Aims: Pathogenic Escherichia coli is one of global concern because of their effect on public health. The aims of this study were to determine the prevalence of E. coli, i.e. enterotoxigenic E. coli (ETEC), enteropathogenic E. coli (EPEC), enterohemorrhagic E. coli (EHEC), and enteroinvasive E. coli (EIEC) in ice-based beverages sold in street food vendors in Bogor and to determine virulence factor and quantity of labile toxin (LT), stable toxin (ST), intimin (EAE), shiga-like toxin1 (STX1), shiga-like toxin 2 (STX2), and plasmid invasion (INV). Methodology and results: Identification and quantification of pathogenic E. coli in ice-based beverages (n=85) were performed using real-time PCR (RT-PCR) assay adding propidium monoazide (PMA) prior to samples extraction. Extracted samples were analyzed using electrophoresis gel to define positive genome. The analyzed result showed 55.3% samples were positive genome and those samples were analyzed using RT-PCR to define virulence factor and determined concentration of bacteria. The result showed virulence factor of pathogenic on ice-based beverages (pudding with coconut milk ice, flavored ice, mix fruits ice, coconut ice, and orange ice) were only labile toxin (LT). The prevalence value was 8.2% with varied cycle threshold (Ct) numbers between 28.2 ± 0.3 to 32.8 ± 3.0 and the melting temperature (Tm) was 78.5 °C. The enterotoxigenic E. coli (ETEC) concentration in samples were 1.8´10^1-2.0´10^2 cells/mL. Conclusion, significance and impact study: Iced-based beverage samples in Bogor contained 8.2% of ETEC. Based on the consumption data and the concentration of ETEC in iced-based beverages, the number of ETEC exposure in ice-based beverages consumed by the consumer in Bogor (2.9´10^3-2.4´10^4 cells) was lower than infection dose set by FDA. However, this result could be considered as an early warning of health problems.
Keywords: Concentration, ETEC, ice-based beverages, prevalence

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