

# the ITCH

## Oral Allergy Drops

We have been offering sublingual immunotherapy (oral allergy drops) to our patients/clients for over 2 years now. For those patients or clients that do not like 'needles' or 'injections', this oral route of administration is another option to consider. Oral allergy drops appear to be of equal efficacy to the standard 'allergy injections', but these drops must be given daily. The now new and old options of immunotherapy administration allow us to better tailor therapy to the temperament of the patient and lifestyle of the client. Ultimately, compliance and success will hopefully be improved. Our collective clinical experience and expertise balanced with the art of allergen selection and immunotherapy administration is a winning combination for your referred patients.

## Dermatology Team

Department of  
Small Animal  
Clinical Sciences

Alison Diesel,  
DVM, DACVD

Adam P. Patterson,  
DVM, DACVD

Amanda Friedeck,  
BS, CVA

Department of  
Veterinary Pathobiology

Joanne Mansell,  
DVM, MS, DACVP

Aline Rodrigues Hoffmann,  
DVM, PhD, DACVP

## Clinical Appointments

Small Animal Dermatology  
979-845-2351

Equine Dermatology  
979-845-3541

For more  
information, please  
visit our website at:  
[vetmed.tamu.edu/  
services/dermatology](http://vetmed.tamu.edu/services/dermatology)

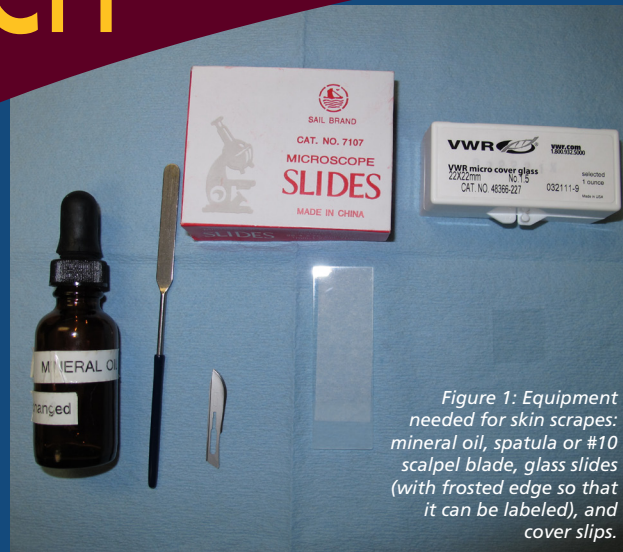


Figure 1: Equipment needed for skin scrapes: mineral oil, spatula or #10 scalpel blade, glass slides (with frosted edge so that it can be labeled), and cover slips.

## Skin Scrapes:

## Part of a minimum dermatological diagnostic database



Figure 2: Deep spatula scraping of a patch of partial alopecia in a Boston terrier dog. The capillary bleeding signifies the scraping is deep enough to exclude the presence of follicular mites such as *Demodex canis*.

Are you performing skin scrapes on all your dermatological patients? If not, why not? Skin scrapes are very practical and an efficient means of examining the surface and follicular microenvironment of the skin when parasites are suspected. Let us show you (and your technical staff) why and how we perform and interpret superficial and deep skin scrapings. Indeed, it is so simple that we sometimes forget that this is a chargeable diagnostic test.

### Why?

Skin scrapes are used to exclude cutaneous parasites (predominantly mites) as a reason for disease. "Surface-dwelling" parasites (Table 1) typically cause exfoliation, alopecia, and moderate to severe pruritus. Identification of many of these parasites is best achieved by scraping the skin superficially. Deep skin scrapes are used to

examine "follicular-dwelling" parasites. These "deep" parasites often result in exfoliation, alopecia, papules, hyperpigmentation, and lichenification. Pruritus, as well as pyoderma, may be a part of the clinical picture.

### What?

Virtually any observable lesion on the skin should be microscopically examined with a combination of superficial and deep scrapings. Preferred lesions to sample would be erythema, scale, crusts, epidermal collarettes, papules, alopecia, and lichenification. Similarly, skin scrapes, together with the history, clinical findings, and skin/ear cytology, should be part of a minimum dermatological database in all pruritic animals.



Figure 3: Cutaneous contents adhered to the spatula by way of mineral oil obtained from the dog in Figure 2.

### How?

Regardless of the depth of the scraping, required equipment includes: #10 dull scalpel blade or spatula, mineral oil, glass slides, cover slips, and a light microscope preferably with a 10x objective (Figure 1). If too much hair is in the way of the best area to sample, then gentle and minimal clipping may be required. Alternatively, a few drops of mineral oil may be put on the skin





## Did you know?

- Texas A&M University Veterinary Medical Teaching Hospital has 2 full time Diplomates of the American College of Veterinary Dermatology specializing in the diagnosis and treatment of skin, ears, claws, and allergy in both small and large companion animals
- Two dermatopathologists who are Diplomates of the American College of Veterinary Pathology work side-by-side with the clinical dermatologists to diagnose skin disease
- Downloadable referral and dermatological history forms along with other information is available to you and your clients at <http://vet-med.tamu.edu/services/dermatology>
- You can send skin biopsies from your practice for interpretation by our dermatopathologists by following the instructions at <http://vetmed.tamu.edu/vtpbl/professional-services/dermatopathology>



Diesel

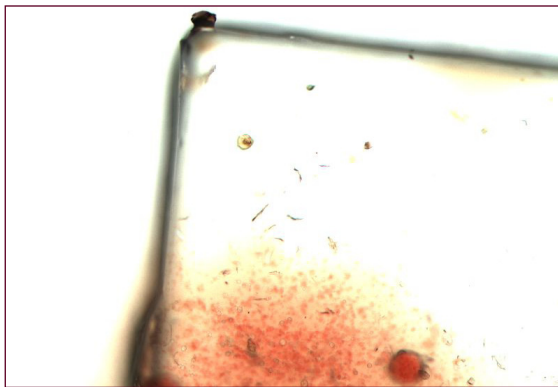


Figure 4: The corner and borders of the cover slip are identified and used as a reference point when scanning the entire scraped contents under the cover slip using the 10x objective. Note the epidermal debris and coagulated blood in the same field.

