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| Section: Technical Manual | Subject Title: Germ Tube Test | |
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GERM TUBE TEST

Principle

This is a rapid test for the presumptive identification of *C. albicans*.

Reagents

Bovine serum

A small volume to be used as a working solution may be stored at 2 to 8°C. Stock solution can be dispensed into small tubes and stored at -20°C.

Other Materials

Clean glass microscope slides

Glass coverslips

Vitek tubes (13 x 100 mm)

Pasteur pipettes

Procedure

1. Put 3 drops of serum into a small Vitek tube.
2. Using a Pasteur pipette, touch a colony of yeast and gently emulsify it in the serum. The pipette can be left in the tube.
3. Incubate at 37°C for 2-4 hours but no longer.
4. Transfer a drop of the serum to a slide for examination.
5. Coverslip and examine microscopically using x 40 objective.

Interpretation

Germ tubes are appendages half the width and 3 to 4 times the length of the yeast cell from which they arise. There is no constriction between the yeast cell and the germination tube.

Positive test: presence of short lateral filaments (germ tubes)

Negative test: yeast cells only

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Precaution

C. tropicalis may form pseudohyphae which may be falsely interpreted as germ tubes.

Quality Control

Set up known controls each time a test is run.

Positive: *C. albicans* (ATCC 10231)
Negative: *C. tropicalis* (ATCC 13803)

Reference

1. Murray PA, et al. Manual of Clinical Microbiology, 7th ed., 1999; pp. 1189-1191.