ABSTRACT

FORMULATION AND EVALUATION OF MANGROVE CRAB (Scylla serrata) CO-PROCESSED EXCIPIENT LACTOSE-PVP K-30 COMPARATION WITH AVICEL PH 102 10% & 15 % AS DISINTEGRANTS (Prepared with Direct Compression Method)

Anis Tri Haryati

Crabs are aquatic invertebrates that are currently in great demand for consumption. This causes an increase in crab waste which can cause environmental pollution because it is easy to decompose due to the activity of microorganisms. Crab shells contain chitin compounds where this chitin can be converted into chitosan. Chitosan 55mg proved effective in lowering cholesterol levels. This study aims to determine the effect of co-processed lactose exipient PVP K-30 with a ratio of Avicel PH 102 10% & 15% as a disintegrant to the characteristics of chitosan tablets from mud crab shells (Scylla serrata) which include weight uniformity test, size uniformity test, time test. crushed, tablet hardness test and tablet friability test. In this study, we will manufacture chitosan tablets from the shells of mud crab (Scylla serrata). The synthesis of chitosan was obtained by removing three major components, namely protein, calcium carbonate and acetyl groups. After obtaining chitosan as the active ingredient, additional materials were added in the form of a co-processed excipient consisting of lactose PVP K-30 and Avicel PH 102. Then it was processed into tablet preparations using the direct compression method. After being compressed into chitosan tablets, it will be evaluated including weight uniformity test, size uniformity test, disintegration time test, tablet hardness test and friability test. From the evaluation results, the data obtained were then processed using the SPSS application using Mann Whitney. Based on the results of the study, both formulas had met the requirements for the weight uniformity test and the tablet hardness test on F1 obtained a value of 5.28 kgf and F2 5.36 kgf which had met the requirements in the range of 4-8 kgf. However, it did not meet the size uniformity test requirements because the diameter of the two tablet formulas was greater than 3 times the tablet thickness. In the disintegration time test, the two formulations did not meet the tablet requirements, namely the disintegration time was more than 15 minutes. In F1 the disintegration time was 22.43 minutes and F2 was 50.56 minutes. For the friability test, the two formulations also did not meet the requirements with the % friability of tablets more than 0.8%, namely in F1 it was obtained that the % friability was 2.57%, while in F2 the % friability was 5.43%.

Keywords : *chitosan, Scylla serrate, tablet, avicel, direct compression.*