

Potensi Ekstrak Jinten Hitam (*Nigella sativa* Linn..) sebagai Agen Antibakteri *Escherichia coli* = The Potential of Black Cumin (*Nigella sativa* Linn.) Extract as Antibacterial Agent for *Escherichia coli*

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Abstrak

[ABSTRAK

Penyakit diare masih merupakan masalah serius di Indonesia, terutama pada anak-anak. Salah satu patogen tersering penyebab diare adalah *Escherichia coli*, terutama ETEC. Penggunaan *Nigella sativa* untuk berbagai penyakit sudah diteliti, namun hasil penelitian terhadap *Escherichia coli* belum konklusif. Oleh karena itu dilakukan percobaan untuk mengetahui potensi antibakteri *Nigella sativa* Linn. terhadap *Escherichia coli*. Penelitian dilakukan di Laboratorium Mikrobiologi FKUI secara *in vitro*, menggunakan metode sumuran. Konsentrasi ekstrak *N. sativa* yang digunakan ialah 1000 mg/ml, 500 mg/ml, 250 mg/ml, 125 mg/ml, dan 62,5 mg/ml, dengan siprofloksasin sebagai kontrol positif dan akuades sebagai kontrol negatif. Percobaan dilakukan tiga kali dengan pengulangan masing-masing empat kali. Pada penelitian ini tidak ditemukan adanya efek antibakteri *Nigella sativa* Linn. terhadap *Escherichia coli*. Hal ini dapat disebabkan oleh karakteristik *Nigella sativa* di Indonesia

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ABSTRACT

Diarrhea is still a serious problem in Indonesia, especially in children. One of the most common pathogen causing diarrhea is *Escherichia coli*, particularly ETEC. The use of *Nigella sativa* for various diseases have been studied, but the results of a study of *Escherichia coli* has not been conclusive. Therefore an experiment is conducted to determine the antibacterial activity of *Nigella sativa* Linn. against *Escherichia coli*. The experiment is conducted at the Laboratory of Microbiology Faculty of Medicine *in vitro*, using agar dilution method. *N. sativa* extract concentration used was 1000 mg / mL, 500 mg / mL, 250 mg / mL, 125 mg / ml, and 62.5 mg / ml, with ciprofloxacin as a positive control and distilled water as a negative control. Experiments were performed three times with each repetition of four times. The study results show no antibacterial effects of *Nigella sativa* Linn. against *Escherichia coli*. It can be caused by the characteristics of *Nigella sativa* in Indonesia; Diarrhea is still a serious problem in Indonesia, especially in children. One of the most common pathogen causing diarrhea is *Escherichia coli*, particularly ETEC. The use of *Nigella sativa* for various diseases have been studied, but the results of a study of *Escherichia coli* has not been conclusive. Therefore an experiment is conducted to determine the antibacterial activity of *Nigella sativa* Linn. against *Escherichia coli*. The experiment is conducted at the Laboratory of Microbiology Faculty of Medicine *in vitro*, using agar dilution method. *N. sativa* extract concentration used was 1000 mg / mL, 500 mg / mL, 250 mg / mL, 125 mg / ml, and 62.5 mg / ml, with ciprofloxacin as a positive control and distilled water as a negative control. Experiments were performed three times with each repetition of four times. The study results show no antibacterial effects of *Nigella sativa* Linn. against *Escherichia coli*. It can be caused by the characteristics of *Nigella sativa* in Indonesia; Diarrhea is still a serious problem in Indonesia, especially in children. One of the most common pathogen causing diarrhea is *Escherichia coli*, particularly ETEC. The use of *Nigella sativa* for various diseases have been studied, but the results of a study of *Escherichia coli* has

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