

UJI DAYA HAMBAT EKSTRAK DAUN SAWO TERHADAP BAKTERI
Escherichia coli SECARA *IN VITRO*



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ABSTRACT

IN VITRO* INHIBITORY TEST OF SAPODILLA LEAVES EXTRACT TO *Escherichia coli

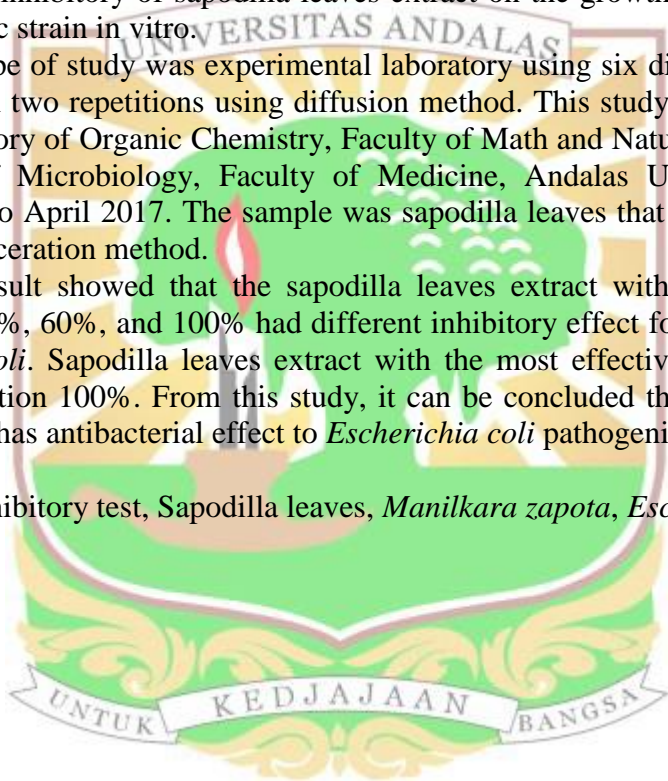
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Sapodilla leaves are a part of Sapodilla (*Manilkara zapota*) often used as anti diarrhea. Sapodilla leaves contain saponins, tannins, and flavonoids that act as antibacterial, so that assumed to inhibit the growth of bacteria that cause of diarrhea. One of the bacteria that cause of diarrhea is *Escherichia coli* pathogenic strain such as EPEC, ETEC, EAEC, and EIEC. The objective of this study was to determine the inhibitory of sapodilla leaves extract on the growth of *Escherichia coli* pathogenic strain in vitro.

The type of study was experimental laboratory using six different samples of *E. coli* with two repetitions using diffusion method. This study was conducted in the Laboratory of Organic Chemistry, Faculty of Math and Natural Science and Laboratory of Microbiology, Faculty of Medicine, Andalas University, from August 2016 to April 2017. The sample was sapodilla leaves that extracted using ethanol by maceration method.

The result showed that the sapodilla leaves extract with concentrations 15%, 30%, 45%, 60%, and 100% had different inhibitory effect for the growth of *Escherichia coli*. Sapodilla leaves extract with the most effective concentration was concentration 100%. From this study, it can be concluded that the sapodilla leaves extract has antibacterial effect to *Escherichia coli* pathogenic strain.

Keywords: Inhibitory test, Sapodilla leaves, *Manilkara zapota*, *Escherichia coli*



ABSTRAK

UJI DAYA HAMBAT EKSTRAK DAUN SAWO TERHADAP BAKTERI *Escherichia coli* SECARA *IN VITRO*

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Daun sawo merupakan bagian dari tanaman sawo (*Manilkara zapota*) yang sering digunakan masyarakat sebagai obat antidiare. Daun sawo mengandung senyawa saponin, tanin, dan flavonoid yang dapat bersifat sebagai antibakteri sehingga diduga mampu menghambat pertumbuhan bakteri penyebab diare. Salah satu bakteri penyebab diare adalah *Escherichia coli* yang strain patogen seperti EPEC, ETEC, EAEC, dan EIEC. Penelitian ini bertujuan untuk mengetahui daya hambat ekstrak daun sawo terhadap bakteri *Escherichia coli* strain patogen secara *in vitro*.

Jenis penelitian adalah eksperimental laboratorium menggunakan 6 bakteri uji *E. coli* berbeda dengan 2 kali pengulangan menggunakan metode difusi. Penelitian dilakukan di Laboratorium Kimia Organik FMIPA dan Laboratorium Mikrobiologi FK UNAND pada bulan Agustus 2016 sampai April 2017. Sampel yang digunakan adalah daun sawo yang telah dilakukan proses ekstraksi maserasi menggunakan etanol.

Hasil penelitian menunjukkan ekstrak daun sawo dengan konsentrasi 15%, 30%, 45%, 60%, dan 100% memiliki daya hambat yang berbeda-beda terhadap bakteri uji *E. coli*. Konsentrasi ekstrak daun sawo yang paling efektif yaitu konsentrasi 100%. Dari penelitian ini disimpulkan bahwa ekstrak daun sawo mempunyai sifat antibakteri terhadap bakteri uji *Escherichia coli* strain patogen.

Kata kunci: Uji daya hambat, Daun sawo, *Manilkara zapota*, *Escherichia coli*

