

INTISARI

RINI, A.A., 2021, UJI AKTIVITAS ANTIJAMUR SEDIAAN MOUTHWASH EKSTRAK BUNGA CENGKEH (*Syzygium aromaticum* L) TERHADAP *Candida albicans*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Candida albicans menginfeksi rongga mulut dengan ciri khas bercak putih jika dikeruk meninggalkan permukaan merah dan berdarah pada gingiva, lidah, dan membran mukosa disebut *candidiasis*. Bunga cengkeh memiliki aktivitas antijamur. *Humectant* (gliserol) berfungsi mengurangi penguapan serta memperlama kontak dengan gigi pada *mouthwash*. Penelitian ini bertujuan memformulasikan *mouthwash* dengan variasi konsentrasi gliserol dari ekstrak bunga cengkeh yang memiliki aktivitas antijamur terhadap *Candida albicans*.

Ekstrak diperoleh dengan maserasi menggunakan etanol 96%. Formulasi *mouthwash* dibuat tiga variasi konsentrasi ekstrak 5; 7,5; 15% digunakan yang paling efektif dan menggunakan variasi konsentrasi gliserol 10; 15; 20%. Kontrol positif menggunakan klorheksidin glukonat 0,2% dan kontrol negatif formula *mouthwash* tanpa ekstrak. Pengujian mutu fisik meliputi uji organoleptis, pH, viskositas, stabilitas. Pengujian aktivitas antijamur menggunakan metode difusi cakram. Data diolah dengan statistik *Shapiro-Wilks* dilanjutkan *One Way ANOVA*.

Hasil penelitian aktivitas antijamur ekstrak bunga cengkeh konsentrasi 5; 7,5; 10% menghasilkan zona hambat berturut-turut sebesar 14,92mm±0,71; 16,08mm±0,11; 19,00mm±0,35. Sediaan *mouthwash* dengan variasi konsentrasi gliserol 10% dan 15% memiliki mutu fisik dan stabilitas yang baik. Sediaan *mouthwash* ekstrak bunga cengkeh konsentrasi 10% dengan variasi konsentrasi gliserol 10; 15; 20% menghasilkan zona hambat berturut-turut sebesar 14,16mm±0,11; 14,83mm±0,51; 13,58mm±0,23 dengan kontrol positif sebesar 20,91mm±0,71 ($p < 0,05$). Aktivitas antijamur *mothwash* masih termasuk dalam kategori kuat.

Kata kunci : *Syzygium aromaticum* L, *mouthwash*, gliserol, *Candida albicans*.

ABSTRACT

RINI, A.A., 2021, TESTING ANTIFUNGAL ACTIVITY OF MOUTHWASH PREPARATION OF CLOVE FLOWER EXTRACT (*Syzygium aromaticum* L) AGAINST *Candida albicans*, THESIS PROPOSAL, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Candida albicans infects the oral cavity with characteristic white patches when scraped off leaving a red and bloody surface on the gingiva, tongue, and mucous membranes called candidiasis. Clove flower has antifungal activity. Humectant (glycerol) serves to reduce evaporation and prolong contact with teeth in mouthwash. This study aims to formulate a mouthwash with varying concentrations of glycerol from clove flower extract which has antifungal activity against *Candida albicans*.

The extract was obtained by maceration using 96% ethanol. The mouthwash formulation was made with three variations of extract concentration 5; 7.5; 15% was used which was the most effective and used variations in the concentration of glycerol 10; 15; 20%. The positive control used 0.2% chlorhexidine gluconate and the negative control was a mouthwash formula without extract. Physical quality testing includes organoleptic test, pH, viscosity, stability. The antifungal activity was tested using the disc diffusion method. The data was processed using Shapiro-Wilks statistics followed by One Way ANOVA.

The results of the antifungal activity of clove flower extract concentration 5; 7.5; 10% resulted in inhibition zones of 14.92mm±0.71; 16.08mm±0.11; 19.00mm±0.35. Mouthwash preparations with variations in concentration of 15% glycerol base have good physical quality. Clove flower extract mouthwash preparation with 10% concentration with variation of glycerol 10; 15; 20% resulted in an inhibition zone of 14.16mm±0.11 respectively; 14.83mm±0.51; 13.58mm±0.23 with a positive control of 20.91mm±0.7169 (p<0.05) but the antifungal activity of the extract was still included in the strong category.

Key words : *Syzygium aromaticum* L, mouthwash, glycerol, *Candida albicans*