

SUMMARY

In the present work the incidence of bacterial flora in tannery effluent of Kasur area from three different tannery sites namely Pindi tannery, Fazal tannery and Akhtar tannery were studied.

The serial dilutions of tannery effluent samples were spread on petriplates containing Nutrient agar, MacConkey agar, Eosin methylene Blue agar, Pseudosel agar, Streptococcus agar and Brain heart infusion agar. These agar plates were then incubated for 24 hours at 37°C. The colonies developed were marked and shifted on separate nutrient agar plates with the help of a sterilized inoculating loop by streaking method. These were then incubated at 37°C for 24 hours to obtain the pure cultures of the isolates. The colonial and morphological characteristics of the pure cultures were noted. These were then stabbed and streaked on nutrient agar slants for preservation and performing various biochemical tests required for the identification of the bacteria.

The isolated bacteria were identified as *Aerococcus viridians*, *Bacillus brevis*, *Bacillus pumilus*, *Bacillus spp*, *Chromobacterium violaceum*, *Clostridium tetani*, *Clostridium camis*, *Corynebacterium bovis*, *Corynebacterium haemolyticum*, *Corynebacterium ovis*, *Eikenella corrodens*, *Kurthia spp.*, *Lactobacillus acidophilus*, *Listeria grayi*, *Micrococcus luteus*, *Moraxella nonliquefaciens*, *Moraxella osloensis*, *Moraxella urethralis*, *Peptococcus spp*, *Rothia dentocariosa*, *Staphylococcus aureus*, *Staphylococcus epidermidis*, *Streptococcus anginosus*, *Streptococcus faecium*, *Streptococcus faecalis*, *Streptococcus mutans*, *Streptococcus zooepidermicus*, *Streptobacillus moniliformis*.

For studying the sensitivity profile of these bacteria, different antibiotics like Streptomycin, Penicillin, Ampicillin, Tetracycline, Chloramphenicol, Cephalosporin, Cephadrine, Ceftizoxime, Ceftazidime and Lincocin were used. The sensitivity profiles were performed against each antibiotic in the

concentration of 0.25mg/ml, 0.50 mg/ml, 0.75 mg/ml and 1.00 mg/ml. These antibiotics were added to the nutrient medium and the test bacteria isolated were streaked and incubated in incubator for 24 hours at 37°C. After incubation, the resistant or sensitivity of every bacterium against different antibiotic concentrations were noted simply by the growth or no growth of the bacterium.

In most of the cases, Streptomycin, Cephadrine, Cephalosporin and Ceftizoxime were the most effective antibiotics against all the bacteria studied while Penicillin, Tetracycline and some concentrations of Ampicillin and Chloramphenicol were ineffective against the bacteria studied.