

Viability of fungi in boric acid glycerol methylene blue mounting medium

Sir,

The article “evaluation of boric acid as a mounting agent in a microbiology laboratory” by Singh et al., is very interesting. Lactophenol cotton blue (LCB) stain is the most widely stain used for morphological identification of mycelial fungi. The constituents have a definitive function such as lactic acid preserves the morphology, phenol kills the fungi, glycerol prevents drying, and cotton blue is a dye which stains bacteria, chitin and cellulose of the fungal cell wall of yeasts and mycelial fungi intensely blue [1,2]. In this study, all the aspects have been compared and addressed between the two mounting media (LCB and boric acid glycerol methylene blue) such as staining quality, morphology, and drying except one viability of fungi. Although boric acid is a good fungicidal agent as it has been described in some studies as an antifungal agent for the treatment of vulvovaginal candidiasis [3] and athlete’s foot [4,5]. *Trichophyton rubrum* is a common human dermatophyte that is the causative agent of 80-93% of fungal infections of the skin and nails. Although boric acid represses *T. rubrum* [6], the effect on other mycelial fungi and their spores need to be evaluated. Many mycologists even suggest the use of Lugol’s iodine with glycerol instead of LCB. Lugol’s iodine is reported to be a potent fungicide which acts by interacting with thiol groups in enzymes and proteins and hence could possibly replace phenol, the killing agent of LCB [7]. Before shifting from the reliable and standardized methods, the factor addressing viability of mycelial fungi needs be addressed so as to avoid spread of live fungal spores and hyphae through air and hands of health-care professionals. Moreover, boric acid glycerol methylene blue was prepared in house, and LCB was procured from HiMedia (India) in this study. The costs can only be compared if LCB is also prepared in house which is a very simple technique and is prepared by many mycology centers. Otherwise, the authors have innovated a novel method for visualization of bacteria and fungi.

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