

ABSTRAK

Judul : Formulasi Pasta Gigi Herbal Ekstrak Etil Asetat Daun Rosemary (*Rosmarinus officinalis* Linn.)

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Kesehatan gigi dan mulut tak kalah penting dari kesehatan tubuh lainnya, karena gigi dan mulut menjadi pintu masuk utama berbagai macam benda asing masuk ke dalam tubuh. Saat ini pasta gigi herbal menjadi pilihan yang sangat diminati oleh sebagian masyarakat, dikarenakan pasta gigi herbal menggunakan bahan yang berasal dari alam. Penambahan herbal pada sediaan pasta gigi dapat membantu menghambat pertumbuhan plak pada gigi, karena beberapa herbal mempunyai aktivitas antibakteri. Daun rosemary (*Rosmarinus officinalis* Linn.) merupakan salah satu famili Lamiaceae yang mengandung berbagai senyawa aktif, terutama *carnosol*, *rosmasol*, *isorosmasol*, *epirosmasol*, *rosmaridifenol* dan *rosmariquinon*, *linalool*, *burneol*, *kamfor*, asam karnosik dan asam rosmarinik. Diantara senyawa-senyawa yang terkandung di dalam daun rosemary asam karnosik dan asam rosmarinik merupakan turunan tannin yang dilaporkan berfungsi sebagai antibakteri. Penelitian ini dilakukan untuk mendapatkan formulasi sediaan pasta gigi herbal ekstrak etil asetat daun rosemary (*Rosmarinus officinalis* Linn.) yang memenuhi persyaratan sediaan pasta gigi. Ekstraksi daun rosemary menggunakan metode maserasi dengan pelarut etil asetat dan hasil rendemen ekstrak sebesar 8,6%. Hasil skrining fitokimia ekstrak etil asetat daun rosemary memiliki kandungan golongan senyawa alkaloid, tannin, dan triterpenoid. Pasta gigi herbal ekstrak etil asetat daun rosemary dibuat dengan variasi konsentrasi ekstrak formula I 15%, formula II 20%, dan formula III 25%. Pengujian sifat fisik sediaan dengan melihat organoleptis, homogenitas, pH, daya sebar, stabilitas *Heating-cooling stress test*, daya busa, dan viskositas. Data pengujian sifat fisik sediaan pasta gigi dianalisis secara deskriptif. Hasil pengujian sifat fisik sediaan pasta gigi menunjukkan formula I dan II memenuhi persyaratan sediaan pasta gigi.

Kata kunci : Pasta gigi herbal, Etil asetat, *Rosmarinus officinalis* Linn, Sifat fisik.

ABSTRACT

Title : The Formulation of Ethyl Acetate Extract of Rosemary Leaves (*Rosmarinus officinalis* Linn.) Herbal Toothpaste

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Dental and oral health is equally important to the health of other body parts because teeth and mouth are the main entrances for various kinds of unfamiliar objects that enter the body. Currently, herbal toothpaste is in high-demand option for some people since herbal toothpaste uses ingredients derived from nature source. Adding herbs to toothpaste preparations can help inhibit the growth of plaque on the teeth since some herbs have antibacterial activity. Rosemary leaf (*Rosmarinus officinalis* Linn.) is one of the Lamiaceae family, which contains various active compounds, especially carnosol, rosmasol, isorosmasol, epirosmasol, rosmaridiphenol and rosmariquinone, linalool, burneol, camphor, karnosik acid and rosmarinic acid. Among the compounds contained in rosemary leaves, karnosik acid and rosmarinic acid, which are tannin derivatives, are reported to function as antibacterial. This research was conducted to obtain the formulation of herbal toothpaste preparations of ethyl acetate extract of rosemary (*Rosmarinus officinalis* Linn.) leaves that meet the requirements of toothpaste preparations. Extraction of rosemary leaves using maceration method with ethyl acetate solvent and extract yield of 8.6%. The results of phytochemical screening of the ethyl acetate extract of rosemary leaves contain a group of alkaloid compounds, tannins, and triterpenoids. Herbal toothpaste with rosemary leaf ethyl acetate extract was made with various concentrations of extract formula I 15%, formula II 20%, and formula III 25%. Testing the physical properties of the preparation by looking at the organoleptic, homogeneity, pH, spreadability, Heating-cooling stress test stability, foaming ability, and viscosity. The data for testing the physical properties of toothpaste preparations were analyzed descriptively. The results of testing the physical properties of toothpaste preparations show that formula I and II meet the requirements of toothpaste preparations.

Keywords : Herbal toothpaste, Ethyl Acetate, *Rosmarinus officinalis* Linn Physical properties.

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