

**The Effectiveness Of Leaf Extract Beluntas (*Pluchea indica* (L.) Less.) In  
Inhibiting Bacterial Growth Of *Streptococcus mutans***

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**Abstract**

Dental caries, or known as perforated teeth, are a harsh tissue disease caused by the *Streptococcus mutans* bacteria. One of the plants that has antibacterial activity on *Streptococcus mutans* bacteria and has been widely researched is the leaf beluntas. The Beluntas leaves (*Pluchea indica* L.) are herbal plants that have active compounds that are able to inhibit the growth of *Streptococcus mutans* bacteria. **Research objectives:** To know the effectiveness of leaf extract in inhibiting the growth of *Streptococcus mutans* bacteria. **Method:** The research is a true experimental research laboratoris with post test only group design using a Sumuran method, with a large sample 27 treatment that is divided into 3 groups of concentrations of leaf extract beluntas against bacteria *Streptococcus mutans* is 25%,50% and 75% which then results in a barrier zone diameter. The analysis of the data used is *One Way Anova* test followed by a *Post Hoc test* analysis of the *Bonferroni* test. **Result:** Beluntas leaf extract produces a barrier zone diameter with the average of each concentration of 25% =  $6.43 \pm 0.059$ , 50% =  $7.50 \pm 0.019$  and 75% =  $8.94 \pm 0.291$ . A test result of *One Way Anova* and test *Post Hoc test* analysis of the *Bonferroni* test is obtained (P-value) = 0.000 or ( $p < 0.05$ ). **Conclusion:** Extract of beluntas leaves (*Pluchea indica* L.) at concentrations of 25%,50% and 75% effective in inhibiting the growth of *Streptococcus mutans* bacteria and included in the medium category.

**Key word:** Dental caries, *Streptococcus mutans*, Beluntas leaf (*Pluchea indica* L.)

# EFEKTIVITAS EKSTRAK DAUN BELUNTAS (*Pluchea indica* (L.) LESS. )

## DALAM MENGHAMBAT PERTUMBUHAN BAKTERI

### *Streptococcus mutans*

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### Abstrak

Karies gigi atau dikenal dengan gigi berlubang merupakan suatu penyakit jaringan keras gigi akibat bakteri *Streptococcus mutans*. Salah satu tanaman yang memiliki aktivitas antibakteri terhadap bakteri *Streptococcus mutans* dan telah banyak diteliti adalah daun beluntas. Daun beluntas (*Pluchea indica* L.) merupakan tanaman herbal yang memiliki senyawa aktif yang mampu menghambat pertumbuhan bakteri *Streptococcus mutans*. **Tujuan penelitian:** mengetahui efektivitas ekstrak daun beluntas dalam menghambat pertumbuhan bakteri *Streptococcus mutans*. **Metode:** Jenis penelitian ini adalah penelitian true eksperimental laboratoris dengan *post test only group design* menggunakan metode sumuran, dengan besar sampel 27 perlakuan yang terbagi menjadi 3 kelompok konsentrasi ekstrak daun beluntas terhadap bakteri *Streptococcus mutans* yaitu 25%, 50% dan 75% yang kemudian menghasilkan diameter zona hambat. Analisis data yang digunakan adalah uji *One Way Anova* diikuti dengan uji *Post Hoc Test* analisa uji *Bonferroni*. **Hasil:** Ekstrak daun beluntas menghasilkan diameter zona hambat dengan rerata tiap konsentrasi yaitu 25% =  $6,43 \pm 0,059$ , 50% =  $7,50 \pm 0,019$  dan 75% =  $8,94 \pm 0,291$ . Berdasarkan hasil uji *One Way Anova* dan uji *Post Hoc Test* analisa uji *Bonferroni* didapatkan nilai (P-value) = 0,000 atau ( $p < 0,05$ ). **Kesimpulan:** Ekstrak daun beluntas pada konsentrasi 25%, 50% dan 75% efektif dalam menghambat pertumbuhan bakteri *Streptococcus mutans* dan termasuk dalam kategori sedang.

**Kata kunci :** Karies Gigi, *Streptococcus mutans*, Daun beluntas  
(*Pluchea indica* L.)

