ABSTRACT

In this present study, development of biofilm was carried out in altered temperature and pH. Biofilm was developed on glass slides in different environment and in different pH (5, 7 and 9) and temperature (4°C, room temperature which varied between 29°C-32°C and 37°C) for ten days.

Bacteria belonging to eight genera were isolated and among these two are Gram positive namely Staphylococcus and Micrococcus while six are Gram negative represented by Pseudomonas, Edwardsiella, Salmonella, Neisseria, Alcaligenes and Yersinia. In total nine species were isolated and these were Pseudomonas aeruginosa, Micrococcus luteus, Edwardsiella tarda, Salmonella typhi, Staphylococcus aureus, Alcaligenes bronchisepticus, Neisseria flavescens, Yersinia pestis and Yersinia enterocolitica.

Pseudomonas aeruginosa was isolated after thirty minutes at 37°C. No bacteria were isolated in any other parameter after thirty minutes. Pseudomonas aeruginosa was found in pH 5 and pH 9 and at 4°C and 37°C. Micrococcus luteus was found in pH 7 and at room temperature (29-32°C). Salmonella typhi was found in pH 7 and at room temperature (29-32°C). Yersinia pestis and Yersinia enterocolitica were found at 37°C only. Neisseria flavescens was found in pH 9 and at 37°C. Alcaligenes bronchisepticus was found at 37°C and in pH 9. Edwardsiella tarda was found in pH 7 and at 4°C and at room temperature (29-32°C). Staphylococcus aureus was found in pH 5 only. Pseudomonas aeruginosa was the most frequently isolated bacteria from the biofilms.