

Occurrence of *Escherichia coli* harbouring *stx* genes in popiah, a Malaysian street food

ABSTRACT

Irrespective of its health effects, street foods are very popular with the consumers. The main purpose of this research was to study the biosafety of *Escherichia coli* in popiah, a Malaysian street food sold at a roadside food stall and a restaurant in Sri Serdang, Selangor, Malaysia, using the combination of the most probable number (MPN)-Polymerase Chain Reaction (PCR) assay-plating on Eosin Methylene Blue (EMB) agar methods. Using these biomolecular methods, *E. coli* was detected in 12/15 (80%) and 11/15 (73%) of the collected samples from the roadside food stall and the restaurant respectively. The incidence of *stx* virulence-associated genes was detected in 1/15 (7%) among the *E. coli* isolated from samples taken from the roadside food stall while the *E. coli* isolated from the restaurant was 3/15 (20%). The density of *E. coli* ranged from <3 to >1100 MPN/g and the density of *E. coli* positive with *stx* genes was <3 to 53 MPN /g in samples from both the roadside food stall and the restaurant. The presence of the *stx*-positive *E. coli* in popiah are significant to risk assessments of food and epidemiological studies. Therefore, from the information obtained in this study, it is obvious that the screening for STEC markers in food samples would be useful for food safety survey.

Keyword: *Escherichia coli*; Popiah; MPN-PCR; *Stx* genes; Street food