

**DETECTION OF DAIRY COW MILKS AS RESERVOIR OF Methicillin Resistant *Staphylococcus aureus* (MRSA) WITH *mecA* GENE APPROACH WITH POLYMERASE CHAIN REACTION TECHNIQUE (PCR)**

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**ABSTRACT**

In this study MRSA isolates from dairy farms in Surabaya were investigated for their phenotypic and genotypic identification by several laboratories test, confirmation test and PCR. In total, 50 dairy cow milk samples from four dairy farms in Surabaya were collected and analysis. Bacterial identification based on the growth in MSA media, blood agar media, Gram staining, catalase, coagulase, the resistance/sensitivity to Erythromycin and Oxacillin, confirmation test with ChromID™ MRSA, and *mecA* genes for the resistance screening to Methicillin (MRSA) by using Polymerase Chain Reaction (PCR). Isolate and identification *Staphylococcus aureus* were found in 27 samples that showed positive result in MSA, 27 samples positive catalase test, 19 samples positive blood agar test, and 19 samples positive coagulase test. Antibiotics sensitivity test for 19 of samples found that *S. aureus* in 31.6% resistant, 10,5% intermediate and 57.9% sensitive to Oxacillin while 31.6% resistant and 68.4% sensitive to Erythromycin. MRSA confirm test were found in five samples that showed positive MRSA strain. In PCR test, five isolates showed negative presence of *mecA* gene. In conclusion, the presence of *mecA* gene in dairy cows was not found and it could be indicates that it is absent or carrying other gene in Surabaya's dairy cows.

**Key words:** *Staphylococcus aureus*, dairy milk, MRSA, *mecA* gene, PCR