

INTISARI

DETEKSI *Escherichia coli* O157:H7 DAN PROFIL RESISTANSI ANTIBIOTIK PADA DAGING SAPI DAN DAGING KERBAU YANG DILALULINTASKAN MELALUI PELABUHAN TRISAKTI BANJARMASIN

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Escherichia coli O157:H7 bersifat patogen dan banyak dihubungkan dengan kejadian *outbreak foodborne disease*. Konsumsi daging yang terkontaminasi *E. coli* O157:H7 resistan antibiotik dapat menimbulkan masalah kesehatan serius. Pelabuhan Trisakti merupakan gerbang utama masuknya komoditas pangan asal hewan ke Kalimantan Selatan. Lalulintas daging antar wilayah berpotensi menyebarkan *E. coli* O157:H7 resistan antibiotik. Penelitian ini bertujuan untuk melakukan isolasi dan identifikasi *E. coli* O157:H7 dari daging sapi dan daging kerbau yang dilalulintaskan melalui Pelabuhan Trisakti, menguji pola resistansinya terhadap antibiotik serta mendeteksi gen penyandi resistansi. Total sampel sebanyak 44 sampel, terdiri dari 31 sampel daging sapi dan 13 sampel daging kerbau. Pengambilan sampel dilakukan dengan teknik *non-probability sampling*. Metode yang digunakan pada penelitian ini yaitu isolasi dan identifikasi bakteri menggunakan kultur dan dikonfirmasi menggunakan PCR menggunakan target gen *rfbO157* dan *fliCH7*. Pengujian resistansi antibiotik menggunakan metode difusi cakram terhadap 6 jenis antibiotik meliputi siprofloksasin, gentamisin, ampicilin, tetrasiklin, kloramfenikol dan sulfametoksazol/trimetoprim. Deteksi gen resistansi antibiotik dilakukan dengan metode PCR menggunakan target gen *qnrS*, *tetA* dan *bla_{TEM}*. Data yang diperoleh dianalisis secara deskriptif. Hasil penelitian menunjukkan 4 isolat positif *E. coli* O157:H7 9,1% (4/44), terdiri atas dua isolat dari daging sapi 6,5% (2/31) dan dua isolat dari daging kerbau 15,4% (2/13). Isolat positif menunjukkan resistansi terhadap siprofloksasin, tetrasiklin dan ampicilin, dengan dua diantaranya tergolong *multidrug resistant*. Semua isolat masih sensitif terhadap gentamisin, kloramfenikol dan sulfametoksazol/trimetoprim. Gen penyandi resistansi yang terdeteksi pada isolat tersebut meliputi *qnrS*, *tetA* dan *bla_{TEM}*. Kesimpulan dari penelitian ini yaitu *E. coli* O157:H7 resistan antibiotik dan gen resistansi antibiotik dapat terdeteksi dari sampel daging sapi dan daging kerbau yang dilalulintaskan melalui Pelabuhan Trisakti.

Kata kunci : Daging, *E.coli* O157:H7, *foodborne disease*, lalulintas pangan, resistansi antibiotik

ABSTRACT

DETECTION OF *Escherichia coli* O157:H7 AND ANTIBIOTIC RESISTANCE PROFILE IN BEEF AND BUFFALO MEAT TRANSHIPPED THROUGH TRISAKTI PORT IN BANJARMASIN

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Escherichia coli O157:H7 are pathogenic and commonly associated with outbreaks of foodborne disease. Consumption of meat contaminated with antibiotic-resistant *E. coli* O157:H7 can cause serious health problems. Trisakti Port is the entry point for food commodities of animal origin into South Kalimantan. Transportation of meat between regions potentially spreads antibiotic-resistant *E. coli* O157:H7. The aim of this study was to isolate and identify *E. coli* O157:H7 from beef and buffalo meat transhipped through Trisakti Port, testing its resistance patterns to antibiotics and detecting resistance genes. A total of 44 samples were collected, consisting of 31 beef samples and 13 buffalo meat samples. Sampling was performed using non-probability sampling techniques. The methods used in this study were bacterial isolation and identification using culture and confirmed using PCR targeting the *rfbO157* and *fliCH7* genes. Antibiotic resistance testing was performed using the disc diffusion method against six types of antibiotics including ciprofloxacin, gentamicin, ampicillin, tetracycline, chloramphenicol, and sulfamethoxazole/trimethoprim. Antibiotic resistance gene detection was performed using the PCR method targeting the *qnrS*, *tetA*, and *bla_{TEM}* genes. The data obtained were analyzed descriptively. The results showed that 4 isolates were positive for *E. coli* O157:H7, 9.1% (4/44), consisting of two isolates from beef, 6.5% (2/31), and two isolates from buffalo meat, 15.4% (2/13). Positive isolates showed resistance to ciprofloxacin, tetracycline, and ampicillin, with two of them classified as multidrug resistant. All isolates were still sensitive to gentamicin, chloramphenicol, and sulfamethoxazole/trimethoprim. The resistance genes detected in these isolates included *qnrS*, *tetA*, and *bla_{TEM}*. The study found that antibiotic-resistant *E. coli* O157:H7 and associated antibiotic resistance genes were present in beef and buffalo meat samples transhipped through Trisakti Port.

Key words: Antibiotic resistance, *E. coli* O157:H7, foodborne disease, food transhipped, meat.