

## ANTIBIOTICS SUSCEPTIBILITY OF COLIFORM BACTERIA ISOLATED FROM DRAINS OF BEAUTY SALONS IN JOÃO PESSOA-PB, BRAZIL

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Beauty salons could act as punctual sources of water contamination in urban areas due to cosmetic manipulation and regular washing procedures. The presence of coliform bacteria in cosmetics indicates secondary contamination from fecal origin. By considering that washbasins in beauty salon exert an environment of selective pressure for microorganism, coliform bacteria developed in biofilms around drains and pipes may exhibit resistance to antibiotics. The aim of this study was to isolate coliforms found in sinks from beauty salons and to evaluate their susceptibility to antibiotics used in the empirical treatment scheme. Samples were collected by spreading a swab in the drains, then transferred to test tubes containing nutrient broth containing nystatin (50mg/L) which were incubated at 37 °C for 48h. Following the observation of turbidity, coliforms were obtained by using presumptive and confirmative media for total and fecal coliforms. Additional biochemical tests were conducted for species identification. Susceptibility tests were carried out using disk diffusion method for nine antibiotics (in mg.mL<sup>-1</sup>): Amoxicillin 30, Cephalexin 30, Cephalothin 30, Ciprofloxacin5, Gentamicin 10, Imipenem 10, Meropenem 10, Norfloxacin 10 and Sulfonamide 300. A total of 15 strains were isolated and 7 were confirmed as fecal coliform: 2 *Hafnia alvei*, 2 *Escherichia coli*, 1 *Kluyvera cryocrescens*, 1 *Serratia liquefaciens*, and 1 *Citrobacter freundii*. Around 85% of strains were resistant to penicilins antibiotics. *E. coli*, *H. alvei* and *C. freundii* showed resistance to carbapenems and one *E. coli* strain was resistant to sulfonamide. Some resistant colonies growth was established in the inhibition zones whose antibiotics were active. Results invite us to a discussion on aquatic strains isolated from environments which drive forces to multiresistance directly affecting human and environment health such as beauty salons.

**Key-words:** Beauty salons. Fecal coliforms. Multidrug resistance. Water pollution.

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