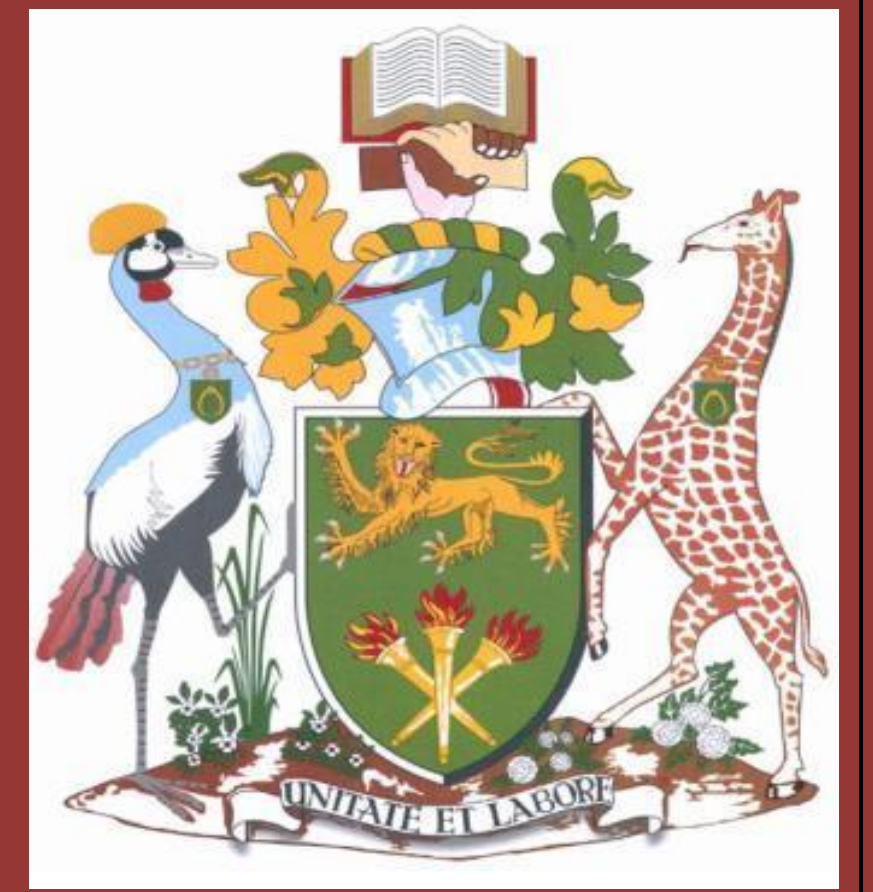


Molecular Identification of *Staphylococcus aureus* Using Bacteriophage Based Genetic Markers

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Introduction

Staphylococcus aureus (*S.aureus*) is a bacterium that infects both humans and animals.

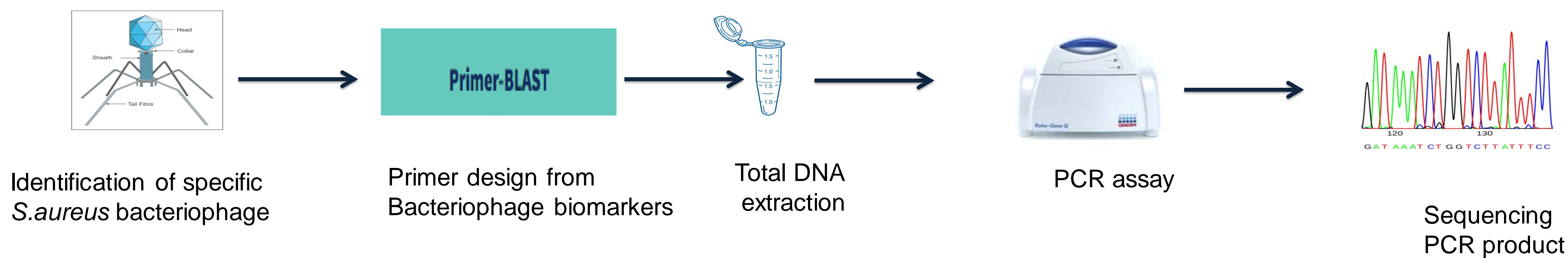
It causes skin infection, pneumonia, endocarditis, toxic shock syndrome, scaled skin syndrome and food poisoning in humans and mastitis in cattle.

