

FUNGAL CULTURE

I. GENERAL CONSIDERATIONS:

Molds and yeast comprise the group of agents causing fungal (mycotic) infections. The majority of fungi isolated from clinical specimens are relatively common agents causing infection of human skin and mucosal surfaces including *Candida albicans*, other *Candida* species, and the dermatophytes. In the U.S., there are only a few species of fungi isolated which are always considered clinically significant because of their pathogenicity. They are: *Blastomyces dermatitidis*, *Coccidioides immitis*, *Cryptococcus neoformans*, *Histoplasma capsulatum*, and *Sporothrix schenckii*. Diagnosis of these infections is generally performed on hospitalized patients. Infections of the skin and mucosal surfaces may be diagnosed in ambulatory outpatients.

II. SPECIMEN COLLECTION: Listed below are various superficial specimen types and how they should be collected and submitted for diagnosis.

- (1) Aspirates or scrapings are always preferred specimens for isolation of fungi. Swab collections should be used primarily for throats and vaginal specimens when *Candida* is suspected. If swabs are used, do not wet swab with tap water prior to specimen collection.
- (2) Specimens should always be labeled with the suspected agent and enclosed in a sealed screw-capped container or dual culture swab system swabs container.

A. Specimen Collection on Outpatients for Superficial Fungal Infection

(1) Cutaneous Lesions

Material aspirated from a closed lesion is preferred. If the lesion is open, the material should be collected from deep inside the lesion using the dual culture swab system swabs.

(2) Throat and Vaginal Specimens for *Candida* species

These specimens are acceptable when *Candida* infections are suspected. The infected area should be swabbed with the dual culture swab system swabs. For oral specimens, this should be done vigorously, to remove portions of plaque adhering to the mucosal lining. Alternatively, a wooden tongue depressor blade may be used to scrape oral lesions. Place the wooden blade in a sterile screw-cap container and send to Laboratory Services.

(3) Hair for dermatophyte

No cleaning of scalp is needed. Use sterile forceps to pluck hair; both the hair shaft and its base are needed for culture. If hairs are broken off close to the scalp, scrapings of the area are acceptable. The hairs should be submitted to Laboratory Services in a sterile screw-cap container.



(4) Skin for dermatophyte

Cleanse the infected area with **70% alcohol on sterile gauze** or **sterile water and gauze**. Using a sterile scalpel, collect the epidermal scales from the edge of active lesions by scraping into a sterile screw-cap container. **Do not send scalpel blade or glass slide with specimen. Samples received with a scalpel blade or glass slide will be rejected.**

(5) Nail for dermatophyte

Cleanse the infected area with **70% alcohol or sterile water and gauze**. For specimen of the dorsal plate, scrape the outer surface and discard the initial scrapings. Be sure to submit material from under the nail plate and nail clippings. Collect in a sterile screw-cap container. **Do not send scalpel blade or glass slide with specimen. Samples received with a scalpel blade or glass slide will be rejected.**