ABSTRACT

Deodorant is a cosmetic product used to reduce bad body odor. Commercialized deodorant products usually come with a substance that enables hiding and reduces bad body odor. A clinical trial study was held to examine the antimicrobial activity of the daily deodorant product towards four healthy male university students in the Indonesian population via 3 days of observation at 3 different sampling times together with identifying the remaining bacteria from the swab treated *axilla* sample of all subject. Miles-Misra and Colony Forming Unit (CFU) was used to assess the antimicrobial activity of deodorant products while selective mannitol salt agar media and Gram Staining were used to assess the presence of *Staphylococcus spp*. The antimicrobial evaluation of the deodorant product showed no significant reduction of microbial load in the treated *axilla* compared to the control *axilla*. Instead, the deodorant is more likely to induce microbial growth since individual CFU/mL data of some participants showed an increase in microbial load at the treated *axilla* compared to control. Moreover, the identification using MSA media followed by Gram Staining confirmed the presence of *Staphylococcus spp* in the treated axillary sample which proves the deodorant unable to kill *Staphylococcus spp*. Moreover, following the unexpected result of the deodorant product, an additional method to check the bioburden of three deodorant samples using a spread plate showed no microbial bioburden was detected. Therefore, the unexpected results were not influenced by the bioburden but some product-related and subject-related factors may drive these results.

***Keywords**: Body malodor; Deodorant; Mannitol Salt Agar; Gram Staining; Bioburden*