

ABSTRACT

IN VITRO TEST OF CHOLESTEROL REDUCTION SUSPENSION OF EFFERVESCENT GRANULES OF MANGROVE CRAB SHELL (*Scylla serrata*)

(Chitosan Dosage Comparison 65 mg : 75 mg)

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*Unhealthy lifestyles can cause hypercholesterolemia so that sufferers must routinely take cholesterol-lowering drugs. However, cholesterol-lowering drugs on the market are not commensurate with their benefits, so another alternative is needed from crab shell waste. Crab shells processed into chitosan are thought to have benefits as cholesterol-lowering. This study aims to compare the effectiveness of chitosan doses of 65 mg and 75 mg in reducing cholesterol levels with in vitro tests of effervescent granule suspension of mangrove crab shell chitosan (*Scylla serrata*). This test was conducted by testing samples of chitosan effervescent granule suspension of mangrove crab shell with chitosan doses of 65 mg and 75 mg and positive control of simvastatin 10 mg using the Lieberman Burchardl method and then measured using a UV-Vis spectrophotometer at a maximum λ length of 412 nm. The average % reduction in cholesterol levels obtained was $0.15\% \pm 0.96$ in the 65 mg dose chitosan sample, $5.54\% \pm 8.64$ in the 75 mg dose chitosan sample, and $17.96\% \pm 2.07$ in the positive control simvastatin 10 mg. The results of the average % reduction in cholesterol levels that have been tested with statistics state that there is no significant difference in reducing cholesterol levels so that further research can consider choosing a dose of 55 mg compared to 75 mg to see a comparison of the effectiveness of chitosan in reducing cholesterol levels with in vitro tests of effervescent granule suspensions.*

Keyword : *Hypercholesterolemia, Chitosan, Cholesterol, In Vitro Test, Effervescent Granule Suspensions*