

**EFEKTIVITAS DAYA HAMBAT EKSTRAK BONGGOL NANAS**

**(*Ananas comosus (L.) Merr*) TERHADAP BAKTERI**

***Lactobacillus acidophilus* ATCC 4356**



**Skripsi**

**Sebagai salah satu syarat**

**Untuk memperoleh gelar sarjana**

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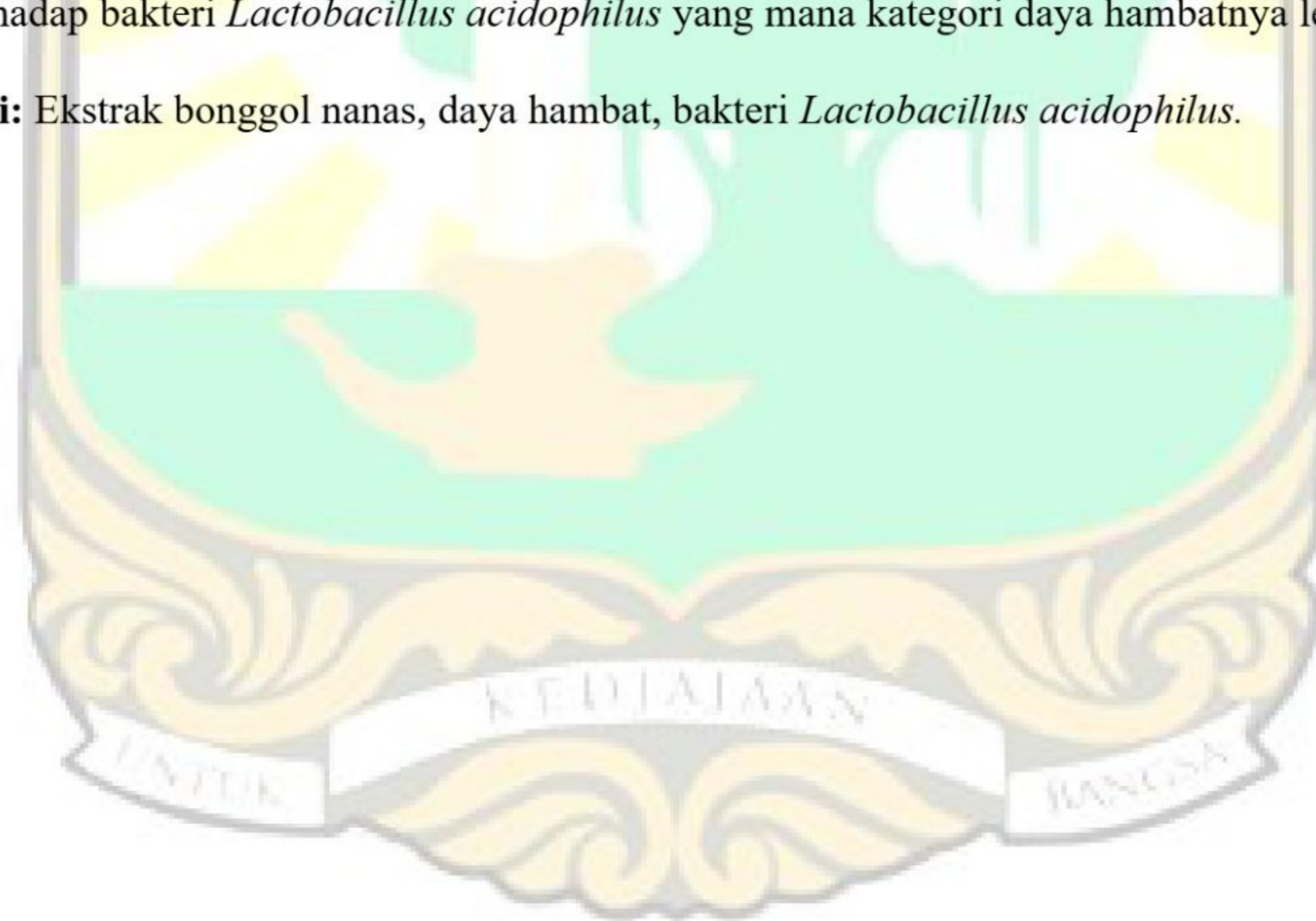
**EFEKTIVITAS DAYA HAMBAT EKSTRAK BONGGOL NANAS  
(*Ananas comosus* (L.) Merr) TERHADAP BAKTERI  
*Lactobacillus acidophilus* ATCC 4356**

