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(54) Title: A METHOD FOR IDENTIFYING A PORK CONTENT IN A FOOD

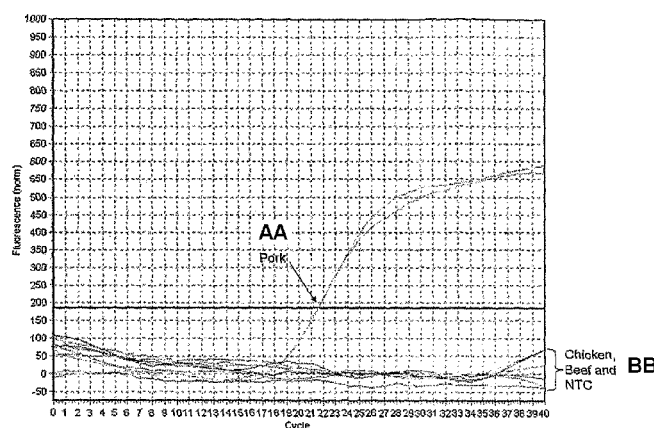


Fig. 1

(57) **Abstract:** In this study, pork-specific real-time PCR assay is developed for Halal authentication. Three species of meat samples are employed, which were pork, beef and chicken. These three type of poultry meat are among the commonly consumed meat in Malaysia and are easily available in the market. DNA from each raw meat sample was successfully extracted using DNeasy® Blood & Tissue Kit (Qiagen, Hilden, Germany). Concentration of DNA extracted is estimated by UV absorption spectrophotometry using the Biophotometer (Eppendorf AG, Hamburg, Germany) prior to real-time PCR reaction. The annealing temperature for the primers is at 58 °C. To verify the specificity of primers designed, reaction is carried out to test the primers against the other two meat samples to detect possible cross-reactions. The reaction only amplified pork DNA at Ct=22.83. The real-time PCR assay described in this paper proved to be very sensitive with a low detection limit when samples were tested. The assay is done by preparing a 10-fold dilution series starting from 100 ng DNA were used to determine the sensitivity of the reaction. The sensitivity threshold was up to 0.001 ng pork DNA. It has been reported that a detection limit of 0.1 ng pork DNA using conventional PCR. In this context, the method would be useful in the detection of porcine DNA in food products.

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