

## RESISTANCE OF *Staphylococcus aureus* ISOLATED FROM RAW MILK IN SURABAYA AGAINST $\beta$ -LACTAM ANTIBIOTICS

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### ABSTRACT

The aim of this research was to know the resistance of *Staphylococcus aureus* that isolated from raw milk in Surabaya to  $\beta$ -lactam antibiotics and to know potential discovery of Methicillin Resistant *Staphylococcus aureus* (MRSA) from raw milk in Surabaya. The research used purposive sampling method technique. Fourty samples were cultured on Mannitol Salt Agar from which 23 samples were identified as *Staphylococcus sp* and among 23 *Staphylococcus sp* found 7 (30,44%) samples were *Staphylococcus aureus*. Antibiotic disc that used for sensitivity test were penicillin, ampicillin and methicillin using Kirby-Bauer method. Antibiotic disc were put on the surface of Mueller Hinton Agar with *Staphylococcus aureus* which has already to grow on it. Diameter of inhibitor area surrounding the discs were measured on mm to know sensitivity level of  $\beta$ -lactam antibiotic. The results showed that the precence of penicillin resistance in a samples are 85,71%, the presence of ampicillin resistance in a samples are 100%, and the results showed that the precence of methicillin resistance in a samples are 57,14% which showed that isolated was potential to be a *Methicillin Resistant Staphylococcus aureus* (MRSA). The existence of this resistance causes milk dangerous to be consumed by public health because the resistant bacteria, or genetic determinants of resistance, can be transmitted from animals to humans via foodstuffs.

Key words: *Staphylococcus aureus*, raw milk, resistance,  $\beta$ -lactam antibiotics.