INTISARI

KRISTANTI YSW. 2020. FORMULASI SEDIAAN *SPRAY* ANTIBAU KAKI DARI MINYAK ATSIRI DAUN ROSEMARY (*Rosmarinus officinalis* L.) DAN UJI AKTIVITAS SEDIAAN TOPIKAL DARI MINYAK ATSIRI FAMILI Lamiaceae TERHADAP BAKTERI PATOGEN. SKRIPSI. FAKULTAS FARMASI. UNIVERSITAS SETIA BUDI SURAKARTA.

Rosemary (*Rosmarinus officinalis* L.) termasuk dalam famili Lamiaceae. Minyak atsiri rosemary mengandung 1,8-sineol dan α-pinene yang berkhasiat sebagai antibakteri. Tujuan dari penelitian ini adalah untuk memformulasikan minyak atsiri dari daun rosemary (*Rosmarinus officinalis*) dalam bentuk sediaan *spray* antibau kaki serta mengetahui aktivitas antibakteri berbagai sediaan topikal minyak atsiri dari famili Lamiaceae.

Minyak atsiri dari bagian daun rosemary dihasilkan melalui metode destilasi uap air dan di analisis dengan GC-MS. Sediaan *spray* dibuat dengan variasi konsetrasi minyak atsiri daun rosemary 1,5%, 3% dan 4,5%. Pengujian mutu fisik sediaan *spray* meliputi uji pH, bobot jenis dan uji stabilitas (sentrifugasi dan *cycling test*). Hasil uji pH dan bobot jenis dianalisis secara statistik menggunakan metode *Analysis of Variant* (ANOVA). Hasil *cycling test* dianalisis secara statistik dengan *Paired sample t-test.*

Rendemen yang diperoleh sebesar 0,92%. Analisis GC-MS minyak atsiri daun rosemary (*Rosmarinus officinalis* L.) menunjukkan komponen senyawa mayor penyusunnya yaitu α-pinene (33,53%) dan 1,8-cineole (24,16%). Pengujian mutu fisik sediaan *spray* menunjukkan semua formula memiliki mutu dan stabilitas yang baik.. Hasil data sekunder menunjukkan sediaan topikal dari minyak atsiri famili Lamiaceae memiliki aktivitas antibakteri. Sediaan emulgel dari *Rosmarinus officinalis* L., *deodorant spray*, gel pencuci tangan, nanoemulsi dan *deodorant* krim dari *Ocimum basilicum* L., sabun cair dari *Ocimum americanum* L., gel dan krim dari *Pogostemon cablin* serta gel antiseptik dari *Lavandula angustifolia* M. Pada sediaan gel *hand sanitizer* dari minyak atsiri daun mint (*Mentha arvensis*) tidak menunjukkan adanya aktivitas antibakteri.

Kata kunci: sediaan *spray*, daun rosemary, minyak atsiri, Lamiaceae, antibakteri, bakteri patogen.

ABSTRACT

KRISTANTI YSW. 2020. FOOT ODOR SPRAY FORMULATION OF ROSEMARY (*Rosmarinus officinalis* L.) ESSENTIAL OIL AND ANTIBACTERIAL ACTIVITY OF ESENTIAL OIL PREPARATIONS FROM Lamiaceae FAMILY AGAINST PATOGENIC BACTERIA. SKRIPSI. FACULTY OF PHARMACY. SETIA BUDI SURAKARTA UNIVERSITY.

Rosemary (*Rosmarinus officinalis* L.) belongs to the Lamiaceae family. Rosemary essential oil contains 1,8-sineol and α-pinene which has antibacterial properties. The purpose of this study was to formulate essential oils from the leaves of rosemary (*Rosmarinus officinalis*) in the form of foot odor spray preparations and to know the antibacterial activity of various topical preparations of essential oils from the Lamiaceae family.

Essential oils from the rosemary leaves are produced by the steam water distillation method and analyzed by GC-MS. Spray preparations are made with variations in the concentration of essential oils of rosemary leaves 1.5%, 3% and 4.5%. The physical quality testing of spray preparations include pH, specific gravity and stability test (centrifugation and cycling test). The results of pH and specific gravity test were statistically analyzed using the Analysis of Variant (ANOVA) method. Cycling test results were statistically analyzed by paired sample t-test.

The yield obtained was 0.92%. GC-MS analysis of rosemary (*Rosmarinus officinalis* L.) essential oil showed the constituent major components, α-pinene (33.53%) and 1,8-cineole (24.16%). Physical quality testing of spray preparations shows that all formulas have good quality and stability. Secondary data results show topical preparations of essential oils of the Lamiaceae family have antibacterial activity.. Emulgel preparations from *Rosmarinus officinalis* L., deodorant spray, hand washing gel, nanoemulsion and deodorant cream from *Ocimum basilicum* L., liquid soap from the *Ocimum americanum* L., gel and cream from *Pogostemon cablin* and an antiseptic gel from *Lavandula angustifolia M*. The gel hand sanitizer from mint essential oil (*Mentha arvensis*) did not show any antibacterial activity.

Keywords: spray preparations, rosemary leaves, essential oils, Lamiaceae, antibacterial, pathogenic bacteria.