

## ABSTRAK

**Latar Belakang:** Diabetes melitus dapat diatasi dengan mengonsumsi obat alternatif yang berasal dari herbal seperti daun sambiloto. Belum adanya penelitian terkait pembuatan tablet kunyah daun sambiloto maka penelitian ini dikembangkan menjadi bentuk sediaan tablet kunyah dengan kombinasi bahan pengisi manitol dan laktosa.

**Tujuan :** Mengetahui pengaruh variasi kombinasi manitol dan laktosa terhadap sifat fisik tablet kunyah ekstrak etanol daun sambiloto, menentukan kombinasi optimum dari manitol dan laktosa sebagai bahan pengisi tablet kunyah.

**Metode :** Penelitian eksperimental laboratorium. Diawali karakterisasi simplisia dan ekstrak. Ekstrak etanol daun sambiloto di formulasikan dalam sediaan tablet kunyah dengan variasi manitol dan laktosa : F1 (100:0), F2 (75:25), F3 (50:50), F4 (25:75), F5 (0:100). Evaluasi yang dilakukan meliputi evaluasi granul, uji keseragaman ukuran, keseragaman bobot, kerapuhan, kekerasan dan uji penerimaan rasa. Penentuan formula optimum dengan metode *Simplex Lattice Design*, dan analisis data dengan ANOVA.

**Hasil :** Hasil karakterisasi simplisia dan ekstrak telah memenuhi persyaratan mutu dalam Farmakope Herbal. Sedangkan evaluasi granul dan evaluasi tablet di dapatkan hasil memenuhi syarat yang ditentukan oleh Farmakope Indonesia Edisi III. Berdasarkan penilaian kualitas rasa pada formula 3 memiliki rasa yang paling manis dibandingkan ke lima formula.

**Kesimpulan :** Sediaan tablet kunyah ekstrak etanol daun sambiloto dengan variasi kombinasi manitol dan laktosa mempengaruhi sifat fisik tablet meliputi kecepatan alir granul, kekerasan, dan kerapuhan. Formula optimum tablet kunyah terdapat pada formula 3 yaitu perbandingan 50:50

**Kata kunci :** daun sambiloto, tablet kunyah, manitol, laktosa

## ABSTRACT

**Background:** Diabetes mellitus can be overcome by consuming alternative medicines derived from herbs such as sambiloto leaves. There has been no research related to the manufacture of sambiloto leaves chewable tablets, so this research was developed into a chewable tablet dosage form with a combination of mannitol and lactose fillers.

**Objectives:** To determine the effect of variation combinations mannitol and lactose the physical properties of chewable tablets from ethanol extract sambiloto leaves, to determine the optimum combinations of mannitol and lactose as fillers of chewable tablets.

**Method:** Laboratory experimental research. Beginning with the characterization of simplicia and extracts. The ethanol extract of Sambiloto leaves is formulated in chewable tablets with variations mannitol and lactose: F1 (100:0), F2 (75:25), F3 (50:50), F4 (25:75), F5 (0:100). The evaluations belong to granule evaluation, size uniformity test, weight uniformity, friability, hardness and taste acceptance. Determine of the optimum formula with the *Simplex Lattice* Design method, and data analysis with ANOVA.

**Results:** The results of the simplicia and extract characterization have met the quality requirements in the Herbal Pharmacopoeia. While the evaluation of granules and evaluation of tablets obtained results that meet the requirements specified by the Indonesian Pharmacopoeia Edition III. Based on the taste acceptance formula 3 has the sweetest taste compared to the five formulas.

**Conclusion:** Chewable tablets of Sambiloto leaf ethanol extract with various combinations of mannitol and lactose affect the physical properties of the tablets including granule flow rate, hardness, and friability. The optimum formula for chewable tablets is in formula 3, which is a ratio of 50:50

**Keywords:** *sambiloto leaves, chewable tablets, mannitol, lactose*