# ABSTRAK

**RAMADANTI, R.B., 2022, FORMULASI TABLET HISAP EKSTRAK DAUN SIRIH (*Piper betle L.*) DENGAN METODE GRANULASI BASAH MENGGUNAKAN VARIASI KONSENTRASI GELATIN SEBAGAI BAHAN PENGIKAT, SKRIPSI, PROGRAM STUDI S1 FARMASI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA. Dibimbing oleh Dr. Supriyadi, M.Si. dan apt. Drs.Widodo Priyanto, M.M.**

Tablet hisap merupakan sediaan tablet yang dihisap didiamkan dalam mulut, tidak hancur langsung tetapi hancur perlahan kurang lebih selama 30 menit dengan diberi penambah rasa. Ekstrak daun sirih mengandung minyak atsiri, tanin, saponin, dan flavonoid bermanfaat sebagai astrigent, antibakteri dan antibatuk. Penelitian ini bertujuan untuk memformulasikan tablet hisap ekstrak daun sirih dengan variasi konsentrasi gelatin sebagai pengikat yang memenuhi persyaratan mutu fisik tablet.

Ekstrak kental daun sirih diperoleh dengan maserasi menggunakan pelarut etanol 70%. Pembuatan tablet hisap ekstrak daun sirih dibuat dengan tiga formula dan memvariasikan konsentrasi bahan pengikat gelatin sebesar 5%, 7,5%, dan 10%. Tablet hisap dibuat dengan metode granulasi basah. Granul diuji sifat fisik meliputi kadar air, kompresibilitas, waktu alir dan sudut diam. Tablet hisap diuji sifat fisik meliputi keseragaman bobot, kekerasan, kerapuhan,waktu larut dan uji tanggapan rasa (*Hedonic test*). Data yang diperoleh dianalisis secara statistik menggunakan uji *Shapiro-wilk* dan uji *One Way* Anova dengan tingkat kepercayaan 95%.

Hasil penelitian menunjukkan formula tablet hisap ekstrak daun sirih dengan dengan gelatin sebagai bahan pengikat pada konsentrasi 5%, 7,5%, dan 10% menghasilkan tablet hisap yang memenuhi persyaratan. Hasil penelitian menunjukkan bahwa variasi konsentrasi gelatin memberikan pengaruh pada sifat fisik granul yaitu waktu alir, semakin tinggi konsentrasi bahan pengikat gelatin akan mempersingkat waktu alir granul. Serta memberikan pengaruh pada uji sifat fisik tablet hisap yaitu kekerasan tablet, semakin tinggi konsentrasi bahan pengikat gelatin semakin tinggi kekerasan tablet.

Kata kunci : Tablet hisap, ekstrak daun sirih, gelatin, granulasi basah

# ABSTRACT

**RAMADANTI, R.B., 2022, FORMULATION OF LOZENGES BETEL LEAF EXTRACT (*Piper betle L.*) USING WET GRANULATION METHOD USING VARIATIONS OF GELATIN CONCENTRATION AS BINDING MATERIAL, SKRIPSI, PHARMACY BACHELOR PROGRAM STUDY, PHARMACY FACULTY, SETIA BUDI UNIVERSITY, SURAKARTA. Advised by Dr. Supriyadi, M.Si. and apt. Drs.Widodo Priyanto, M.M.**

Lozenges are tablets that are sucked in the mouth, not crushed directly but crushed slowly for about 30 minutes with a flavor enhancer. Betel leaf extract contains essential oils, tannins, saponins, and flavonoids that are useful as astringent, antibacterial and antifungal agents. This study aims to formulate lozenges of betel leaf extract with varying concentrations of gelatin as a binder that meets the requirements of the physical quality of the tablet.

The thick extract of betel leaf was obtained by maceration using 70% ethanol as solvent. Betel leaf extract lozenges were made with three formulas and varying the concentration of the gelatin binder by 5%, 7.5%, and 10%. Lozenges are made by wet granulation method. The granules were tested for physical properties including moisture content, compressibility, flow time and angle of repose. The lozenges were tested for physical properties including weight uniformity, hardness, friability, dissolving time and taste response test (Hedonic test). The data obtained were analyzed statistically using the Shapiro-wilk test and the One Way Anova test with a 95% confidence level.

The results showed that the formula of betel leaf extract lozenges with gelatin as a binder at concentrations of 5%, 7.5%, and 10% produced lozenges that met the requirements. The results showed that variations in the concentration of gelatin have an effect on the physical properties of the granules, namely flow time, the higher the concentration of the gelatin binder, the shorter the flow time of the granules. As well as having an effect on the physical properties of lozenges, namely tablet hardness, the higher the concentration of the gelatin binder, the higher the tablet hardness.

Keyword : Lozenges, betel leaf extract, gelatin, wet granulation