

Sample collection fungi

Dr. hanaa khilil

MYCOLOGY SPECIMEN COLLECTION PROTOCOL

All efforts should be made to collect specimens for fungal culture as free from bacterial contamination as possible

HAIR, SKIN AND NAILS

The scalps of patients with suspected tinea capitis may be examined with a Wood's lamp. Fluorescent distorted or fractured hairs should be removed with forceps. Infected hairs can easily be removed, but normal hairs are more difficult to dislodge. A comb or brush may be used to collect loose hair and skin squames

Skin, when involved, should be cleansed with an alcohol wipe before a specimen is collected. Epidermal scales at the active border of a lesion should be removed with a scalpel. Nails should be cleansed with alcohol wipe, and the outermost layer should then be removed by scraping with a scalpel. Deeper scrapings, debris from under the edges of the infected nails, and nail clippings from infected areas are also suitable for culture.

Samples of hair, skin and nails should be collected and placed in a sterile culture dish for transport to the Laboratory. Storage of 4°C is not recommended since at least one dermatophyte is susceptible to cold temperatures. In addition, storage in closed containers is unsuitable due to overgrowth of contaminating bacteria and saprobic fungi in a moist environment.

Nail clippings may be ground in a mortar before being inoculated onto culture media. Skin scrapings and hair may be inoculated directly onto the surface of appropriate culture media.

Body Fluids Including Cerebrospinal Fluid

All body fluids are collected aseptically by needle aspiration and should be sent to the Laboratory in a sterile container as quickly as possible. **However, if a delay is unavoidable, CSF should NOT be refrigerated, since it is an excellent culture medium and fungi will continue to replicate at 25-30°C.**

Other body fluid specimens may be stored at 4°C overnight, if necessary before culturing. All body fluids should be concentrated by centrifugation for 15 minutes at 1000 x g, and a minimum of 0.5 ml of sediment should be inoculated onto the surface of media. Small volumes of CSF not suitable for centrifugation may be dropped directly on media surface.

BLOOD AND BONE MARROW

As with the collection of other sterile body fluids, good skin antisepsis should be practiced for blood sample collection. Ten milliliters of blood should be collected at periodic intervals. Blood is inoculated to Blood Culture bottles at bedside. Bottles should be returned immediately to Laboratory for incubation at 35°C for 28 days.

VAGINAL SECRETIONS

Vaginal and cervical specimens collected usually submitted on a swab. Transport to the Laboratory should be rapid; however overnight refrigeration before culturing. Specimens should not be stored at room temperature.

RESPIRATORY SPECIMENS

Specimens from the ear, nose, nasopharynx, and mouth are usually submitted on a sterile swab.

All specimens from the lower respiratory tract should be collected in a sterile wide-mouth bottle or sputum cup. A first morning expectorated sputum specimen is optimal. Before a sputum specimen is collected the patient's teeth must be extensively brushed or his or her dentures be removed. The mouth should be cleansed by a mouthwash or several rinses of sterile water or saline.

Specimens should be transported to the Laboratory as soon as possible to ensure maximum recovery of fungi. If culturing is delayed, specimens may be refrigerated at 4°C.

Eye

1. cleanse the skin around the eye with a mild antiseptic

2. purulent conjunctivitis:

a. Collected purulent material with a regular cotton swab

b. Place the swab into transport media and transport at ambient temperature

3. Corneal infections:

a. Swab the conjunctive as described above

Thank you