

OREGON HEALTH & SCIENCE UNIVERSITY  
Hospitals and Clinics  
Point of Care

**Fungal Elements by KOH Microscopic Examination, Skin and Nails**

Principle

Microscopic examination for the identification of fungi from skin or nails. Identification of fungi is better achieved with the addition of KOH. KOH can dissolve tissue cells and keratinized material, making fungal elements more visible.

Specimen Requirements

1. Skin
  - a. Cleanse skin to be sampled with 70% alcohol to remove contaminating microorganisms.
  - b. If characteristic "ring" is present on skin, collect samples from the outer margin of the ring. Otherwise collect samples from where skin appears to be scaling.
  - c. Use edge of glass side or scalpel to scrape off surface skin scales.
  - d. Place sample on a clean glass slide.
  - e. Skin samples should be thoroughly minced to allow KOH to penetrate
2. Nails can be progressively shaved with a scalpel and pulverized with a mortar and pestle.

Interferences

Small quantities of yeast and hyphae may be missed in the KOH prep. Send the sample for culture to verify.

Reference Range

None seen.

Alert Values

N/A

Test Accuracy and Reliability Verification

All providers performing Fungal Elements must be enrolled in the on-line training with Medtraining. Please contact Point of Care at 4-6035 to be enrolled.

