

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.