# **ABSTRACT**

The high mortality rate in the world, especially in tropical areas such as Indonesia, is one of the causes of infectious diseases. Infectious disease is one of the problems in the health sector that many Indonesian people suffer from which from time to time continues to grow. This study aims to determine the antibacterial activity of guava leaf extract with 70% ethanol and chloroform extract against *Staphylococcus aureus* based on the diameter of the inhibition zone. The concentrations of the extracts used were 5%, 10%, and 15%. In addition, for the positive control, amoxicillin was used and the negative control was 10% DMSO. Extraction was carried out by maceration by soaking 250 grams of guava leaf powder in 500 ml of 70% ethanol. The filtrate from the maceration was filtered, then the residue was macerated again with 500 ml of chloroform filter, then evaporated in a rotary evaporator. Produced a thick extract in ethanol as much as 10 grams and in chloroform as much as 6 grams. The extract obtained was then tested for its antibacterial activity using *Nutrient agar* media by well diffusion. Beside, the results obtained showed the presence of antibacterial activity in each filter, namely 5%, 10% and 15% ethanol extract, respectively, of 4.6 mm; 8mm and 10 mm. Meanwhile, in 5% , 10% and 15% chloroform, respectively, they were 4.3 mm; 7.6 mm and 10.3 mm. Positive control of 20 mm amoxicillin and negative control with 10% DMSO solvent did not show any antibacterial activity. Based on the results of the study, the key that the concentration of 15% in both extracts had the highest antibacterial activity in inhibiting the growth of *Staphylococcus aureus*.

Keywords: Guava leaves, *Staphylococcus aureus*, antibacterial, inhibition, well diffusion

**ABSTRAK**

Tingginya angka kematian di dunia terutama di daerah tropis seperti Indonesia, salah satunya disebabkan oleh penyakit infeksi. Penyakit infeksi merupakan salah satu masalah dalam bidang kesehatan yang banyak diderita oleh masyarakat Indonesia. Penelitian ini bertujuan untuk mengetahui aktivitas antibakteri ekstrak daun jambu biji dengan penyari etanol 70% dan penyari kloroform terhadap Staphylococcus aureus berdasarkan diameter zona hambat. Konsentrasi ekstrak yang digunakan yaitu 5%, 10%, dan 15%. Untuk kontrol positif yang digunakan adalah antibiotik amoksisilin, dan kontrol negatif yang digunakan adalah DMSO 10%. Ekstraksi dilakukan secara maserasi dengan merendam 250 gram serbuk daun jambu biji dalam 500 ml etanol 70%. Filtrat hasil maserasi disaring, kemudian residunya dimaserasi kembali dengan penyari kloroform sebanyak 500 ml, kemudian diuapkan didalam rotary evaporator. Menghasilkan ekstrak kental dalam etanol sebanyak 10 gram, dan dalam kloroform sebanyak 6 gram. Ekstrak yang diperoleh kemudian diuji aktivitas antibakterinya menggunakan media Nutrient agar dengan cara difusi sumuran. Hasil yang diperoleh menunjukkan adanya aktivitas antibakteri pada masing-masing penyari yaitu penyari etanol 5%, 10% dan 15% berturut-turut sebesar 4,6 mm; 8 mm dan 10 mm. Sedangkan dalam penyari kloroform 5% ,10% dan 15% berturut-turut sebesar 4,3 mm; 7,6 mm dan 10,3 mm. Kontrol positif amoksisilin sebesar 20 mm dan kontrol negatif dengan pelarut DMSO 10% tidak menunjukkan adanya aktivitas antibakteri. Dari hasil penelitian ini disimpulkan bahwa konsentrasi 15% pada kedua penyari memiliki aktivitas antibakteri tertinggi dalam menghambat pertumbuhan staphylocococcus aureus.

**Kata Kunci :** Daun jambu biji, Staphylococcus aureus, antibakteri, daya hambat, difusi sumuran