

## **ABSTRACT**

### **FORMULATION AND EVALUATION OF EFFERVESCENT GRANULE SUSPENSION OF CHITOSAN EXTRACT MANGROVE CRAB (*Scylla serrata*) AS A CHOLESTEROL-LOWERING SUPPLEMENT WITH A COMPARISON OF 25% AND 30% SODIUM BICARBONAT (Made Using Dry Granulation Method)**

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*Chitosan extract from mangrove crab shells (*Scylla serrata*) is known to reduce cholesterol. The chitosan extract formulation of mangrove crab shell (*Scylla serrata*) was made in the form of effervescent granule suspension using various levels of base components. This study aims to determine the effect of 25% sodium bicarbonate (F1) and 30% sodium bicarbonate (F2) on the physical properties of effervescent granules before and after reconstitution. The results of the chitosan evaluation on the Degree of Deacetylation (DD) obtained a value of 77.89%, the yield test was 69.92%, the organoleptic test produced a light brown to white powder, the ninhydrin test was purple, the ash content test was 0.21% and the water content test was 4.6%. These results indicate that chitosan has purity that meets the requirements. The effervescent granule formulation of mangrove crab (*Scylla serrata*) shell chitosan extract was carried out by dry granulation method, which does not use water or other solvents. The results showed that the effervescent granules produced were qualified with flow rate (F1 3.1 seconds); (F2 7.1 seconds), angle of repose (F1 23.9°); (F2 24°), moisture content (F1 1.6%); (F2 2%), percentage of fines (F1 5.6%); (F2 34.31%), dispersion time (F1 01.49 minutes); (F2 03.65 minutes), foam height (F1 3.5 cm); (F2 3.2 cm), pH (F1 4.23); (F2 5.15), viscosity (F1 2.22 mPa. s); (F2 1.91 mPa.s). Formula 2 is the best formula because it produces a good pH and formula 2 is the most preferred effervescent granule because it has a fresh taste.*

**Keywords** : Chitosan, *Scylla serrata*, Effervescent Granule Suspension, Dry Granulation method.