

Prevalence and antibiotic resistance of *Salmonella* Enteritidis and *Salmonella* Typhimurium in raw chicken meat at retail markets in Malaysia

ABSTRACT

Salmonellosis is one of the major food-borne diseases in many countries. This study was carried out to determine the occurrence of *Salmonella* spp., *Salmonella* Enteritidis, and *Salmonella* Typhimurium in raw chicken meat from wet markets and hypermarkets in Selangor, as well as to determine the antibiotic susceptibility profile of *S. Enteritidis* and *S. Typhimurium*. The most probable number (MPN) in combination with multiplex polymerase chain reaction (mPCR) method was used to quantify the *Salmonella* spp., *S. Enteritidis*, and *S. Typhimurium* in the samples. The occurrence of *Salmonella* spp., *S. Enteritidis*, and *S. Typhimurium* in 120 chicken meat samples were 20.80%, 6.70%, and 2.50%, respectively with estimated quantity varying from <3 to 15 MPN/g. The antibiogram testing revealed differential multi-drug resistance among *S. Enteritidis* and *S. Typhimurium* isolates. All the isolates were resistance to erythromycin, penicillin, and vancomycin whereas sensitivity was recorded for Amoxicillin/Clavulanic acid, Gentamicin, Tetracycline, and Trimethoprim. Our findings demonstrated that the retail chicken meat could be a source of multiple antimicrobial-resistance *Salmonella* and may constitute a public health concern in Malaysia.

Keyword: *Salmonella*; Antimicrobial susceptibility; Chicken meat; Most probable number PCR; Prevalence