ISOLATION, IDENTIFICATION AND ANTIBIOTIC SUSCEPTIBILITY OF *Salmonella* spp. IN SMOKED FOOD AT KUALA PILAH, NEGERI SEMBILAN BY USING MPN-PCR METHOD

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This Final Year Project Report entitled "**Isolation, Identification and Antibiotic Susceptibility of *Salmonella* spp. in Smoked Food at Kuala Pilah, Negeri Sembilan by Using MPN-PCR Method**" was submitted by Fadhlul Khaliq Ab Patah, in partial fulfilment of the requirements for the Degree of Bachelor in Science (Hons.) Biology, in the Faculty of Applied Science, and was approved by

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ABSTRACT

Isolation, identification and antibiotic susceptibility of *Salmonella* spp. in smoked food at Kuala Pilah, Negeri Sembilan by using MPN-PCR method

Smoked food was one of the most authentic dishes in Malaysian cuisines. However, consumers were still unaware on the hygienic level of these smoked products. Nowadays, the smoked products were smoked in an open space that allowed the contamination of bacteria on the food. The objective of this study is to detect the presence of *Salmonella* spp. in smoke fish and meat in Negeri Sembilan, Malaysia. The samples were randomly collected from the street stall in Kuala Pilah. The samples were found to be contaminated by *Salmonella* spp. with 24×10^{-7} MPN/g in smoked fish and 2.9×10^{-7} MPN/g in smoked meat and were confirmed by culturing on selective agar of Salmonella Shigella agar. By using MPN-PCR method, the prevalence of *Salmonella* spp. were found to be 68% in both samples. *Salmonella* spp. were 100% detected in smoked fish followed by smoked meat by 44% prevalence. All the positive isolates from MPN-PCR were continued with antibiotic susceptibility to determine the resistance level of *Salmonella* spp. towards selected antibiotics. As a results showed a multi-resistance patterns from one to four antibiotics tested with MAR indices ranging from 0.25 to 1.00.