

ABSTRAK

IDENTIFIKASI DAN UJI SENSITIVITAS ANTIBIOTIK TERHADAP BAKTERI *Enterococcus* spp. ASAL SWAB KLOAKA AYAM BROILER DI KABUPATEN SLEMAN YOGYAKARTA

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Ayam pedaging (broiler) merupakan salah satu unggas yang memberikan kontribusi besar dalam memenuhi kebutuhan protein asal hewani bagi masyarakat Indonesia. Faktor pemeliharaan perlu diperhatikan guna mengoptimalkan hasil produksi peternakan. Pemeliharaan atau penanganan terutama pada pengobatan dari infeksi bakteri dapat memicu resistensi antibiotik. *Enterococcus* spp. merupakan bakteri berbentuk kokus Gram-positif yang bersifat komensal yang terdapat pada ayam dapat membawa gen resistensi yang dapat berpindah ke manusia melalui lingkungan seperti tanah dan air.

Isolasi bakteri *Enterococcus* spp. dilakukan menggunakan media *Enterococcosel* Plat Agar, kemudian dikonfirmasi menggunakan uji sifat biokimia. Uji sensitivitas dilakukan menggunakan metode difusi cakram antibiotik Kirby-Bauer, menggunakan media *Mueller Hinton Agar* (MHA). Antibiotik yang dipakai terdapat enam jenis yaitu tetracycline, oxytetracycline, ampicillin, trimethoprim-sulfamethoxazole, gentamicin, vancomycin.

Hasil uji sensitivitas membentuk zona hambat yang dibandingkan dengan zona hambat standar. Hasil dari uji sensitivitas bakteri *Enterococcus* spp yaitu sebanyak 35% resisten terhadap oxytetracycline, 20% resisten tetracycline, 15% resisten trimethoprim-sulfamethoxazole, 15% resisten ampicillin, 30% resisten gentamicin, dan 45% resisten vancomycin. Seluruh sampel identifikasi didapatkan bakteri *Enterococcus* spp. dengan kemungkinan spesies yaitu *E.avium*, *E.faecalis*, *E.pallens*, *E.phoeniculicola*, dan *E.raffinosis*. *Multi-Drug Resistant* (MDR) terdapat sebanyak 9 dari 20 isolat (45%).

Kesimpulan dari penelitian ini terdapat *Enterococcus* spp yang memiliki persentase resisten yang tinggi terhadap beberapa antibiotik berspektrum luas yang juga digunakan pada manusia dan beberapa isolat memiliki *Multi-Drug Resistant* (MDR).

Kata kunci: *Enterococcus* spp.; resistensi antibiotik; ayam broiler; Sleman.

ABSTRACT

IDENTIFICATION AND ANTIBIOTIC SENSITIVITY TEST ON *Enterococcus* spp. BACTERIES FROM BROILER CHICKEN COCK SWABS IN SLEMAN DISTRICT, YOGYAKARTA

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Broiler chicken are one of the poultry that make a major contribution in fulfilling the needs of animal protein for Indonesian people. Maintenance or handling factors need to be monitored to optimize livestock farming products. Improper maintenance or handling especially for medication of bacterial infection could lead to antibiotic resistance. *Enterococcus* spp. are commensal Gram-positive cocci-shaped bacteria that found in chickens could carry resistance genes and can be transferred to humans through the environment such as soil and water.

The isolation of *Enterococcus* spp. carried out using *Enterococcosel* Plate Agar media, then confirmed using biochemical tests. Antibiotic sensitivity were tested using *Kirby-Bauer* (disc diffusion test) method and *Mueller Hinton Agar* (MHA) media. There were six antibiotics that used are tetracycline, oxytetracycline, ampicillin, trimethoprim-sulfamethoxazole, gentamycin, vancomycin.

Sensitivity test results formed a inhibition zone that was compared with the inhibition standard zone. The results of the sensitivity test of *Enterococcus* spp bacteria against antibiotics obtained results as much as 35% oxytetracycline resistant, 20% tetracycline resistant, 15% trimethoprim-sulfamethoxazole resistant, 15% ampicillin resistant, 30% gentamicin resistant, and 45% vancomycin resistant. All identification samples obtained *Enterococcus* spp. with possible species namely *E.avium*, *E.faecalis*, *E.pallens*, *E.phoeniculicola*, and *E.raffinosis*. *Multi-Drug Resistant* (MDR) was found in 9 out of 20 isolates (45%).

The conclusion of this study is that *Enterococcus* spp has a high percentage of resistance to several broad-spectrum antibiotics that are also used in humans and some are *Multi-Drug Resistant* (MDR).

Key Word: *Enterococcus* spp.; antibiotic resistant; broiler chicken; Sleman.