

UJI AKTIVITAS EKSTRAK ETANOLIK KULIT KENTANG (*Solanum tuberosum* L.) TERHADAP PERTUMBUHAN *Staphylococcus epidermidis* ATCC 12228 SECARA *IN VITRO*

ABSTRAK

Staphylococcus epidermidis merupakan salah satu bakteri penyebab jerawat, bakteri ini akan memicu terjadinya radang pada kulit. Kulit kentang (*Solanum tuberosum* L.) mengandung senyawa polifenol yang memiliki aktivitas antibakteri dalam menghambat pertumbuhan *Staphylococcus epidermidis*. Tujuan penelitian ini untuk mengetahui aktivitas ekstrak etanolik kulit kentang (*Solanum tuberosum* L.) terhadap pertumbuhan *Staphylococcus epidermidis* ATCC 12228.

Ekstrak etanolik kulit kentang hasil dari maserasi dibuat dengan konsentrasi 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Kontrol positif menggunakan eritromisin dan kontrol negatif dengan akuades. Uji aktivitas antibakteri menggunakan metode difusi *test Kirby & Bauer*, *disc* yang mengandung antibakteri diletakan pada media *Mueller-Hinton* yang sudah di biakan bakteri dan diinkubasi selama 24. Zona hambat diukur dari diameter daerah bening yang muncul dan dianalisis menggunakan *Kruskal-wallis* dan *Mann-whitney*.

Hasil penelitian menunjukkan bahwa pada konsentrasi 10%, 20%, 30%, 40%, dan 50%, tidak ada zona hambat, zona hambat terjadi pada konsentrasi 60%, 70%, 80%, 90%, dan 100%. Terdapat perbedaan bermakna pada kontrol negatif dengan konsentrasi 60% sebesar 11,8 mm, konsentrasi 70% sebesar 11,73 mm, konsentrasi 80% sebesar 15,37 mm, konsentrasi 90% sebesar 15,43 mm dan konsentrasi 100 % sebesar 17 mm, sedangkan daya hambat kontrol positif sebesar 31,43 mm.

Kesimpulan yang diambil bahwa ekstrak etanolik kulit kentang mempunyai aktivitas antibakteri dalam menghambat *Staphylococcus epidermidis* tetapi hasilnya zona hambat tidak seluas kontrol positif.

Kata kunci : *Staphylococcus epidermidis*, Kulit Kentang, *Solanum tuberosum* L., Ekstrak etanolik.

THE ETHANOLIC EXTRACT OF POTATO SKIN ACTIVITY TEST (SOLANUM TUBEROSUM L.) ON THE GROWTH OF STAPHYLOCOCCUS EPIDERMIDIS ATCC 12228 ACCORDING TO IN VITRO

ABSTRACT

Staphylococcus epidermidis is one of the acne-causing bacteria, these bacteria will trigger inflammation on the potato skins. (*Solanum tuberosum* L.) contains polyphenolic compounds which possess antibacterial activity in inhibiting the growth of *Staphylococcus epidermidis*. The purpose of this study was to determine the activity of ethanolic extract of potato skins (*Solanum tuberosum* L.) on the growth of *Staphylococcus epidermidis* ATCC 12228.

Ethanolic extract of potato skins which is the result of maceration is made with a concentration of 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Erythromycin was used to keep the positive controls and distilled water was used to keep the negative controls. The diffusion method test Kirby & Bauer was used to the antibacterial activity test, a disc which contains antibacterial placed on the medium Mueller-Hinton that already contains bacteria and it incubated for 24. Zone of inhibition was measured from the diameter of the clear zone that appears and analyzed using Kruskal-Wallis and Mann-Whitney.

The results showed that at a concentration of 10%, 20%, 30%, 40% and 50%, there was no inhibition zone, the zone of inhibition occurred at a concentration of 60%, 70%, 80%, 90% and 100%. There were significant differences in the negative control where 60% concentration had 11.8 mm differences, the concentration of 70% had 11.73 mm, the concentration of 80% had 15.37 mm, the concentration of 90% had 15.43 mm and a concentration of 100% had 17 mm differences, whereas the positive control for inhibition was 31.43 mm.

The conclusions showed that ethanolic extract of potato skins has antibacterial activity in inhibiting *Staphylococcus epidermidis* but the results of zone of inhibition was not as wide as the positive control.

Keywords: *Staphylococcus epidermidis*, potato skins, *Solanum tuberosum* L., ethanolic extract