

Profiling Of Bacterial Contaminant and Its Susceptibility to Antibiotics in Food Delivery Bag for Food Transportation Around Shah Alam

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Structured Abstract

Background: Online food delivery (OFD) services have gained popularity all over the world starting from the early stage of COVID-19 pandemic. Even after the COVID-19 pandemic, people still reliance on OFD services and it became a new norm. The increasing popularity of OFD services corresponds with an increase in the demand for orders for a single rider. On the other hand, food delivery creates food safety challenges. Negligence of proper hygiene management among delivery courier can trigger infectious disease transmission, cross contamination, and foodborne illnesses through fomite transmission. Food spills in delivery bags are one of the possible causes of contaminated food. The purposes of this study were to collect and isolate bacteria from surfaces sampling of food delivery bag.

Methods: Swab surfaces sampling was done from the base and side of delivery bag. The isolated bacteria were identified using Gram-staining and biochemical tests such as catalase test, coagulase test, MacConkey test, mannitol test, indole test and silver nitrate test. Antimicrobial Susceptibility Testing (AST) was performed to determine the presence of antibiotic resistance bacteria in the sample.

Results: Seven distinct bacteria species were identified in this finding based on their morphology of Gram staining and various biochemical tests including *Staphylococcus epidermidis*, *Staphylococcus saprophyticus*, *Staphylococcus aureus*, *Klebsiella pneumoniae* and *Bacillus subtilis*. Some isolated bacteria displayed resistant to common antibiotics in Antibiotic Susceptibility Testing.

Conclusion: In conclusion, findings from this current study will raise awareness on the importance of proper hygiene management in food riders, OFD services provider, related government bodies and the public in accessing the potential threat to public health.

Keywords: Online Food Delivery (OFD), bacterial contaminant, fomite transmission, biochemical tests, Gram staining.

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