



The University of Georgia

College of Veterinary Medicine
Department of Infectious Diseases

DrenchRite® Larval Development Assay: for the laboratory detection of anthelmintic (dewormer) resistance

DESCRIPTION:

The DrenchRite® Larval Development Assay (LDA) is an *in vitro* test for the detection of anthelmintic resistance in the major gastrointestinal nematode parasites infecting small ruminants (sheep, goats, llama, alpaca, etc). The test evaluates the resistance to benzimidazole (e.g. Valbazen, Panacur, Safeguard), levamisole (e.g. Totalon, Levasol, Prohibit), and avermectin/milbemycin (Ivomec, Cydectin). Nematode resistance to all drug classes listed above are tested for in this assay from a single pooled fecal sample. Nematode eggs are isolated from the submitted fecal sample and placed into the wells of a microtiter plate containing growth media and anthelmintic. The concentration of anthelmintic required to block development of nematode larvae is related to the effectiveness of the drug in the animal.

The DrenchRite® LDA offers a diagnostic alternative to the laborious task of performing fecal egg count reduction tests (FECRT) in order to determine the effectiveness of dewormers. All that is needed to perform the DrenchRite is a pooled fecal sample from 10 or more animals containing adequate numbers of nematode eggs. The test can be done with fewer than 10 animals, but it is recommended to include at least 6. The mean fecal egg count (FEC) in the sample should be > 350 eggs per gram (EPG), but samples with mean FEC >500 are preferred. In general, the higher the mean FEC, the better the assay works. The higher egg counts allow for a much cleaner extraction of the eggs from the feces. If *Haemonchus contortus* (barber pole worm) is your primary concern (this is the most common), and you are using the FAMACHA® system, only select feces from animals scored as 3, 4, or 5. Animals scored as 1 or 2 usually will have low egg counts. Results with interpretation will be available approximately 14 - 21 days after the sample is received.

FOR MORE INFORMATION CONTACT EITHER:

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