results obtained were $0.522 \geq 0.05$ which means homogeneous, then continued with the non-parametric testing technique used by Mann Whitney, a value of $0.083 \geq 0.05$ was obtained which indicates that there is no difference in cholesterol levels.

Keywords : chitosan, suspending agents, in vitro