FORMULASI TABLET HISAP EKSTRAK DAUN SIRIH HIJAU (*Piper betle,* L) DENGAN VARIASI KADAR POLIVINIL PIROLIDON (PVP) SEBAGAI BAHAN PENGIKAT

INTISARI

Sirih hijau (*Piper betle,* L) merupakan salah satu tanaman obat yang memiliki beragam khasiat dan telah lama digunakan sebagai obat. Tanaman ini berkhasiat sebagai antibakteri, antiviral, antiinflamasi, mampu mengatasi bau mulut. Penelitian ini bertujuan untuk memformulasi tablet hisap dari ekstrak daun sirih dan untuk mengetahui pengaruh variasi kadar pengikat polivinil pirolidon (PVP) terhadap sifat fisik tablet. Penetapan kandungan zat aktif menggunakan Kromatografi Lapis Tipis. Pada penelitian ini digunakan variasi kadar pengikat polivinil pirolidon 0%, 2%, 4%, 6% untuk mengetahui bagaimana pengaruh berbagai variasi kadar polivinol pirolidon untuk melihat kadar ideal PVP untuk sediaan tablet hisap ekstrak sirih. Tablet hisap dibuat dalam 4 formulasi. Metode yang digunakan dalam penelitian ini adalah granulasi basah. Granul yang dihasilkan di uji sifat alir, sudut istirahat, kelembapan dan pengetapannya. Tablet yang dihasilkan kemudian diuji sifat fisiknya. Hasil dari penelitian; formula I memiliki keseragaman bobot (CV) 0,530%, kerapuhan 1,60 ± 0,25% dan uji kekerasan 3,70 ± 0,12 kg/cm^2. Formula II memiliki keseragaman bobot 0,897%, kerapuhan 1,03 ± 0,04% dan uji kekerasan 5,89 ± 0,29 kg/cm^2. Formula III memiliki keseragaman bobot 0,900%, kerapuhan 0,37 ± 0,06% dan uji kekerasan 8,11 ± 0,52 kg/cm^2. Formula IV memiliki keseragaman bobot(CV) 0,910%, Kerapuhan 0,52 ± 0,09% dan uji kekerasan 9,32 ± 0,41 kg/cm^2. Dapat disimpulkan bahwa formula III dan formula IV yang memenuhi persyaratan sesuai ketentuan yang terdapat diliteratur.

Kata kunci : *Piper betle*, tablet hisap, polivinil pirolidon (PVP)

FORMULATION OF LOZENGES FROM PIPER BETLE LEAF EXTRACT (*Piper betle,* L) WITH VARIATION CONCENTRATION OF POLIVINIL PIROLIDON (PVP) AS A BINDER

ABSTRACT

Piper betle leaf (Piper betle, L) is one of the many medicinal plants that have diverse properties and has long been used as a medicine, but less practical in the presentation. This nutritious plant as an antibacterial, antiviral, anti-inflammatory agent, is able to cope with bad breath. This research was aimed to formula compress lozenges from piper betle leaf extract and to know the influence of various concentration of Polivinil pirolidon (PVP) binder on nature of physical tablet. Active agent contain on piper betle leaf extract detected by Thin Layer of Chromatography (TLC). In this research using variation of PVP 0%, 2%, 4%, 6% to see the ideal rate PVP which is good to make compress lozenges from piper betle leaf extract. Lozenges were made in four formulations (FI, FII, FIII and FIV). Tablets were made by wet granulation method. The resuling granules tested included smooth characteristic, angle of repose, moisture and tapping. Meanwhile, lozenges that has been produced was tested its physical characteristic. Result from the research, showed that the first formula has weight variation of 0,530% (CV), 1,60 ± 0,25% friability, and 3,70 ± 0,12 kg/cm^2 hardness. FII has weight variation of 0,897% (CV), 1,03 ± 0,04% friability, and 5,89 ± 0,29 kg/cm^2. FIII has weight variation of 0,900% (CV), 0,37 ± 0,06 friability, and 8,11 ± 0,52 kg/cm^2. FIV has weight variation of 0,910% (CV), 0,52 ± 0,09 friability, and 9,32 ± 0,41 kg/cm^2. Thus, it can be concluded that just the formula III and formula IV have met requirements according to provisions in the literature.

Keywords: *Piper betle*, lozenges, polivinil pirolidon