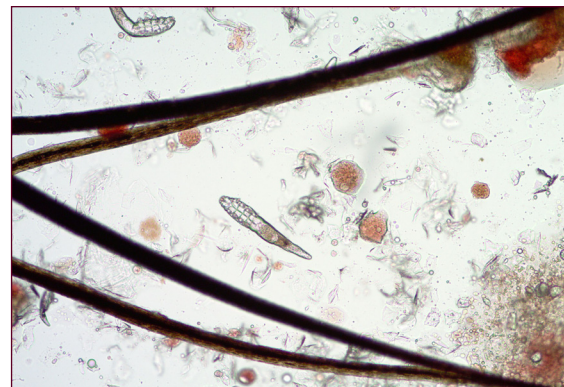


Figure 5: Demodex canis mites were identified from the deep scrapings of a young dog with generalized scaling alopecia. Note the epidermal debris, hair shafts, and coagulated blood within the same field (10x objective).

and surrounding hair in an attempt to flatten and push the hair away from the selected sample site. Once the site is ready, the scalpel blade or spatula should be dipped in a bit of mineral oil. We especially prefer to use a spatula when sampling around mucocutaneous junctions, ulcers, the paws of tiny animals, and when the patient is difficult to lightly restrain. With the blade or spatula perpendicular to the skin surface, scrape the skin in the direction of hair growth to help reduce the chance of losing the sample in the surrounding fur. When searching for “superficial” parasites, scrape broadly over large surface areas of the skin. “Deep” scrapings for follicular parasites require repeated focal scraping until capillary bleeding is observed (Figure 2). Parasites may be extruded to the follicular ostia by gently squeezing the skin while scraping it. Smear collected contents from the instrument to a glass slide (Figure 3); a single drop of mineral oil is placed directly in the center of the slide and contents are wiped onto it as if buttering a piece of bread. Ideally, keep sampled contents in the center of the slide and within the confines of the diameter of a cover slip. For deep scrapings, few specks of blood should be seen with the naked eye. Place a cover slip directly over the sample as it provides a reference point or a border of where the sample is on the slide. Label the sampled location on the glass slide and then repeat the same procedure in at least 2 more representative areas. Superficial scraping contents can all be placed on a single slide. Separately labeled slides per body area are recommended when deep scrapes are performed since it is important to re-scrape these same areas in the future to monitor therapeutic efficacy when the initial scrapes were “positive” for follicular (Demodex) mites.

### Interpretation.

The slide is examined with use of low magnification (10x) since parasites are multicellular organisms. The condenser needs to be lowered and the light source reduced in order

to increase the contrast of sampled cutaneous debris. Once the corner of the cover slip is microscopically identified (Figure 4), the entire contents of the area confined to the cover slip are scanned by moving back-and-forth from the sides of the cover slip. Continuous refocusing will be needed as the slide is scanned since not all of the scraped contents (of varying height/depth) are in a single viewing plane. The finding of any parasite must be interpreted in light of the clinical picture, but are usually considered a significant finding if recovered from a representative lesion (Figure 5 and Table 1). Record the findings in the medical record making sure sampled body areas are mentioned.



Table 1: Clinical Findings and Diagnostic Tests for Common Dermatological Parasites

Mite	Distribution	Main Test	Main Test Sensitivity	Other Tests	Other Considerations
<i>Superficial parasites</i>					
<b>Cheyletiella spp.</b> Walking dander	Dorsal back	Flea comb, acetate tape, superficial scrape	Moderate	ID in fecal float Response to treatment	Treat other dogs, cats, and rabbits in house
<b>Demodex gatoi</b>	Haired skin where cat can reach	Superficial scrape	Low/Moderate	Lime sulfur dip trial	Treat other cats in house
<b>Pediculosis</b> Lice	Trunk, but anywhere	Flea comb, acetate tape, direct visualization	High	Response to treatment	Treat other same species of pet in house
<b>Otodectes</b>	Otic canal, preaural space, face	Otic cytology with mineral oil, superficial scrape	Moderate/High	Response to treatment	Treat other cats & dogs in house
<b>Notoedres</b>	Pinnal margins, head, neck	Superficial scrape	High	Response to treatment	Treat other cats in house
<b>Sarcoptes</b>	Pinnal margins, elbows, hocks, ventrum	Pinnal-pedal response	Moderate/High	Superficial scrape (low sensitivity)	Treat other dogs ± close contact cats in house
<b>Trombiculiasis</b> Chiggers	Limbs, ventrum	Superficial scrape	Moderate	Response to treatment	
<i>Deep parasites</i>					
<b>Demodex canis</b>	Haired skin-perioral, periorcular, paws, but any haired skin	Deep scrape	High	Hair plucks (especially around eyes, nose, ulcers)	Biopsy - Sharpeis or thickened, scarred skin
<b>Demodex cati</b>	Haired skin	Deep scrape	High		FeLV/FIV Neoplasia