

# Specimen Collection for Scabies

Adopted from the Michigan Dept. of Community Health "Scabies Prevention and Control Manual".

Clinical identification of scabies is necessary to confirm scabies infestation. Skin scrapings should be obtained from at least one symptomatic patient. Additional specimens can be obtained from health care workers, volunteers, and/or visitors. The following methods should be followed in order to obtain sufficient samples for scabies diagnosis.

## Tests Available

Microscopy

## Equipment and Supplies

- Disposable gloves
- 2 - 3 glass slides (3 inch x 1 inch) and 2 - 3 cover slips (22 mm) per patient
- Slide carriers
- Magnifying lens and light source such as goose neck lamp or high intensity lamp
- Alcohol wipes
- Felt tip pen (green or blue)
- Clear nail polish
- Mineral oil and dropper
- Sterile surgical blades #15 and handle or sterile disposable scalpel (alternately, use a hypodermic needle, gauge 23 or 25)
- Sharps container

## Procedure

1. Plan to obtain at least 2-3 scrapings from separate locations on the body. Use a separate slide and cover slip for each scraping.
2. Each slide must be labeled. Label only the frosted end of each slide with patient name and DOB or ID number. Do not obscure any other part of the slide with a label.
3. It is critical to do a thorough examination of the patient's skin. The use of a hand-held magnification lens and good lighting are often required for identifying lesions to be sampled.
  - Although 80% of mites are found in the webbing between the fingers on the hands, and on the folds of wrists, they can also be found on the shoulders, back, abdomen, elbows, buttocks, axillae, under the breasts, behind the knees, and on the thighs.
  - The mites burrow into the skin, but never below the outer layer of the epidermis, the stratum corneum.
  - Look for burrows, which will appear as serpentine, redline marking tunnels in the skin up to several centimeters long and unexcoriated papules (unscratched bumps) that suggest site of active mites.
  - These tunnels may be made more visible by rubbing a felt tip pen over the area of the burrow and immediately wiping with an alcohol wipe gently to remove excess ink. The remaining ink will penetrate the stratum corneum (outer layer of skin) and stain the tunnel that will appear as a zigzag line. This may be an insensitive method of locating fresh burrows and may only be helpful for a few days following the onset of signs and symptoms.

- The mites will not be easily demonstrated in excoriated, scabbed, or infected skin.
4. Sample should be taken from unexcoriated burrows, or intact papules.
  5. Place a small drop of mineral oil in the center of the labeled slides.
  6. Place a drop of mineral oil on the lesions to be scraped and evenly spread the oil over the area to be sampled.
  7. A surgical blade or hypodermic needle may be used to collect the scraping. **CAUTION:** never re-enter the mineral oil container with any instrument that has been used to collect scrapings.
    - Pull the skin taut.
    - Apply slight pressure while making several scraping passes over the lesion.
    - If using a needle, best results are obtained when the needle is held at a 5-degree to 10-degree angle to the skin surface.
    - A surgical blade may also be used to collect samples.
      - Hold the blade at 90-degrees to the skin surface and lightly scrape the area to be sampled.
      - A small amount of bleeding may occur but will not interfere with the examination.
  8. Transfer the needle/blade scrapings from the lesion to a prepared slide and place a cover slip on slide. The slide should have visible skin cells on it.
    - A small amount of blood in the sample will not interfere with microscopy.
  9. When specimen collection is complete, wipe each area where a scraping was conducted with an alcohol wipe.
  10. Secure (but do not completely seal) the cover slips by placing one small drop of nail polish on each edge of the cover slip. Place in a cardboard slide mailer labeled with patient identification, and submit to the laboratory with an Infectious Diseases Requisition (IDR) form.