ABSTRAK

RISKA DWI SEPTIANA, 2022, UJI AKTIVITAS ANTIBAKTERI KOMBINASI SERBUK DAUN TEH DAN RIMPANG JAHE TERHADAP BAKTERI *Escherichia coli* ATCC 25922, PROPOSAL KARYA TULIS ILMIAH, PROGRAM STUDI D-III FARMASI, FAKULTAS FAMASI, UNIVERSITAS SETIA BUDI. Dibimbing oleh Dr. apt. Ismi Rahmawati. M .Si.

Daun teh hijau dan rimpang jahe memiliki daya antibakteri terhadap *Escherichia coli.* Serbuk daun teh dan rimpang jahe memiliki kandungan fenol yang memiliki aktivitas antibakteri. Kombinasi dua simplisia atau lebih bisa meningkatkan aktivitas. Tujuan dari penelitian ini untuk mengetahui aktivitas antibakteri kombinasi serbuk teh dan jahe terhadap *E. coli*.

Serbuk teh dan Jahe yang berasal dari pasaran Surakarta dilakukan penyeduhan dengan air panas sesuai penggunaan masyarakat. Hasil seduhan dilakukan skrining fitokimia dengan cara tabung. Hasil seduhan teh dan jahe dibuat kombinasi 1:1, 1:2, 2:1. Uji aktivitas antibakteri dilakukan terhadap seduhan teh, jahe dan kombinasinya menggunakan metode difusi. Hasil uji aktivitas antibakteri dianalisa dengan menggunakan SPSS.

Hasil seduhan serbuk daun teh mengandung polifenol dan rimpang jahe merah mengandung flavonoid, saponin, dan tanin. Uji aktivitas antibakteri terhadap *E. coli* menghasilkan diameter daya hambat seduhan jahe, seduhan teh, kombinasi seduhan teh dan jahe 1:1; 1:2; 2:1 2 serta kontrol positif secara berutan 20 ± 5,196; 16,3 ± 6,658; 18,7 ± 6,027; 18,3 ± 1,527; 22,3 ± 2,081; dan 31,3 ± 4,163mm. Hasil analisa SPPS dengan dengan taraf kepercayaannya 95% menunjukkan kombinasi terbaik seduhan teh dan jahe pada perbandingan 2:1.

Kata kunci : *Escherichia coli*, antibakteri, teh , jahe, difusi

ABSTRACT

RISKA DWI SEPTIANA, 2022, TEST OF ANTIBACTERIAL ACTIVITY OF THE COMBINATION OF TEA LEAF POWDER AND GINGER RHIZOMES AGAINST *escherichia coli* ATCC 25922 BACTERIA, SCIENTIFIC PAPER PROPOSAL, D-III PHARMACY STUDY PROGRAM, FACULTY OF FASCINATION, SETIA BUDI UNIVERSITY. Guided by Dr. apt. Ismi Rahmawati. M . The.

Green tea leaves and ginger rhizomes have antibacterial power against *Escherichia coli.* Tea leaf powder and ginger rhizomes have a phenol content that has antibacterial activity. The combination of two or more simplicia can increase activity. The purpose of this study was to determine the antibacterial activity of the combination of tea powder and ginger against *E. coli*.

Tea powder and ginger from the Surakarta market are brewed with hot water according to community use. The result of steeping is carried out phytochemical screening by means of tubes. The result of steeping tea and ginger is made a combination of 1:1, 1:2, 2:1. Tests of antibacterial activity are carried out against the steeping of tea, ginger and their combination using the diffusion method. The results of the antibacterial activity test were analyzed using SPSS.

The result of steeping tea leaf powder contains polyphenols and the rhizomes of red ginger contain flavonoids, saponins and tannins. Antibacterial activity tests against *E. coli* resulted in the inhibitory diameter of ginger steeping, tea steeping, a combination of tea and ginger steeping 1:1; 1:2; 2:1 2 as well as positive control in 20 ± 5.196; 16.3 ± 6,658; 18.7 ± 6,027; 18.3 ± 1,527; 22.3 ± 2,081; and 31.3 ± 4,163mm. The results of the SPPS analysis with a confidence level of 95% showed the best combination of tea and ginger steeping at a ratio of 2: 1.

Keywords : *Escherichia coli*, antibacterial, tea, ginger, diffusion