

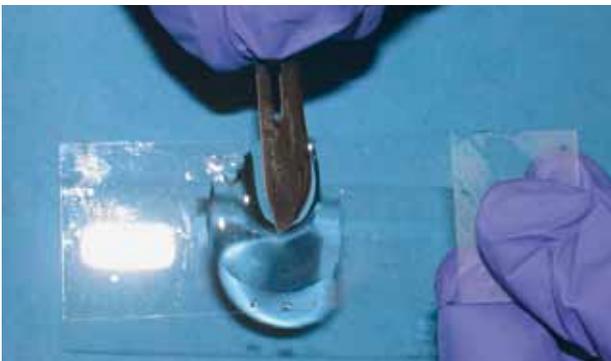
How to perform a **skin scraping** to detect common mites

Skin scrapings are commonly used to identify mites such as *Sarcoptes*, *Demodex* and *Cheyletiella* species. Here, Dr. Kimberly Coyner shows how you can optimize your scraping technique, depending on which irritating mite you suspect.

STEP 1: Prepare your instruments: Use a laboratory spatula or a No. 10 scalpel blade dulled by repeatedly scraping the blade's edge on a hard surface.



STEP 2: Apply mineral oil to the dull blade, the microscope slide and the lesion that will be scraped.



STEP 3: Scrape the area:

Scraping for *Demodex* species mites

Demodex species mites live in hair follicles, so their identification requires deeper skin scrapings than those used to identify surface-living mites. Scrape the dull blade briskly on the skin in the direction of hair growth until capillary oozing is observed on the skin as well as on the blade. Be careful not to press down on the blade, which could cut the skin.



Between scrapings, intermittently squeeze the scraped area to help express mites and increase yield.



See the next page for the scraping techniques for *Sarcoptes* and *Cheyletiella* species and what these mites look like under the microscope. →

Scraping for *Sarcoptes* species mites

To identify infestation with *Sarcoptes* species mites (scabies), obtain multiple wide superficial scrapings of crusted, papular or alopecic lesions on elbows, pinnal margins and the ventral trunk.

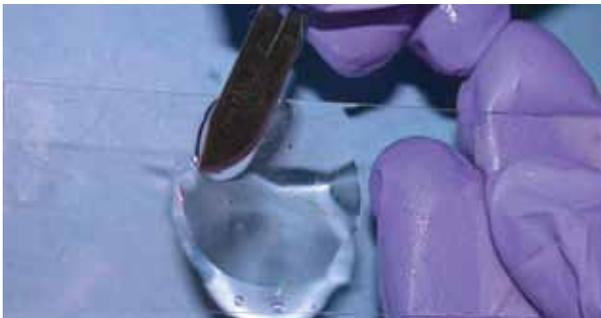
Sarcoptes species mites live in the stratum corneum and are often few in number, making false negative scrapings common. So any animal with pruritus consistent with scabies should be trial-treated with appropriate acaricidal therapy.

**Scraping for *Cheyletiella* species mites**

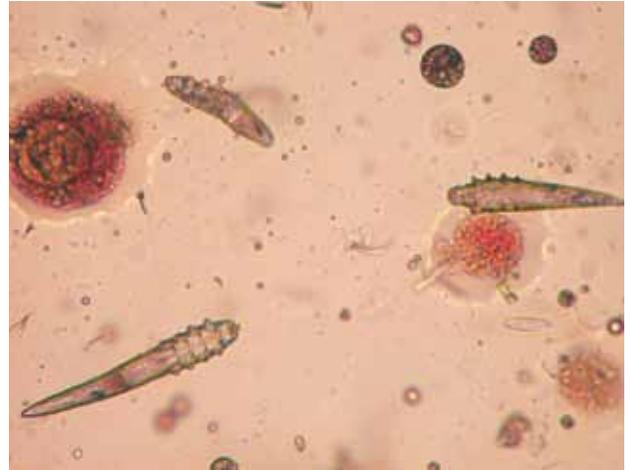
To identify surface-living *Cheyletiella* species mites, obtain wide superficial scrapings of scaly lesions, and place these scrapings in mineral oil for microscopic examination; these large surface-dwelling mites are often found along the dorsum and are quite visible on 4X magnification, but can also be low in number.

In some cases, *Cheyletiella* species mites can be found by using multiple applications of clear (not frosted) acetate tape onto scaly areas. After sample collection, apply the tape to a microscope slide (no oil or stain is used) and examine under 4X magnification. As in cases of suspected scabies, empiric acaricidal therapy is often prescribed in cases of suspected *Cheyletiella* species infestation.

STEP 4: Mix the accumulated debris on the blade into the mineral oil on the microscope slide.



Apply a coverslip and examine the slide under 4X to 10X magnification.



A *Sarcoptes* species mite (10X).



Demodex species mites and nymphs (10X).



A *Cheyletiella* species mite; these mites are larger than *Sarcoptes* species mites and have distinctive mouth parts.