

ABSTRAK

PRASETYO, N., 2015, FORMULASI PASTA GIGI EKSTRAK ETANOL DAUN SELEDRI (*Apium graveolens L*) DENGAN BAHAN PEMBERSIH (*Abrasive*) SODIUM BIKARBONAT DAN KALSIMUM KARBONAT SEBAGAI ANTIBAKTERI *Streptococcus mutans*, SKRIPSI, FAKULTAS FARMASI, UNIVERSITAS SETIA BUDI, SURAKARTA.

Daun seledri diformulasikan dalam bentuk sediaan pasta gigi agar mudah dalam penggunaannya. Sifat fisik sediaan pasta gigi dipengaruhi oleh bahan pembersih (*abrasive*) yaitu Kalsium karbonat dan Sodium bikarbonat. Penelitian ini bertujuan untuk mengetahui pengaruh variasi konsentrasi Kalsium karbonat dan Sodium bikarbonat terhadap mutu fisik pasta gigi ekstrak daun seledri dan aktivitas antibakteri terhadap *Streptococcus mutans*.

Penelitian dilakukan dengan membuat 5 formula pasta gigi ekstrak maserasi daun seledri dengan etanol 96% dengan konsentrasi Kalsium karbonat dan Sodium bikarbonat yang berbeda yaitu F I (0:100), F II (25:75), F III (50:50), F IV (75:25), dan F V (100:0). Pasta gigi ekstrak daun seledri di uji mutu fisik (homogenitas, viskositas, daya sebar, dan pemeriksaan pH) dan uji aktivitas antibakteri terhadap *Streptococcus mutans*.

Data viskositas dan daya sebar dianalisa dengan anova dua jalan. Data Konsentrasi Hambat Minimum (KHM) dilihat dengan adanya zona hambat. Hasil penelitian menunjukkan bahwa KHM pasta gigi ekstrak daun seledri terhadap *Streptococcus mutans* pada konsentrasi 12,5%. Perbedaan konsentrasi *abrasive* kalsium karbonat dan sodium bikarbonat dalam tiap formula berpengaruh terhadap aktivitas antibakteri tetapi mempengaruhi viskositas dan daya sebar sediaan.

Kata kunci : Ekstrak etanol daun seledri, pasta gigi, uji mutu fisik, uji aktivitas antibakteri.

ABSTRACT

PRASETYO, N., 2015, TOOTH PASTE FORMULATIONS ETHANOL EXTRACT LEAF CELERY (*Apium graveolens L*) WITH ABRASIVE BICARBONATE SODIUM AND CALCIUM CARBONATE AS ANTIBACTERIAL AGAINST *Streptococcus mutans*, THESIS, FACULTY OF PHARMACY, SETIA BUDI UNIVERSITY, SURAKARTA.

Celery leaves are formulated into dosage forms toothpaste so easy to use. The physical properties of toothpaste preparations affected by abrasive calcium carbonate and sodium bicarbonate. This study was aimed to determine the effect of variations in the concentration of calcium carbonate and sodium bicarbonate to the physical quality of celery leaf extract toothpaste and antibacterial activity against *Streptococcus mutans*.

The study were made five formulas toothpaste celery extract macerated with 96% ethanol at a concentration of calcium carbonate and sodium bicarbonate are different, namely FI (0: 100), F II (25:75), F III (50:50), F IV (75:25), and FV (100: 0). Toothpaste extract of the leaves of celery in the physical quality test (homogeneity, viscosity, dispersive power, and pH) and test antibacterial activity against *Streptococcus mutans*.

Viscosity data and dispersive power was analyzed by two way ANOVA. Data of Minimum Inhibitory Concentration (MIC) was seen with the inhibition zone. The results showed that the MIC toothpaste celery leaf extract against *Streptococcus mutans* at a concentration of 12.5%. Differences abrasive concentration of calcium carbonate and sodium bicarbonate in each formula affected the antibacterial activity, the viscosity and dispersive power.

Keywords: ethanol extract of celery, toothpaste, physical quality test, test antibacterial activity.