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**PENENTUAN KADAR FLAVONOID DAN UJI AKTIVITAS ANTIBAKTERI EKSTRAK ETANOL DAUN DAN BUNGA CENGKEH (*Syzygium aromaticum* L.) TERHADAP BAKTERI *Propionibacterium acnes***

**ABSTRAK**

**Latar belakang:** Kandungan utama dari minyak cengkeh ini adalah senyawa fenol, yakni eugenol, eugenol asetat dan asam galat, serta flavonoid. Terdapat zat aktif pembunuh bakteri yang terkandung dalam tanaman cengkeh (*Syzygium aromaticum* L.) Penelitian ini bertujuan untuk menganalisis kadar flavonoid dan juga menganalisis aktivitas antibakteri ekstrak daun dan bunga cengkeh.

**Metode:** Penelitian yang dilakukan merupakan penelitian eksperimental laboratorium. Ekstraksi daun dan bunga cengkeh (*Syzygium aromaticum* L.) kemudian dilanjutkan dengan penentuan kadar flavonoid. Uji aktivitas antibakteri menggunakan metode difusi cakram terhadap bakteri *Propionibacterium acnes* dengan konsentrasi 10%, 20% dan 50%. Analisis data menggunakan SPSS versi 23.

**Hasil:** Hasil kadar flavonoid Kadar flavonoid total ekstrak daun dan bunga cengkeh sebesar 50,667 mg/QE dan sebesar 64,976 mg/QE. Diameter zona hambat ekstrak daun dan bunga pada konsentrasi 10%, 20% dan 50% berturut-turut adalah 5,58 mm, 8,72 mm, 13,7 mm, 6,11 mm, 9,70 mm dan 15,63 mm.

**Kesimpulan:** Kadar flavonoid total ekstrak daun cengkeh (*Syzygium aromaticum* L.) sebesar  $50,667 \pm 0,175$  dan ekstrak bunga cengkeh (*Syzygium aromaticum* L.) sebesar  $64,976 \pm 0,175$ . Berdasarkan hasil pengujian bakteri menunjukkan bahwa ekstrak etanol daun dan bunga cengkeh memiliki aktivitas menghambat pertumbuhan bakteri *Propionibacterium acnes* penyebab jerawat.

**Kata kunci:** Daun & Bunga Cengkeh, mgQE Kadar Flavonoid, *P.acnes*

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***DETERMINATION OF FLAVONOID CONTENT AND ANTIBACTERIAL ACTIVITY TEST OF CLOVE LEAF AND FLOWER ETHANOL EXTRACT (Syzygium aromaticum L.) AGAINST TO Propionibacterium Acne***

**ABSTRACT**

**Background:** The main contents of clove oil are phenolic compounds, namely eugenol, eugenol acetate and gallic acid, as well as flavonoids. There are active bacteria-killing substances contained in the clove plant (*Syzygium aromaticum L.*). This research aims to analyze flavonoid levels and also analyze the antibacterial activity of clove leaf and flower extracts.

**Methods:** The research conducted was a laboratory experimental study. Extraction of clove leaves and flowers (*Syzygium aromaticum L.*) using 96% ethanol, then followed by determining the levels of flavonoids. Anti-bacterial activity test using the diffusion method against *Propionibacterium acnes* bacteria with concentrations of 10%, 20% and 50%. Data analysis using SPSS version 23.

**Results:** Results of flavonoid levels The total flavonoid levels of clove leaf and flower extracts were 50.667 mg/QE and 64.976 mg/QE. The diameter of the inhibition zone of leaf and flower extracts at concentrations of 10%, 20% and 50% were 5.58 mm, 8.72 mm, 13.7 mm, 6.11 mm, 9.70 mm and 15.63 mm.

**Conclusion:** The total flavonoid content of clove leaf extract (*Syzygium aromaticum L.*) was  $50.667 \pm 0.141$  and clove flower extract (*Syzygium aromaticum L.*) was  $64.976 \pm 0.244$ . Based on the results of bacterial testing, it shows that the ethanol extract of clove leaves and flowers has the activity of inhibiting the growth of *Propionibacterium acnes* bacteria which causes acne.

**Keywords:** Clove Leaves & Flowers, mgQE Flavonoid Content, *P.acnes*