Bacteriophage (virus that infect bacteria) is employed in this study because when they infect *S.aureus* there is an exchange of genetic material between them and *S.aureus*.

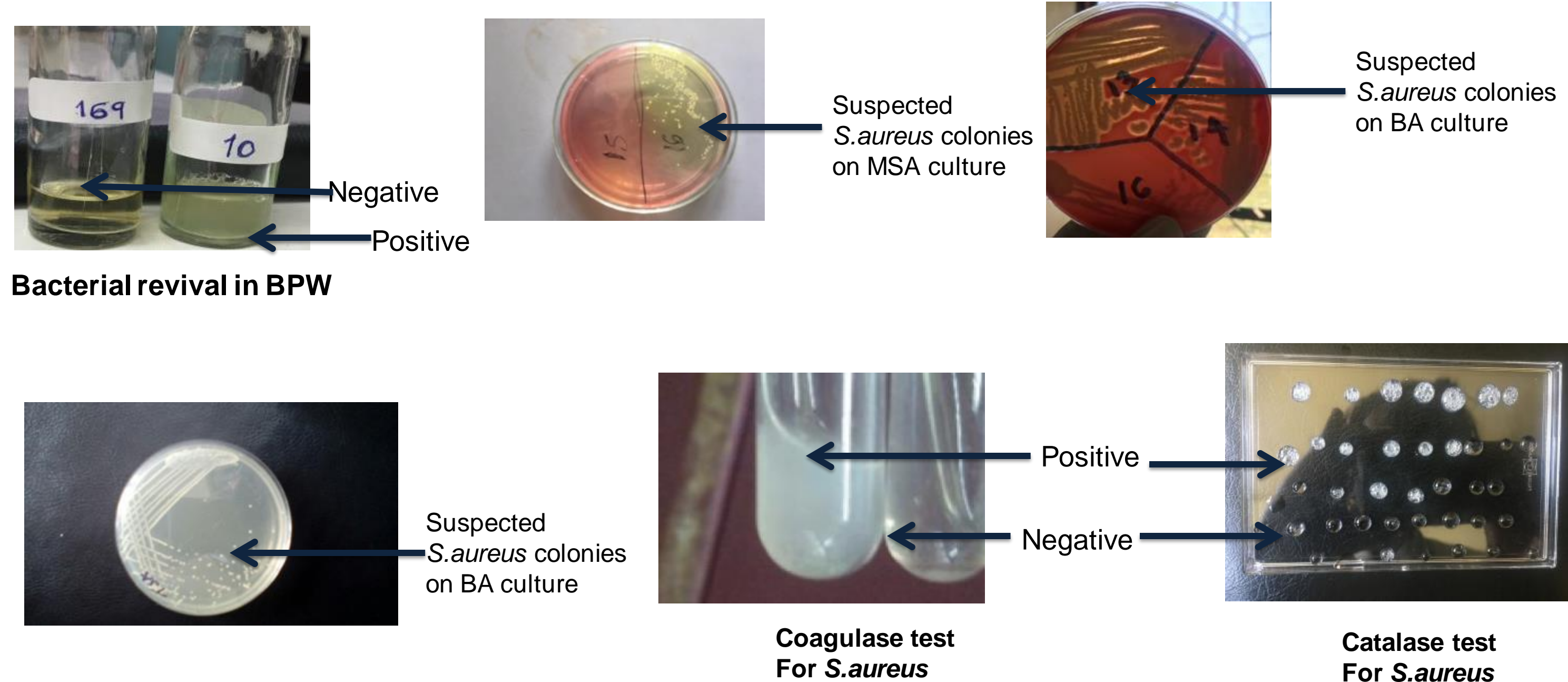
Objectives

- To determine *S.aureus* phage-based biomarkers for *S. aureus* detection.
- To identify *S.aureus* using specific molecular markers derived from bacteriophages.
- To confirm, by sequence analysis, if the PCR bands detected above are indeed *Staphylococcus aureus*.

