DETEKSI DAN KARAKTERISASI *Enterococcus* sp. PADA DAGING BABI DI PASAR TRADISIONAL KOTA YOGYAKARTA

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INTISARI

Daging merupakan sumber protein hewani dengan kandungan nutrisi yang tinggi namun mudah terkontaminasi mikroorganisme termasuk *Enterococcus* sp. Data kontaminasi bakteri *Enterococcus* sp. di Indonesia belum dilaporkan. Tujuan dari penulisan Tugas Akhir ini yaitu mendeteksi dan mengidentifikasi kontaminasi bakteri *Enterococcus* sp. pada daging babi yang dikoleksi dari tiga pasar tradisional di Kota Yogyakarta berdasarkan jarak antar penjual dan tipe penjualan. Uji mikrobiologi dan molekuler dilakukan untuk mendeteksi dan mengidentifikasi bakteri *Enterococcus* sp. pada enam sampel daging babi. Identifikasi mikrobiologi dilakukan dengan kultur pada media selektif-diferensial EF dilanjutkan uji biokimia dengan pewarnaan Gram, uji katalase, dan uji toleransi TSA+NaCl 6,5%, dan uji deret gula. Isolat yang menunjukkan karakteristik *Enterococcus* sp. dilanjutkan uji molekuler menggunakan multipleks PCR dengan target gen 16S rRNA dan gen target spesies. Hasil uji mikrobiologi dan molekuler menunjukkan enam sampel positif *Enterococcus* sp. dengan 24 isolat yang terdiri dari 13 isolat (54,2%) *E. faecium*, 9 isolat (37,5%) *E. faecalis*, dan 2 isolat (8,3%) spesies tidak teridentifikasi. Hasil tersebut menunjukkan adanya kontaminasi *Enterococcus* sp. pada sampel daging babi sehingga perlu adanya tindakan untuk mencegah risiko yang dapat ditimbulkan.

Kata kunci: daging babi, *Enterococcus* sp., multipleks PCR

DETECTION AND CHARACTERIZATION OF *Enterococcus* sp. IN PORK FROM TRADITIONAL MARKETS YOGYAKARTA CITY

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ABSTRACT

Meat is a source of animal protein with high nutritional content but is easily contaminated by microorganisms including *Enterococcus* sp. Data on *Enterococcus* sp. bacterial contamination in Indonesia has not been reported. The purpose of this Study to detect and identify *Enterococcus* sp. bacterial contamination from pork collected from three traditional markets in Yogyakarta City based on the distance between sellers and the type of sales. Microbiological and molecular tests were carried out for the detection and identification of *Enterococcus* sp. bacteria in six pork samples. Microbiological identification was carried out by culture on selective-differential EF media followed by biochemical tests with Gram staining, catalase test, and 6.5% TSA + NaCl tolerance test, and carbohydrate fermentation test. Isolates that showed the characteristics of *Enterococcus* sp. were followed by molecular tests using multiplex PCR targeting the 16S rRNA gene and the target species gene. The results of microbiological and molecular tests showed six positive samples of *Enterococcus* sp. with 24 isolates consisting of 13 isolates (54.2%) of *E. faecium*, 9 isolates (37.5%) of *E. faecalis*, and 2 isolates (8.3%) were not identified. These results indicate the presence of *Enterococcus* sp. contamination in pork samples, highlighting the need for preventive measure to minimize potential health risk.

Keywords: pork, *Enterococcus sp.*, multiplex PCR