IDENTIFICATION OF *Staphylococcus aureus* WHICH CAUSES MASTITIS WITH MANNITOL FERMENTATION TEST AND DETECTION OF ACETOIN PRODUCT IN DAIRY CATTLE AT THE FARM AREA OF SUKA MAKMUR DAIRY COOPERATIVE GRATI PASURUAN

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**ABSTRACT**

The aims of the study were to identify *Staphylococcus aureus* which causes mastitis in dairy cattle at the farm area of Suka Makmur Dairy Cooperative by detecting the acetoin production with *Voges-Proskauer Test* comparing with mannitol fermentation test using *Mannitol Salt Agar*. The non probability sampling was used on this research. Milk samples had been taken as much as 5-10 ml from each quarter of dairy cattle which shown positive according to *California Mastitis Test*. Two hundred bovine milk samples were cultured on *Blood Agar* and *MacConkey Agar* from which 100 (50%) strains were identified as *Staphylococcus sp.* and 26 (13%) were identified as coagulase positive staphylococcus; which were suspected as *Staphylococcus aureus*, whereas 25 strains of them showed the positive result of *Voges-Proskauer Test* and 24 strains showed the positive result of mannitol fermentation on *Mannitol Salt Agar cultured*. The results of the two methods were compared with Nonparametric Tests among which *Chi-square Test* were used. The result showed that there was no difference between the result of *Voges-Proskauer Test* and *Mannitol Salt Agar cultured*, so that *Voges-Proskauer Test* is able to replace *Mannitol Salt Agar cultured* as the common identification method for *Staphylococcus aureus*.

**Key words:** *Staphylococcus aureus, Staphylococcal Mastitis, Coagulase Test, Mannitol Salt Agar, Acetoin Production.*