

**Perbandingan Efektivitas Flavonoid Dan Tanin Ekstrak Daun Kemangi (*Ocimum Sanctum L.*) Dalam Menghambat Pertumbuhan Bakteri *Porphyromonas Gingivalis* (In Vitro)**

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**Abstrak**

**Pendahuluan:** Penyakit periodontal yang sering terjadi adalah periodontitis kronis. Patogen utama penyebab periodontitis kronis yaitu *Porphyromonas gingivalis*. Tanaman herbal yang dapat dimanfaatkan yaitu daun kemangi (*Ocimum sanctum L.*) Kadar tanin dalam daun kemangi (*Ocimum sanctum L.*) sebesar 4,6% dan flavonoid, steroid, triterpenoid, minyak atsiri, memiliki senyawa aktif 2%. **Tujuan penelitian:** Mengetahui perbandingan efektivitas zat aktif flavonoid dan tanin pada ekstrak daun kemangi (*Ocimum sanctum L.*) dalam menghambat pertumbuhan bakteri *Porphyromonas gingivalis*. **Metode:** Penelitian ini berupa eksperimental laboratorium dengan bentuk rancangan penelitian *post test only control group design* dengan menggunakan metode difusi sumuran. Penelitian menggunakan 24 sampel, Satu cawan petri dibuat 4 sumuran yang ditetesi flavonoid 80%, tanin 80%, khlorheksidin 0,2, akuades steril masing-masing sebanyak 50 µl dengan mikropipet. Cawan petri diinkubasi selama 24 jam dengan suhu 37°C. **Hasil:** uji daya hambat flavonoid dan tanin ekstrak daun kemangi terhadap *Porphyromonas gingivalis* yaitu konsentrasi 80% sudah memperlihatkan adanya zona hambat. Konsentrasi flavonoid 80% menghasilkan diameter rerata zona hambat 2,06 mm dan Konsentrasi tanin 80% menghasilkan diameter rerata zona hambat 1,28 mm. Flavonoid memiliki rerata zona hambat terbesar 2,06 dapat disimpulkan bahwa terdapat perbedaan signifikan antara flavonoid dan tanin ekstrak daun kemangi dalam menghambat bakteri *Porphyromonas gingivalis*. **Simpulan:** Flavonoid lebih efektif menghambat bakteri *Porphyromonas gingivalis* dibandingkan tanin 80%.

**Kata kunci:** Daun kemangi, flavonoid, tanin, *Porphyromonas gingivalis*

**Comparative Effectiveness of Flavonoids And Tannin Extract Basil (*Ocimum Sanctum L.*)  
In Inhibits Growth of bacteria *Porphyromonas gingivalis* (In Vitro)**

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**Abstract**

**Introduction:** Periodontal disease is the most common chronic periodontitis. The main pathogenic cause of chronic periodontitis is *Porphyromonas gingivalis*. Herbs that can be used are basil (*Ocimum sanctum L.*) Levels of tannins in leaves of basil (*Ocimum sanctum L.*) is 4.6% and flavonoids, steroids, triterpenoids, essential oils, has a 2% active compound. Objective: Knowing the comparative effectiveness of active substances in the flavonoid and tannin extracts of basil (*Ocimum sanctum L.*) in inhibiting the growth of bacteria *Porphyromonas gingivalis*. **Methods:** the design of the research was experimental laboratory research design form post test only control group design using method cup of plate diffusion. one petri dish divided by 4 cup of plate, sample were 24, each cup of plate contain 50 µl flavonoid 80%, tannin 80%, chlorheksidine 0.2% . They were cup of plate incubated for 24 hours with a temperature of 37°C. **Results:** The test of the inhibition of flavonoid and tannin extracts of basil against *Porphyromonas gingivalis* is the concentration of 80% already showed inhibition zone. Flavonoid concentration of 80% resulted in a mean diameter of 2.06 mm zone of inhibition and tannin concentration of 80% resulted in a mean diameter of 1.28 mm zone of inhibition. Flavonoids have the largest inhibitory zone average 2.06 can be concluded that there were significant differences between the flavonoids and tannins basil leaf extract in inhibiting bacteria *Porphyromonas gingivalis*. **Conclusion:** Flavonoids more effective inhibit the bacteria *Porphyromonas gingivalis* than tannin 80%.

**Keywords:** Basil leaves, flavonoids, tannins, *Porphyromonas gingivalis*