

COMPARATIVE STUDY OF SKIN CLEANSING EFFICACY OF VARIOUS COMMERCIALY AVAILABLE SHAMPOO FORMULATIONS FOR PERSONAL DECONTAMINATION

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The object of the investigation aims to compare the skin cleansing efficacy and irritancy of various commercially available shampoos formulations at different dilutions for personal decontamination purpose. All the shampoos were acid-balanced and the pH ranged from 5.6 to 5.9, which is near to the skin pH. The irritancy potential of the soap/shampoo solutions at different dilutions was zero. The stability study of the various formulations at different dilutions was studied at varying temperature conditions. Six brands effectively removed the selected oils at 1:40 dilution from the skin. The study will result in promotion of mass decontamination especially in hospitals and fields in a simple and economical way. Personal decontamination with the selected formulations was compared with the already available decontamination kit materials containing physical and chemical agents. The skin care efficacy of N,N'-dichloro-bis [2,4,6-trichlorophenyl] urea, known as CC2 in the shampoo solutions at 1:40 dilution was also evaluated.

INTRODUCTION

Hand hygiene is considered the primary measure to reduce the transmission of nosocomial pathogens (Lucet *et al.*, 2002; Girou *et al.*, 2002). It is a general term that applies to handwashing, antiseptic handwash, antiseptic handrub, or surgical hand antiseptic. Handwashing refers to the action of washing hands with plain (nonantimicrobial) soap and water (Pittet *et al.*, 2003). Health care as well as field workers' hands frequently are contaminated with potential pathogens, which likely increases the risk of organism transmission. To minimize this risk; we need to identify methods to improve adherence to hand washing recommendations (Trick *et al.*, 2003).

Decontamination is the reduction or removal of chemical agents. Decontamination may be accomplished by removal of these agents by physical means or by chemical neutralization or detoxification. The decontamination of skin, eyes and wounds is a prerequisite of personal decontamination. It should facilitate the removal of both solid and liquid substances most effectively from the skin. However, the common problems associated with potential decontaminants are skin irritation, toxicity, ineffectiveness and high cost. An ideal decontaminant should rapidly and completely decontaminate all known chemical and

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