

OPTIMIZATION AND FORMULATION OF FIG LEAF EXTRACT (*Ficus carica* L) INTO LOZENGES WITH COMBINATION OF GELATIN AND PVP AS A BINDER

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ABSTRACT

Fig leaves (*Ficus carica* L.) are contained by flavonoid as a bioactive component, which is believed to have antipyretic effect. The general use of fig leaves is still very traditional and impractical, such as stewed or brewed, hence why in this research fig leaves are prepared in the form of lozenges, which has few advantages compared to stewed tin leaves, especially in the practicality of the consumption and the storage. This study aims to prepare lozenges from fig leaf extract with variations of gelatin and PVP contents on the physical properties of the tablets. Extraction was carried out using the infundation method with water solvent, then dried with rotary evaporator, thus put in water bath to obtain a crude extract. Lozenges were prepared using wet granulation method with variations of gelatin and PVP contents. Contents variations of gelatin and PVP are: formula 1 (10%:2%); formula 2 (10%:2%); formula 3 (0,7%:0,5%); formula 4 (8,5%:3,5%); formula 5 (7,8%:4,25%); formula 6 (9,25%:2,75%). The analysis that were carried out including physical properties test on the granules, physical properties test on the tablets, and the profile analysis on TLC extract of fig leaves and lozenges. From the six formulations prepared, it was formulation 4 that has the best physical properties. Tablet evaluation on formulation 4 resulted in: % of CV for uniformity of weight was 0,017%, friability was 0,923%, hardness was 14,03 kg, soluble time was 6,33 minutes. The TLC profiles on crude extracts and formulation 4 showed that they have same Rf value with that of quercetin standard's, which is 0,93, hence it can be concluded that the results of the TLC profiles showed that the formulation of the lozenges did not affect the presence of flavonoid compound contained in the fig leaf extract and the lozenges.

Keywords: *Ficus carica* L., lozenges, gelatin, PVP, TLC