

**ANALISIS KUALITAS DAN IDENTIFIKASI CEMARAN BAKTERI
Escherichia coli PADA DAGING SAPI YANG DIPERJUALBELIKAN DI
BEBERAPA PASAR TRADISIONAL KOTA YOGYAKARTA**

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INTISARI

Daging sapi merupakan bahan pangan asal hewan yang digemari dan memiliki kandungan nutrisi yang tinggi. Daging sapi memiliki sifat *perishable food* dan mudah tercemar mikroba, diantaranya bakteri *Escherichia coli* (*E. coli*). Bakteri *E. coli* termasuk bakteri yang bersifat patogen karena dapat menimbulkan infeksi dan penyakit seperti keracunan makanan (*foodborne diseases*). Pasar tradisional merupakan tempat distribusi daging yang rentan mengalami kontaminasi. Tujuan penulisan Tugas Akhir ini yaitu untuk menganalisis kualitas dan cemaran bakteri *E. coli* pada daging sapi yang diperjualbelikan di beberapa pasar tradisional di wilayah Kota Yogyakarta. Pengujian yang dilakukan berupa uji organoleptik, uji *Total Plate Count* (TPC) sesuai dengan SNI Nomor 2897:2008, dan uji identifikasi *E. coli* dengan media *Eosin Methylene Blue Agar* (EMBA) dan pewarnaan Gram. Pengujian dilakukan pada 22 sampel yang diambil dari lima pasar tradisional di wilayah Kota Yogyakarta. Hasil pengujian organoleptik pada sampel daging sapi menunjukkan sampel memiliki kualitas fisik yang baik dengan ciri daging berwarna merah muda, berbau daging segar, dan bertekstur halus. Sebanyak 22 sampel (100%) menunjukkan median hasil uji TPC melebihi batas maksimum cemaran mikroba yaitu $9,1 \times 10^6$ CFU/g dengan *range* $6,6 \times 10^6$ CFU/g hingga $18,5 \times 10^6$ CFU/g. Persentase kontaminasi *E. coli* menunjukkan sebanyak 17 sampel (77%) positif tercemar *E. coli*. Sampel daging sapi dari seluruh pasar dinyatakan memiliki kualitas mikrobiologi yang kurang baik dan tidak layak menurut SNI Nomor 3932:2008. Berbagai upaya pencegahan kontaminasi mikroba perlu ditingkatkan seperti higiene personal pedagang, fasilitas, dan teknik pengolahan daging yang aman dan tepat sehingga konsumen dapat mengonsumsi pangan asal hewan yang aman.

Kata kunci : analisis, daging sapi, *E. coli*, kontaminasi, kualitas, mikroba

**QUALITY ANALYSIS AND IDENTIFICATION OF BACTERIAL
CONTAMINATION OF *Escherichia coli* IN BEEF TRADED IN SEVERAL
TRADITIONAL MARKETS IN YOGYAKARTA CITY**

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ABSTRACT

Beef is popular foods of animal origin and have a high nutritional content. Beef has perishable food and easily contaminated with microbes, including *Escherichia coli* (*E. coli*). *Escherichia coli* bacteria are pathogenic because they can cause infections and diseases such as foodborne diseases. Traditional markets are places where meat distribution is vulnerable to contamination. The aim of finishing this final project is to find out the quality of beef that traded in Yogyakarta's traditional market. The research was carried out use organoleptic test, Total Plate Count (TPC) test according to SNI Number 2897:2008, and *E. coli* identification using Eosin Methylene Blue Agar (EMBA) media, and Gram staining. Tests were carried out with 22 samples taken from five traditional markets in Yogyakarta City. The results of organoleptic testing on beef samples showed that samples has good physical quality with characteristics of pink meat, fresh meat smell, and soft texture. A total of 22 samples (100%) showed median TPC test results exceeding the maximum microbial contamination limit of $9,1 \times 10^6$ CFU/g with a range of $6,6 \times 10^6$ CFU/g to $18,5 \times 10^6$ CFU/g. The percentage of *E. coli* contamination showed that 17 samples (77%) were positive for *E. coli*. The percentage of *E. coli* contamination showed 17 samples (77%) were positive for contamination. Beef samples from all markets were found to have poor microbiological quality and unfit according to SNI Number 3932:2008. Various efforts to prevent microbial contamination need to be improved such as personal hygiene of traders, facilities, and safe and proper meat processing techniques so that consumers can consume food of animal origin that is safe.

Keywords : analysis, beef, contamination, *E. coli*, microbe, quality