

**IDENTIFIKASI DAN KARAKTERISASI BAKTERI *Enterococcus* sp.
PADA SAMPEL DAGING BABI DI KECAMATAN GODEAN, GAMPING
DAN DEPOK, KABUPATEN SLEMAN**

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INTISARI

Enterococcus sp. merupakan bakteri yang ditemukan secara alami pada saluran pencernaan manusia dan hewan sehingga digunakan sebagai indikator kontaminasi fekal. Penelitian kontaminasi *Enterococcus* sp. pada daging babi telah dilaporkan di berbagai negara, namun penelitian serupa belum pernah dilakukan di Indonesia. Penelitian bertujuan untuk mengidentifikasi dan karakterisasi *Enterococcus* sp. pada daging babi di Kecamatan Godean, Gamping dan Depok Kabupaten Sleman. Metode penelitian yang digunakan meliputi isolasi dan kultur bakteri pada media selektif, biokimia dan molekuler. Uji mikrobiologi yang dilakukan diantaranya pewarnaan Gram, tes katalase, fermentasi gula-gula, dan toleransi NaCl 6.5%. Uji molekuler yang dilakukan menggunakan metode *Polymerase Chain Reaction* (PCR) *multiplex* dengan dua gen target, yaitu 16S rRNA sebagai penanda genus bakteri dan gen *ddl* untuk penentuan spesies. Hasil penelitian menunjukkan seluruh sampel 100% (6/6) mampu tumbuh pada media selektif, dan seluruh isolat terpilih (38) memiliki karakteristik Gram positif, katalase negatif, mampu memfermentasi glukosa dan laktosa, serta mampu tumbuh pada NaCl 6.5%. Spesies *Enterococcus* yang teridentifikasi meliputi *E. faecalis* 21/38 (55,26%), *E. faecium* 12/38 (31,58%), *E. casseliflavus* 1/38 (2,63%) serta beberapa koloni yang tidak teridentifikasi (*unidentified Enterococcus*) 4/38 (10,53%). Temuan ini menunjukkan bahwa sampel daging babi yang diteliti telah terkontaminasi *Enterococcus* dan berpotensi menimbulkan risiko keamanan pangan, sehingga pengawasan dan pengendalian kontaminasi pada daging babi perlu diperhatikan.

Kata Kunci: daging babi, *Enterococcus* sp., kontaminasi fekal, PCR *multiplex*

**IDENTIFICATION AND CHARACTERIZATION OF *Enterococcus* sp.
FROM PORK SAMPLES IN THE SUBDISTRICTS OF GODEAN,
GAMPING, AND DEPOK, SLEMAN REGENCY**

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ABSTRACT

Enterococcus sp. is a bacterium that is naturally found in the digestive tract of humans and animals, therefore, it is used as an indicator of fecal contamination. Research on *Enterococcus* sp. contamination in pork has been reported in various countries, but similar research has never been conducted in Indonesia. This study aims to identify and characterize of *Enterococcus* sp. from pork in the subdistricts of Godean, Gamping, and Depok, Sleman Regency. The research methods included bacterial isolation and culture on selective media, microbiological tests, and molecular tests. The microbiological tests performed included Gram staining, catalase test, sugar fermentation, and 6.5% NaCl tolerance. The molecular test was performed using the multiplex Polymerase Chain Reaction (PCR) method with two target genes, namely 16S rRNA as a bacterial genus marker and the *ddl* gene for species determination. The results showed that all samples (6/6) grew on selective media, and all selected isolates (38) were Gram-positive, catalase-negative, capable to fermenting glucose and lactose, and able to grow in 6.5% NaCl. The identified *Enterococcus* sp. species included *E. faecalis* 21/38 (55,26%), *E. faecium* 12/38 (31,58%), *E. casseliflavus* 1/38 (2,63%), and several unidentified *Enterococcus* 4/38 (10,53%). These findings indicate that the pork samples studied were contaminated with *Enterococcus* sp., posing a potential food safety risk, and therefore monitoring and control of contamination in pork needs to be addressed.

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