COMPARISON OF *KIRBY BAURER* METHOD (DISC) AND *WELL DIFFUSION* METHOD (WELL) FOR RESISTANCE USING ESSENTIAL OIL OF RED GALANGAL RHIZOME (*Alpinia Purpurata K.Schum*) AGAINST *Trichophyton rubrum*

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ABSTRACT

Background : Test the inhibition of essential oil of red galangal rhizome *(Alpinia Purpurata K.Schum)* against *Tricophyton rubrum* there is *Kirby Bauer* diffusion and *well diffusion*. The diffusion method is to determine the zone of inhibition against the fungus *Tricophyton rubrum*.

Objective : Knowing the effect of the best method of inhibiting s of essential oils of red galangal rhizome *(Alpinia Purpurata K.Schum)* on the growth of *Trichophyton rubrum to* determine the method of wells or disk that can produce a greater inhibition zone.

Method : This type of research is pure experimental research with a "Post-test Only Control Group Design". This design has a comparison group (Control) and observation. Data were analyzed analytically by Shapiro Wilk and Wilcoxon test.

Result : The average diameter of inhibition zone in the *well diffusion* method with concentrations of 20%, 40%, 60%, 80% and 100% were 5,412 mm, 11,56 mm, 14,418 mm, 17,208 mm dan 21,472 mm respectively . The average diameter of inhibition zone in the *kirby bauer* method with concentrations of 20%, 40%, 60%, 80% and 100% were 8,98 mm, 14,35 mm, 17,826 mm, 21,162 mm dan 31,27 mm respectively. The higher the concentration of red galangal leaf essential oil (*Alpinia Purpurata K.Schum*), the greater the diameter of the inhibitory zone formed. The mean of essential oils of red galangal rhizome *(Alpinia Purpurata K.Schum)* diameter of the *Kirby bauer* method compared to the *well diffusion* method at concentrations of 20%, 40%, 60%, 80% and 100% was 3,568 mm, 2,79 mm, 3,408 mm, 3,954 mm and 9,798 mm respectively.

Conclusion : There was an effect of various concentrations and methods of essential oil of red galangal rhizome (*Alpinia Purpurata K.Schum*) on the growth of *Trichophyton rubrum* with the *Kirby Bauer* method, the zone of inhibition was greater than that of the *well diffusion* method.

Keywords : Inhibition zone method of red galangal rhizome essential oil (*Alpinia Purpurata K.Schum*), *Tricophyton rubrum*, *Well diffusion* method, *Kirby Bauer* method

PERBANDINGAN METODE *KIRBY BAURER* (CAKRAM) DAN METODE *WELL DIFFUSION* (SUMURAN) UNTUK DAYA HAMBAT MENGGUNAKAN MINYAK ATSIRI RIMPANG LENGKUAS MERAH (*Alpinia Purpurata K.Schum*) TERHADAP JAMUR *Trichophyton rubrum*

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ABSTRAK

Latar Belakang : Uji daya hambat berbagai konsentrasi minyak atsiri rimpang lengkuas merah (*Alpinia Purpurata K.Schum*) terhadap jamur *Tricophyton rubrum* metode *kirby bauer* dan *well diffusion*. Metode difusi untuk mengetahui zona hambat terhadap jamur.

Tujuan : Mengetahui pengaruh metode yang paling bagus menghambat minyak atsiri rimpang lengkuas merah (*Alpinia Purpurata K.Schum*) terhadap pertumbuhan jamur *Trichophyton rubrum* dan Mengetahui metode *well diffusion* atau *kirby bauer* yang dapat menghasilkan zona hambatnya lebih besar.

Metode :Jenis penelitian ini penelitian eksperimen murni dengan rancangan "Post - test Only Control Group Design". Rancangan ini ada kelompok pembanding (Kontrol) dan observasi. Data dianalisis secara analitik Shapiro Wilk, Uji Wilcoxon.

Hasil :Rata-rata diameter zona hambat pada metode *well diffusion* dengan konsentrasi 20%, 40%, 60%, 80% dan 100% adalah 5,412 mm, 11,56 mm, 14,418 mm, 17,208 mm dan 21,472 mm. Rata-rata diameter zona hambat pada metode *kirby bauer* dengan konsentrasi 20%, 40%, 60%, 80% dan 100% adalah adalah 8,98 mm, 14,35 mm, 17,826 mm, 21,162 mm dan 31,27 mm. Semakin tinggi konsentrasi minyak atsiri rimpang lengkuas merah (*Alpinia Purpurata K.Schum*), maka semakin besar diameter zona hambat yang terbentuk. Rerata diameter metode *kirby bauer* dibanding metode *well diffusion* pada konsentrasi 20%, 40%, 60%, 80% dan 100% adalah 3,568 mm, 2,79 mm, 3,408 mm, 3,954 mm dan 9,798 mm.

Kesimpulan: Ada pengaruh berbagai konsentrasi dan metode minyak atsiri rimpang lengkuas merah (*Alpinia Purpurata K.Schum*) terhadap pertumbuhan jamur *Trichophyton rubrum* dengan metode *kirby bauer* lebih besar zona hambatnya dibandingkan dengan metode *well diffusion*.

Kata Kunci : Metode zona hambat minyak atsiri rimpang lengkuas merah (*Alpinia Purpurata K.Schum*) *Tricophyton rubrum*, Metode *well diffusion*, Metode *kirby bauer*