

## ABSTRAK

### UJI SENSITIVITAS ANTIBIOTIK *Escherichia coli* RESISTEN COLISTIN ASAL SAMPEL SWAB KLOAKA AYAM BROILER

Galuh Citra Rahmawati

18/423991/KH/09616

Kejadian resistensi antibiotik dan *Multidrug Resistant* (MDR) belakangan ini menjadi masalah kesehatan global utama. Penggunaan antibiotik yang irasional, tidak tepat diagnosis, dan tidak tepat bakteri penyebab penyakit pada dunia peternakan menjadi salah satu pemicu adanya resistensi antibiotik. Hal ini akan menyebabkan kegagalan pengobatan dan kerugian ekonomi pada sektor peternakan.

*Escherichia coli* merupakan bakteri Gram negatif flora normal pada saluran pencernaan hewan dan manusia dapat dijadikan indikator adanya resistensi antibiotik. Penelitian ini bertujuan untuk mengetahui sensitivitas bakteri *Escherichia coli* yang resisten colistin dari sampel swab kloaka broiler terhadap berbagai antibiotik.

Uji sensitivitas dilakukan dengan metode difusi agar disk antibiotik Kirby-Bauer menggunakan media *Mueller Hinton Agar* (MHA), enam disk antibiotik dengan empat isolat *Escherichia coli* yang resisten colistin. Hasil dianalisis secara deskriptif berdasarkan zona hambat yang terbentuk dan dibandingkan dengan zona hambat standar. Hasil uji sensitivitas empat isolat *Escherichia coli* yang resisten colistin terhadap antibiotik lain adalah 100% resisten terhadap ampicilin, streptomisin, amoksisilin dan trimetoprim-sulfametoksazol, 75% resisten terhadap tetrasiklin, dan 25% resistensi terhadap kloramfenikol.

Kata Kunci: *Escherichia coli*, Uji Sensitivitas, Resistensi, *Multidrug Resistant* (MDR), Antibiotik

## ***ABSTRACT***

### **THE SUSCEPTIBILITY TEST TO ANTIBIOTICS OF COLISTIN-RESISTANT *Escherichia coli* FROM CLOACAL SWAB SAMPLES OF BROILER CHICKENS**

Galuh Citra Rahmawati

18/423991/KH/09616

The incidence of antibiotic resistance and Multidrug-resistant (MDR) has become major global health problem. Irrational use of antibiotics, not in accordance with the correct diagnosis and not in accordance with the bacteria that cause disease in the livestock are one of the triggers for antibiotic resistance. This emergence of antibiotic resistance will lead to treatment failure and economic loss in the livestock sector.

*Escherichia coli* is a Gram negative bacteria and is also normal flora in the digestive tract of animals and humans, which can be used as an indicator of antibiotic resistance. This study aims to determine the susceptibility of colistin-resistant *Escherichia coli* from cloacal swab samples of broiler to various antibiotics.

The susceptibility test was carried out by the Kirby-Bauer agar disc diffusion method using Mueller Hinton Agar (MHA), six antibiotic discs with four colistin-resistant *Escherichia coli* isolates. The results were analyzed descriptively based on the zone of inhibition formed and compared with the standard inhibition zone. The results of the susceptibility test of four colistin-resistant *Escherichia coli* isolates to other antibiotics were 100% resistant to ampicillin, streptomycin, amoxicillin, and trimethoprim-sulfamethoxazole, 75% resistant to tetracycline, and 25% resistant to chloramphenicol.

**Keyword:** *Escherichia coli*, Susceptibility test, Resistance, Multidrug-Resistant (MDR), Antibiotic