

Comparative study of the disinfection capacity of different floor cleaning solutions on ventilated room floor

M. G. Sanal Kumar, S. Nandakumar, B. Bini & Arya Raj R. S.

P.G. & Research Department of Zoology, N.S.S. College, Pandalam, Kerala, India -689 501

Email: <u>binirohini@gmail.com</u>

Abstract

Floor cleaning solutions is used to promote floor hygiene. It removes dirt and bacteria and provides a clean walking surface. Most of the cleaning is achieved by the mechanical action of the mop along with the floor cleaning solutions. The present study aimed to analyze the effect of various floor cleaners (Exo, Lysol, Dettol, Lemon grass oil) in the recommended concentration on floor bacteria. The floor cleaners tested in the present study were selected based on the popularity and availability in market. The study was performed using swabbing method for collection of bacteria and pour plate method for bacterial culture. Among the four floor cleaners, Dettol shows maximum antibacterial action, the chloroxylenol containing in Dettol that show higher anti microbial activity. It is obvious that ayurvedic floor cleaner Lemon grass oil exhibit antibacterial action like other selected floor cleaners. Before cleaning, bacterial population of the specific area was 31 CFU and in after cleaning sample with lemon grass oil 9 bacterial colonies were observed. All the variations between the CFU of bacteria before and after treatment was found as significant in student t test performed. An attempt has been done in the present study to screen antimicrobial effect of four selected floor cleaning solutions on floor with an objective to evaluate performance of daily usable floor cleaning solutions, avoiding bacterial contaminations in floor.

Keywords: Antimicrobial effect, Dettol, Exo, Lysol, Lemon grass oil.

References

- 1. Jamieson, D., Bremen, J., Measham, A., Alleyne, G. and Claeson, M., 2006, Disease control priorities in developing countries, Oxford: Oxford University Press 3(1):356-363
- 2. Kampf, G., and Kramer, A. 2004, Epidemiologic background of hand hygiene and evaluation of the most important agents for scrubs and rubs, Clinical Microbiology Reviews, 17(4): 863-893
- 3. Mangalappalli-Illathu, A. K. and Korber, D. R., 2006, Adaptive resistance and differential protein expression on Salmonella enteric Serovar enteritidis biofilms exposed to benzalkonium chloride, Antimicrobial agents and chemotherapy, 50 (11):3588-3596
- 4. Marsh P. D. and Martin M. V., 2009, Oral microbiology: Elsevier Publishing company, London. 232pp.
- 5. Prescott, L. M. and Klein D. A., 1996, Microbiology, Normal micro biota and Non-Specific (innate) Host resistance, 6th Ed. 674-676
- 6. Rutala, W. A., 1995, APIC guidelines for selection and use of disinfectants, Am. J. Infect. Cont. 23: 313-342
- 7. Scott, E. and Bloomfield, S. F. 1990, The survival and transfer of microbial contamination via cloths and utensils. Journal of Applied Bacteriology, 68:271