



Uji Aktivitas Antibakteri Ekstrak Etanol Daun Mangga Kasturi (*Mangifera casturi*) Terhadap Pertumbuhan Bakteri *Escherichia coli* dan *Methicillin-resistant staphylococcus aureus* (MRSA)

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ABSTRACK

Escherichia coli and *Methicillin-resistan staphylococcus aureus* (MRSA) are bacteria that cause infection in humans. One herbal plant that can be antibacterial is the mango kasturi plant because on the leaves there are tannin compounds and flavonoids. The purpose of this study was to find out whether the ethanol extract of kasturi mango leaves was able to inhibit the growth of *Escherichia coli* and *Methicillin-resistant staphylococcus aureus* (MRSA) based on the diameter value of its bland zone. Extraction of kasturi mango leaves using the maceration method with a 96% ethanol solvent. Identification of secondary metabolite compounds using qualitative test methods by looking at discoloration. Testing antibacterial activity using disc diffusion methods. Antibacterial activity testing data was processed using a post hoc test method with LSD using the spss program. Extracted bland zone results of 0.5%, 1%, 2%, 4%, 6% against *Escherichia coli* consecutively $13 \pm 0,00$ mm; $14 \pm 1,73$ mm; $18,3 \pm 4,04$ mm; $20,7 \pm 5,03$ mm; $22 \pm 3,46$ mm and against *Methicillin-resistant staphylococcus aureus* (MRSA) consecutive $12 \pm 1,73$ mm; $12,7 \pm 5,77$ mm; $13 \pm 0,00$ mm; $14 \pm 3,46$ mm; $17,3 \pm 7,51$ mm. The results of the post hoc test against *Escherichia coli* on extracts of 4% and 6% were comparable to the positive control of ciprofloxacin 0.005% due to the value of ($p > 0,05$). The results of the post hoc test against *Methicillin-resistant staphylococcus aureus* (MRSA) at all extract concentrations were not comparable to the positive control of ciprofloxacin 0.005% due to the value of ($p < 0,05$). Ethanol extract of mango kasturi leaves has antibacterial activity against the growth of *Escherichia coli* and *Methicillin-resistant staphylococcus aureus* (MRSA).

Keywords: *Mangifera casturi*, *Escherichia coli*, *Methicillin-resistant staphylococcus aureus* (MRSA)



ABSTRAK

Escherichia coli dan *Methicillin-resistant staphylococcus aureus* (MRSA) merupakan bakteri penyebab terjadinya infeksi pada manusia. Salah satu Tumbuhan herbal yang dapat bersifat sebagai antibakteri yaitu tumbuhan mangga kasturi karena pada daunnya terdapat senyawa tanin dan flavonoid. Tujuan penelitian ini untuk mengetahui apakah ekstrak etanol daun mangga kasturi mampu menghambat pertumbuhan *Escherichia coli* dan *Methicillin-resistant staphylococcus aureus* (MRSA) berdasarkan nilai diameter zona hambatnya. Ekstraksi daun mangga kasturi menggunakan metode maserasi dengan pelarut etanol 96%. Identifikasi senyawa metabolit sekunder menggunakan metode uji kualitatif dengan melihat perubahan warna. Pengujian aktivitas antibakteri menggunakan metode difusi cakram. Data pengujian aktivitas antibakteri diolah menggunakan metode uji pos hoc dengan LSD menggunakan program spss. Hasil zona hambat ekstrak 0,5%, 1%, 2%, 4%, 6% terhadap *Escherichia coli* berturut-turut $13 \pm 0,00$ mm; $14 \pm 1,73$ mm; $18,3 \pm 4,04$ mm; $20,7 \pm 5,03$ mm; $22 \pm 3,46$ mm dan terhadap *Methicillin-resistant staphylococcus aureus* (MRSA) berturut-turut $12 \pm 1,73$ mm; $12,7 \pm 5,77$ mm; $13 \pm 0,00$ mm; $14 \pm 3,46$ mm; $17,3 \pm 7,51$ mm. Hasil uji pos hoc terhadap *Escherichia coli* pada ekstrak 4% dan 6% sebanding dengan kontrol positif ciprofloxacin 0,005% karena nilai ($p > 0,05$). Hasil uji pos hoc terhadap *Methicillin-resistant staphylococcus aureus* (MRSA) pada semua konsentrasi ekstrak tidak sebanding dengan kontrol positif ciprofloxacin 0,005% karena nilai ($p < 0,05$). Simpulan penelitian ini Ekstrak etanol daun mangga kasturi memiliki aktivitas antibakteri terhadap pertumbuhan *Escherichia coli* dan *Methicillin-resistant staphylococcus aureus* (MRSA).

Kata kunci : *Mangifera casturi*, *Escherichia coli*, *Methicillin-resistant staphylococcus aureus* (MRSA)