SPECIES IDENTIFICATION IN CHICKEN BASED PROCESSED FOOD USING SPECIES-SPECIFIC POLYMERASE CHAIN REACTION

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ABSTRACT

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DNA or known as the deoxyribonucleic acid is a self-replication that present in all living things of genetic information. This is crucial for researchers to be able to identify the species identification and adulteration in the processed meat as the main problem that arises nowadays is the adulteration. The objectives in this study are to identify the types of meat used and to detect its adulteration from by using PCR. Besides, it's also aimed to identify the extracted DNA quality, the sizes by using the gel electrophoresis and to optimize primer annealing temperature using gradient PCR. In this project, the DNA samples were collected from previous researchers that comprised from three different types of chicken sausages which are Jimat Fiesta, Jodi and 1 Malaysia brand. Result showed that band was presented as smear or less smear in all samples which it can be used for the next PCR process. Next, in order to find the suitable melting temperature, T_M, for 'Chicken' primer, the gradient PCR was used. All samples had been tested with chicken primer and bands presented almost reached nearer to expected band for chicken, 266 bp. This proved that the all samples contained originally chicken sausages meat. Then, the other two different primers such bovis and *Sus scrofa* were tested in other two samples like Jodi and 1 Malaysia as to identify the adulteration of their species. The results showed absence of bands from the primer bovis and *Sus scrofa*. All the three brands had posses no adulteration of its content. Based on the bands presence nearer to expected base pair, 266 bp, its shown that all the results of sample had a chicken positive result.

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