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UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL DAN n-HEKSAN DAUN SINGKONG (*Manihot esculenta* Crantz) TERHADAP BAKTERI *Staphylococcus aureus*

ABSTRAK

Latar belakang: Daun singkong memiliki kandungan metabolit sekunder alkaloid, flavonoid, tanin, saponin yang memiliki aktivitas sebagai antibakteri. Penelitian dilakukan dengan tujuan mengetahui pengaruh aktivitas antibakteri ekstrak etanol 96% dan n-heksan daun singkong dalam menghambat bakteri *Staphylococcus aureus*.
Metode: Jenis penelitian yang digunakan adalah eksperimental yang diawali ekstraksi menggunakan metode refluks dengan pelarut etanol 96% dan n-heksan, ekstrak dibuat dengan konsentrasi 5%, 10%, 15%. Kontrol positif menggunakan disk amoksisilin, kontrol negatif menggunakan DMSO. Uji antibakteri menggunakan metode difusi cakram. Data diuji menggunakan SPSS dengan uji Kruskall Wallis dan uji Mann Whitney.
Hasil: Pengujian aktivitas antibakteri menunjukkan ekstrak daun singkong mempunyai aktivitas antibakteri terhadap bakteri *Staphylococcus aureus*. Ekstrak etanol konsentrasi 5%; 10%; 15% memiliki rerata zona hambat sebesar 0 mm. Sedangkan ekstrak n-heksan memiliki rerata zona hambat dengan konsentrasi 5%; 10%; 15% sebesar 1,79 mm; 2,918 mm; 3,016 mm. Aktivitas antibakteri berasal dari aktivitas senyawa alkaloid, flavonoid, tanin dan saponin dalam ekstrak daun singkong. Ekstrak daun singkong memiliki daya hambat lebih kecil dibanding amoksisilin yang memiliki rerata zona hambat sebesar 0,7 mm dan 3,325 mm. Hasil uji SPSS menunjukkan tidak adanya perbedaan yang signifikan antar kelompok perlakuan dalam menghambat pertumbuhan bakteri *Staphylococcus aureus.*
Kesimpulan: Tidak ada perbedaan signifikan terhadap aktivitas antibakteri daun singkong ekstrak etanol dan n-heksan terhadap bakteri *Staphylococcus aureus.* Pelarut yang memiliki aktivitas antibakteri paling baik pada ekstrak daun singkong yaitu pelarut n-heksan dengan konsentrasi 15% yang memiliki reratazona hambat sebesar 3,016 mm sehingga termasuk kategori lemah.

Kata kunci: Daun singkong, antibakteri, *Staphylococcus*

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TESTING THE ANTIBACTERIAL ACTIVITY OF ETHANOL AND n-HEXANE EXTRACT OF CASSAVA LEAVES *(Manihot esculenta* Crantz*)* AGAINST THE BACTERIA *Staphylococcus aureus*

ABSTRACT

Background: Cassava leaves contain secondary metabolites of alkaloids, flavonoids, tannins, saponins which have antibacterial activity. The research was carried out with the aim of determining the effect of the antibacterial activity of 96% ethanol extract and n-hexane of cassava leaves in inhibiting *Staphylococcus aureus* bacteria.
Method: The type of research used was experimental which began with extraction using the reflux method with 96% ethanol and n-hexane solvents, extracts were made with concentrations of 5%, 10%, 15%. Positive control used amoxicillin disk, negative control used DMSO. Antibacterial test using the disc diffusion method. Data were tested using SPSS with the Kruskall Wallis test and Mann Whitney test.
Results: Testing of antibacterial activity showed that cassava leaf extract had antibacterial activity against *Staphylococcus aureus* bacteria. Ethanol extract concentration 5%; 10%; 15% have an average zone of inhibition of 0 mm. Meanwhile, n-hexane extract has an average inhibition zone with a concentration of 5%; 10%; 15% of 1.79 mm; 2,918 mm; 3.016mm. Antibacterial activity comes from the activity of alkaloid, flavonoid, tannin and saponin compounds in cassava leaf extract. Cassava leaf extract has a smaller inhibitory power than amoxicillin which has an average zone of inhibition of 0.7 mm and 3.325 mm. The SPSS test results showed that there were no significant differences between treatment groups in inhibiting the growth of *Staphylococcus aureus* bacteria.
Conclusion: There is no significant difference in the antibacterial activity of ethanol and n-hexane extracts of cassava leaves against *Staphylococcus aureus* bacteria. The solvent that has the best antibacterial activity in cassava leaf extract is n-hexane solvent with a concentration of 15% which has a mean zone of inhibition of 3.016 mm so it is in the weak category.

Key words: Cassava leaves, antibacterial, *Staphylococcus*