ABSTRAK

Komoditas perikanan Indonesia berperan penting memenuhi kebutuhan protein Masyarakat. Tingginya permintaan ikan di Indonesia sebanding dengan risiko kontaminasi *Escherichia coli* dan *Salmonella* spp., sehingga pengujian mikrobiologi sangat penting untuk mengetahui prevalensi kontaminasi bakteri, persentase gen penanda pada bakteri, dan korelasi kontaminasi bakteri. Penelitian ini dilakukan pada komoditas perikanan segar dari lima lokus di enam kabupaten/kota di Provinsi Bali dengan metode konvensional dan biologi molekuler. Hasil penelitian menunjukkan 7,4% sampel terkontaminasi *E. coli* dan tidak ada sampel terkontaminasi *Salmonella* spp. Kontaminasi *E. coli* ditemukan tertinggi di pasar tradisional (33%) dan ikan lemuru (50%) di kabupaten Tabanan (66%). Seluruh sampel yang terkontaminasi *E. coli* memiliki gen *lacZ* (100%). Nilai korelasi kontaminasi *E. coli* terhadap lokus, jenis ikan, dan daerah sebesar 0,413; 0,386; dan 0,411 berturut-turut. Hasil ini menunjukkan kurangnya sanitasi dari pengolahan dan penanganan ikan. Sosialisai penerapan *Hazard Analysis and Critical Control Point* (HACCP) dan pengujian secara rutin perlu dilakukan untuk mengontrol kontaminasi bakteri pada komoditas perikanan.

Kata kunci : *Escherichia coli*, ikan segar; komoditas perikanan; *Salmonella* spp; *polymerase chain reaction*

ABSTRACT

Indonesian fishery commodities play an important role in meeting the protein needs of the population. The high demand for fish in Indonesia is proportional to the risk of *E. coli* and *Salmonella* spp. contamination, making microbiological testing important to determine the prevalence of bacterial contamination, the percentage of marker genes in bacteria, and the correlation of bacterial contamination. The study was conducted on fresh fishery commodities from five locations in six regencies/cities in Bali using conventional and molecular biological methods. The results showed that 7.4% of samples were contaminated with *E. coli*, and no samples were contaminated with *Salmonella* spp. *E. coli* contamination was highest in traditional markets (33%) and lemuru fish (50%) in Tabanan district (66%). All *E. coli*-contaminated samples had the *lacZ* gene (100%). The correlation coefficients for *E. coli* contamination with location, fish type, and region were 0,413; 0,386; and 0,411 respectively. These results indicate inadequate sanitation in fish processing and handling. Implementation of Hazard Analysis and Critical Control Point (HACCP) and routine testing are necessary to control bacterial contamination in fishery products.

Keywords: Escherichia coli, fresh fish, fishery products, Salmonella spp., polymerase chain reaction.