Oleh : Dian Anggraini

**ABSTRAK**

**Latar belakang :** Bakteri *Lactobacillus acidophilus* merupakan salah satu faktor penyebab karies gigi. Karies dapat dicegah dengan menggunakan bahan antibakteri dengan menggunakan alternatif bahan alami yang memiliki kandungan senyawa antibakteri seperti ekstrak bonggol nanas. **Tujuan:** Mengetahui efektivitas daya hambat ekstrak bonggol nanas terhadap bakteri *Lactobacillus acidophilus*. **Metode:** Jenis penelitian ini adalah *true experimental* laboratoris dengan desain penelitian *post-test only group design*. Pembuatan ekstrak bonggol nanas dilakukan dengan menggunakan teknik maserasi dan diencerkan dengan *aquadest* untuk mendapatkan larutan uji konsentrasi 12,5%, 25%, 50% dan 75%. Pengujian daya hambat dilakukan dengan metode difusi cakram *Kirby-Bauer* menggunakan media MRS-A. Analisis data hasil penelitian menggunakan uji *Kruskal-Wallis* dan dilanjutkan dengan uji *Mann-Whitney*. **Hasil:** Hasil penelitian menunjukkan bahwa ekstrak bonggol nanas mampu menghambat pertumbuhan bakteri *Lactobacillus acidophilus*. Zona hambat terbesar diamati pada konsentrasi 75% dengan diameter 2,86 mm, sedangkan zona hambat terkecil pada konsentrasi 50% dengan diameter 2,29 mm. Analisis statistik menggunakan uji *Kruskal-Wallis* menunjukkan nilai  $p = 0,000$  ( $p < 0,05$ ) yang berarti adanya perbedaan rata-rata zona hambat terhadap pertumbuhan bakteri *Lactobacillus acidophilus* diantara kelompok konsentrasi 12,5%, 25%, 50% dan 75% dan kelompok kontrol. **Kesimpulan:** Ekstrak bonggol nanas pada konsentrasi 50%, dan 75%, menunjukkan daya hambat terhadap bakteri *Lactobacillus acidophilus* yang mana kategori daya hambatnya lemah.

**Kata kunci:** Ekstrak bonggol nanas, daya hambat, bakteri *Lactobacillus acidophilus*.



**EFFECTIVENESS OF INHIBITION POWER OF PINEAPPLE CORE  
EXTRACT (*Ananas comosus* (L.) Merr) AGAINST BACTERIA  
*Lactobacillus acidophilus* ATCC 4356**

By : Dian Anggraini

**ABSTRACT**

**Background:** *Lactobacillus acidophilus* bacteria is one of the factors causing dental caries. Caries can be prevented by using antibacterial materials by using alternative natural materials that contain antibacterial compounds such as pineapple core extract. **Objective:** To determine the effectiveness of inhibition power of pineapple core extract against *Lactobacillus acidophilus* bacteria. **Methods:** This type of research was true experimental laboratory with post-test only group design. The preparation of pineapple core extract was carried out using maceration technique and diluted with distilled water to obtain a concentration test solution of 12.5%, 25%, 50% and 75%. Inhibition power testing was carried out using the Kirby-Bauer disc diffusion method using MRS-A media. Data analysis of the research results using the Kruskal-Wallis test and continued with the Mann-Whitney test. **Results:** The results showed that pineapple core extract was able to inhibit the growth of *Lactobacillus acidophilus* bacteria. The largest inhibition zone was observed at concentration of 75% with a diameter of 2.86 mm, while the smallest inhibition zone was at concentration of 50% with a diameter of 2.29 mm. Statistical analysis using the Kruskal-Wallis test showed a  $p$  value = 0.000 ( $p < 0.05$ ), which means there was a difference in the average inhibition zone against the growth of *Lactobacillus acidophilus* bacteria between the concentration groups of 12.5%, 25%, 50% and 75% and the control group. **Conclusion:** Pineapple core extract at concentrations of 50%, and 75%, showed inhibition power against *Lactobacillus acidophilus* bacteria, which were in the weak inhibition category.

**Keywords:** Pineapple core extract, inhibition, *Lactobacillus acidophilus* bacteria.