Methods

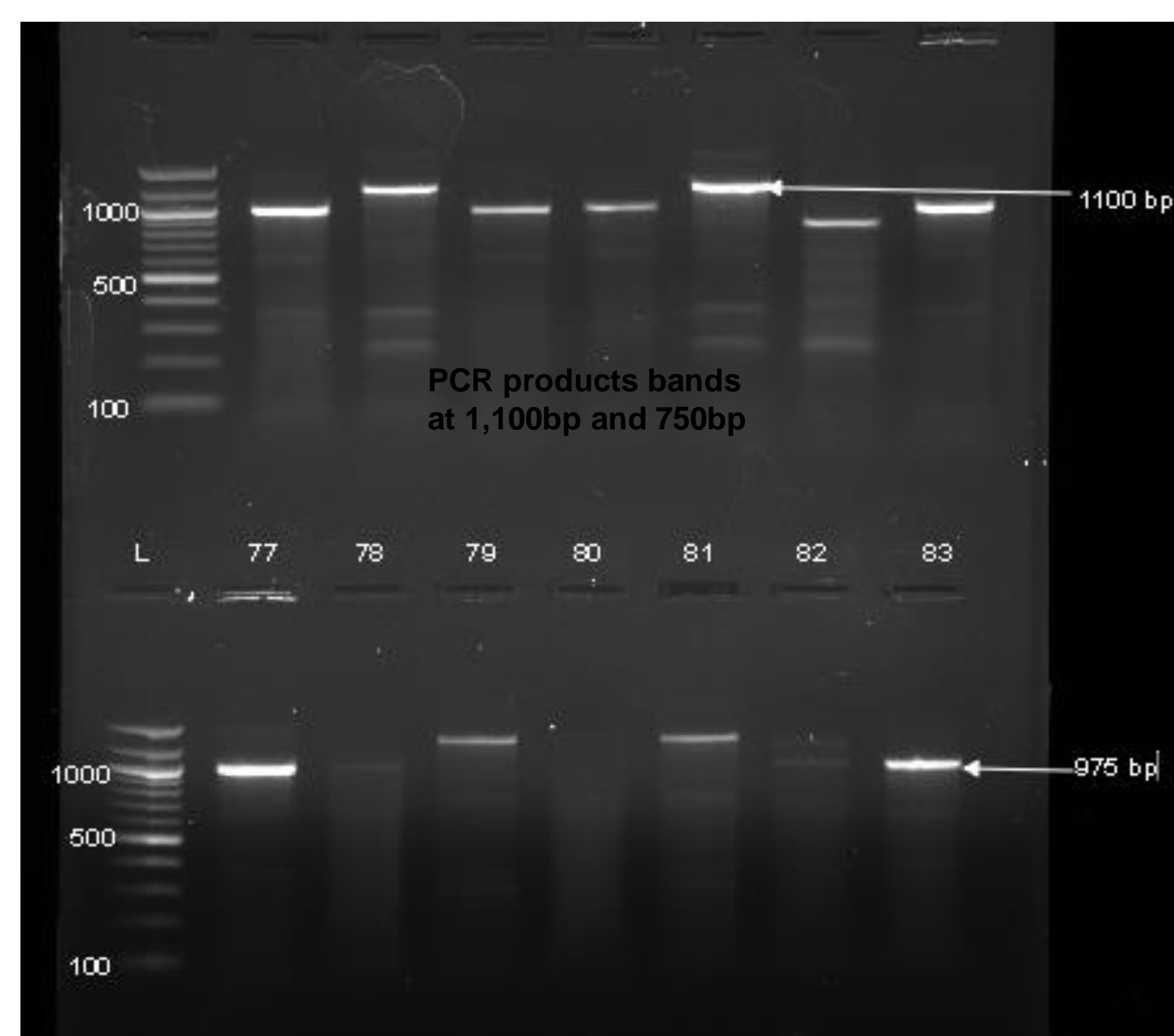


Results



-The bacteria were successfully revived in Buffered Peptone Water (BPW).

-*S.aureus* isolate were selected by culture and biochemical tests.



From PCR assay bands of 1,100bp and 975bp were obtained

Conclusion and future work

- Bacteriophage can be used to specifically identify *Staphylococcus aureus*.
- Further analysis on the difference between the 1,100bp and 975bp band will be carried out.