ABSTRAK

Diare disebabkan oleh gangguan penyerapan usus terhadap makanan dan minuman (seperti karbohidrat, lemak, dan protein) yang terkontaminasi bakteri seperti *Vibrio cholerae* dan *Escherichia coli*. Tujuan penelitian ini untuk mengetahui pengaruh pemberian biji pinang muda dan berapa persen konsentrasi yang memiliki efek sangat baik untuk mengatasi pertumbuhan bakteri *Vibrio cholerae* dan bakteri *Escherichia coli*. Jumlah sampel yang digunakan sebanyak 5kg. Bentuk penelitian ini ialah True Experimental dan desain penelitian adalah Post - Test Only Control Design menggunakan metode difusi cakram dan data pada penelitian ini akan dianalisis menggunakan software SPSS Versi 27. Untuk konsentrasi dibagi menjadi 4 yaitu 20%, 40%, 60% dan 80% dan kontrol positif (Ciprofloxacin). Selanjutnya dilakukan uji daya hambat pada kedua bakteri yaitu *Vibrio cholerae* dan *Escherichia coli*, menggunakan media NA (Nutrient Agar). Dari penelitian menunjukkan ekstrak dari biji pinang muda *(Arecha catechu L.)* dapat melakukan hambatan pertumbuhan pada kedua bakteri di konsentrasi 20%, 40%, 60%, 80% dan kontrol positif (Ciprofloxacin) yaitu di rata-rata diameter uji daya zona hambat untuk *Vibrio cholerae* 13,3 mm, 11,5 mm, 13,4 mm, 13,8 mm dan 21,3 mm. Dan untuk percobaan daya zona hambat *Escherichia coli* 12,8 mm, 11,5 mm, 11,9 mm, 11,9 mm, 19,4 mm. Penelitian ini menunjukkan bahwa ekstrak biji Pinang Muda *(Arecha Catechu L.)* mempengaruhi efektivitas pertumbuhan bakteri *Vibrio cholerae* dan *Escherichia coli* dari 4 konsentrasi yaitu 20%,40%,60%, dan 80%. Pengaruh biji pinang muda *(Arecha catechu L.)* terhadap bakteri paling tinggi terdapat pada konsentrasi 60%.

Kata kunci: Biji pinang muda; Diare; *Escherichia coli*; Kolera; *Vibrio cholerae*

ABSTRACT

Diarrhea is caused by impaired intestinal absorption of food and beverages (such as carbohydrates, fats, and proteins) contaminated with bacteria such as Vibrio cholerae and Escherichia coli. The purpose of this study was to determine the effect of giving young areca nut seeds and what percentage of the concentration had a very good effect on overcoming the growth of Vibrio cholerae and Escherichia coli bacteria. To determine the effect of giving young areca nut and what percentage of concentration has the best effect on overcoming bacterial growth of Vibrio cholerae and Escherichia coli bacteria. The sample used is 5kg. Type of research is True Experimental and the research design is Post-Test Only Control Design the data in this study will be analyzed using SPSS Version 27 software. The concentration of the extract was made into 4 concentrations, namely 20%, 40%, 60%, 80%, and positive control (Ciprofloxacin). Furthermore, the inhibition test was carried out on the two bacteria, namely Vibrio cholerae and Escherichia coli were conducted using NA (Nutrient Agar) media. Research shows that extracts from young areca nut (Arecha catechu L.) seeds can inhibit the growth of both bacteria at high concentrations 20%, 40%, 60%, 80%, and positive control (Ciprofloxacin) with an average diameter of the inhibitory zone test for Vibrio cholera were 13.3 mm, 11.5 mm, 13.4 mm, 13.8 mm and 21.3 mm. And for the power test, the inhibition zones of Escherichia coli were 12.8 mm, 11.5 mm, 11.9 mm, 11.9 mm, 19,4 mm. This study showed that the extract (Arecha Catechu L.) affected the growth effectiveness of Vibrio cholerae and Escherichia coli bacteria from 4 concentrations, namely 20%, 40%, 60%, and 80%. The effect of young areca nut (Arecha Catechu L.) on bacteria was highest at a concentration of 60%.

Keywords: Cholerae; Diarrhea; Escherichia coli; Vibrio cholera ; Young areca nut