

Budambula N.L.M. and E.C. Mwachiro (2006). Isolation and characterization of naphthalene utilising bacteria from Nairobi River. Asian Journal of Microbiology, Biotechnology and Environmental Science. 8: 1-8.

Abstract

Bacteria that utilise naphthalene were isolated on minimal medium from 3 sites along the Nairobi River. Sixteen isolates were obtained, characterised and identified as *Listeria* sp., *Aerococcus viridans*, *Streptococcus adjacens*, *Bacillus* sp., *Staphylococcus Itominis*, *Serratia liquefaciens*, *Kluyvera* sp., *Klebsiella pneumoniae pneitmoniae*, *Pseudomonas putida*, *Pseudomonas mendocina* and *Listonella damsella*. Microbial growth was used as an indicator of naphthalene degradation. *Listeria* sp., *A. viridans*, *S. adjacens*, *Bacillus* sp., *S. hominis*, *S. liquefaciens* and *P. mendocina* showed heavier growth at 80 mg/l of naphthalene as compared to no naphthalene. The 16 isolates were generally resistant to ampicillin and lincomycin but sensitive to nalidixic acid, norfloxacin and minocycline. *Bacillus* sp (NR34) showed the highest level of resistance to antibiotics. Plasmids ranging between 1 kb and 3.5 kb were isolated from *Pseltdontonas putida*. The *Kluyvera* sp. was shown to carry plasmids that ranged from 2 kb to 55 kb.