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OCCURENCE OF BIOFILM FORMING COAGULASE POSITIVE ISOLATES IN CASE OF SUBLINICAL MASTITIS

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Coagulase positive staphylococci (CPS) are the leading health and economic problem in primary milk production. Some strains are capable to form a biofilm causing persistent intramammary infections, easily spreading to the udder of healthy cows and contaminating the environment. By excretion into milk, they can enter the food chain and pose a risk to human health. Determination of the ability to form a biofilm during isolation and identification of CPS in short period of time could improve good veterinary practice. The aim of this work was to determine the ability to form biofilm in CPS isolates from cows mastitic milk. From 56 quarter milk samples with > 500.000 cells/mL, CPS were isolated from 29 (51.78%) samples.

The ability of CPS to form biofilm was examined by Congo Red Agar (CRA) method and Crystal Violet assay. Based on the colour and consistency of the colonies at CRA, it was detected that out of 29 CPS isolates 5 (17.24%) isolates produced slime, 16 (55.17%) were suspected producers and 8 (27.5%) isolates did not produce the slime. Estimation of biofilm production by microtiter plate method was performed measuring the optical density at 630 nm (OD₆₃₀) and showed that 8 (27.5%) isolates were high producers, 12 (34.8%) moderate, 6 (20.60%) weak and 3 (10.30%) isolates did not produce biofilm. It can be concluded that Congo red agar method may be used as a rapid method for detection of biofilm producing CPS isolates.



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