POLITEKNIK KESEHATAN TANJUNGKARANG
JURUSAN ANALIS KESEHATAN
PROGRAM STUDI TEKNOLOGI LABORATORIUM MEDIS
PROGRAM SARJANA TERAPAN
Skripsi, Agustus 2021

Pungky Dian Pratiwi

Pengaruh Antibakteri Ekstrak Etanol Bawang Putih *(Allium sativum L.)* Terhadap Pertumbuhan Bakteri *Propionibacterium acnes* ATCC 11827

xvi + 37 halaman + 8 tabel + 3 gambar + 19 lampiran

ABSTRAK

Propionibacterium acnes merupakan salah satu patogen opurtunis yang menyebabkan penyakit akne vulgaris. Antibiotik memegang peran penting dalam terapi pengobatan akne vulgaris, namun penggunaan antibiotika dalam jangka panjang dapat menimbulkan resistensi. Berdasarkan hasil uji fitokimia bawang putih mengandung senyawa flavonoid, tanin, saponin dan allicin yang dapat digunakan sebagai antibakteri. Penelitian bertujuan mengetahui konsentrasi hambat minimum (KHM) dan konsentrasi bunuh minimum (KBM) ekstrak etanol bawang putih terhadap bakteri *Propionibacterium acnes* ATCC 11827 serta mengetahui perbedaan nyata pada setiap konsentrasi ekstrak etanol bawang putih terhadap pertumbuhan bakteri *Propionibacterium acnes* ATCC 11827. Jenis penelitian adalah eksperimental dengan rancangan acak lengkap (RAL) menggunakan ekstrak etanol bawang putih konsentrasi 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. Data diolah menggunakan uji *One-way Anova* dengan hasil nilai p=0,000 (p<0,05) dilanjutkan ke uji BNT dengan p<0,05. Hasil penelitian menunjukkan KHM ekstrak etanol bawang putih berada pada konsentrasi 20% tetapi KBM ekstrak etanol bawang putih tidak diperoleh. Berdasarkan uji *post hoc* terdapat perbedaan yang nyata antara konsentrasi 100% dan 90% dengan konsentrasi 10%-70%, konsentrasi 80% dengan konsentrasi 10%-60%, konsentrasi 70% dengan konsentrasi 10%-50%, konsentrasi 60% dengan konsentrasi 10%-20%, dan konsentrasi 50% dengan konsentrasi 10%.

Kata Kunci : *Propionibacterium acnes* ATCC 11827, Bawang Putih, Maserasi
Daftar Bacaan : 46 (1985-2020)

THE HEALTH POLYTECHNIC OF TANJUNGKARANG BACHELOR OF APPLIED PROGRAM MEDICAL LABORATORY TECHNOLOGY
A thesis, August 2021

Pungky Dian Pratiwi

Antibacterial Effect Of Garlic (*Allium Sativum* L.) Ethanol Extract On The Growth Of Bacteria *Propionibacterium acnes* ATCC 11827

xvi + 37 Pages + 8 Tables + 3 Picture + 19 Attachment

ABSTRACT

Propionibacterium acnes is one of the opportunistic pathogens that causes acne vulgaris. Antibiotics play an important role in the treatment of acne vulgaris, but long-term use of antibiotics can cause resistance. Based on the phytochemical test results, garlic contains flavonoid compounds, tannins, saponins and allicin which can be used as antibacterial. This study aims to determine the minimum inhibitory concentration (MIC) and minimum killing concentration (MBC) of garlic ethanol extract against the bacteria Propionibacterium acnes ATCC 11827 and to determine the significant difference in each concentration of garlic ethanol extract on the growth of bacteria Propionibacterium acnes ATCC 11827. The type of research is experimental with Completely randomized design (CRD) using garlic ethanol extract concentrations of 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80%, 90%, 100%. The data was processed using the One-way Anova test with the results of the p value = 0.000 ($p < 0.05$) followed by the BNT test with $p < 0.05$. The results showed that the MIC of garlic ethanol extract was at a concentration of 20% but the MIC of garlic ethanol extract was not obtained. Based on the post hoc test there is a significant difference between the concentration of 100% and 90% with a concentration of 10%-70%, 80% concentration with a concentration of 10%-60%, 70% concentration with a concentration of 10%-50%, 60% concentration with a concentration of 10%-50%. 10%-20%, and 50% concentration with 10% concentration.

Keywords : *Propionibacterium acnes* ATCC 11827, Garlic, Macerat

Reading list : 46 (1985-2020)