# A DETECTION OF Escherichia coli & Salmonella sp. IN RAW COCONUT MILK USING MPN-PCR METHOD

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#### ABSTRACT

#### A DETECTION OF Escherichia coli & Salmonella sp. IN RAW COCONUT

#### MILK USING MPN-PCR METHOD

Little is known on the biohazard level of microorganisms in raw products. The main purpose of this study was to investigate the prevalence and quantification of Escherichia coli and Salmonella sp. in the raw coconut milk samples by using Most Probable Number-Polymerase Chain Reaction (MPN-PCR) method. A total of ten samples of raw coconut milks were purchased randomly from several wet market and hypermarket in Kuala Pilah and Senawang areas. A total of 10% (1/10) samples from both markets showed positive result of Escherichia coli while 100% (10/10) samples showed positive result of Salmonella sp. The estimated quantities of positive turbid tubes from the wet market were ranging from  $2.0 \times 10^5$  MPN/g to  $2.4 \times 10^7$  MPN/g. The estimated quantities of positive turbid tubes from hypermarket were ranging from  $2.8 \times 10^5$  MPN/g to  $2.4 \times 10^7$ MPN/g. In this study, the presumptive amount of Escherichia coli in wet market samples was ranging from  $3.0 \times 10^4$  MPN/g to  $9.4 \times 10^4$  MPN/g while Salmonella sp. was ranging from  $3.0 \times 10^4$  MPN/g to  $4.4 \times 10^5$  MPN/g. Based on the result, it showed that Escherichia coli did not occur in hypermarket samples. Meanwhile, Salmonella sp. was ranging from  $3.0 \times 10^4$  MPN/g to  $2.4 \times 10^7$  MPN/g. The outcome of this study showed that the presence of microbial contaminants that indicates poor milk quality, which requires immediate consideration as it can pose serious health risk to consumers.