

FORMULATION OF A NEW MEDIUM TO IDENTIFY THE PATHOGENIC FORM OF *CANDIDA*

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A large number of *C. albicans* identification media and identification systems have been developed. However, these expensive media and identification systems are economically unaffordable in a developing country like Sri Lanka. The main aim of the current project is to formulate a low cost medium, having the property of developing germ tubes within a short period of time to identify *Candida albicans*.

A preliminary dose response study was carried out to determine a suitable concentration of serum to be included in Sabouraud's agar for the induction of germ tubes in *Candida albicans*. The production of germ tubes was noted at a concentration of 10 % human serum in Sabouraud's agar after 45 min. A total of 20 fresh clinical isolates were used for the study. Thirty microscopic fields were selected for each *Candida* isolate using the battlement technique. A Sabouraud's agar plate without human serum was also included in the study. A known germ tube positive *C. albicans* isolate and germ tube negative *C. parapsilosis* isolate were used as controls. For each isolate the experiment was repeated three times. The results of the current study indicate that 10 % human serum containing Sabouraud's agar are also capable of inducing germ tubes in *C. albicans* and the newly formulated medium seems to be much quicker (45 to 60 min) than two and two to four hours in Germ Tube Cryo Vial and Germ Tube Agar, respectively. Further, if Germ Tube Cryo Vial is incubated for longer than three hours, other types of *Candida* yeasts may start producing germ tubes, thus resulting in possible false-positives. The Cryo Vial method has also shown that 5% of routine isolations of *C. albicans* test negative for germ tube production, and other *Candida* spp. such as rare isolates of *Candida tropicalis* may produce similar germ tube structures with constrictions. The present findings indicate that our simple formulation gives 100% positive identification without false positive and negative results.