## FLUORESCEIN DIAGNOSTICS & ULCER TYPES: AN ILLUSTRATED OVERVIEW

Fluorescein is an orange hydrophilic dye that turns green in basic media. It has a high affinity for the hydrophilic stroma but does not bind to the hydrophobic corneal epithelium. There are 4 diagnostic advantages for ophthalmology.



**SEIDEL EVALUATION** 



The Seidel test is used to detect corneal perforations. After applying topical anesthetic if needed, several drops of fluorescein are instilled onto the cornea without rinsing. If there is a perforation, aqueous humor will leak from the anterior chamber, diluting the fluorescein. Using a light with a blue filter, a green stream or runoff will be visible on the surface of the cornea.

## **EVALUATION OF TEAR FILM BREAK-UP TIME (TFBUT)**



This test is used to assess the stability of the tear film. A drop of fluorescein is applied to the cornea, and the eyelids are briefly closed. After opening the eyelids, the cornea is observed for the TFBUT, which is the time between eyelid opening and the break down of the tear film, indicated by the appearance of black dots while the rest of the cornea remains green. This test evaluates the quality of the tear film, including the lipid and mucin layers. In dogs, the average TFBUT is about 20 seconds, and in cats, about 17 seconds. For greater sensitivity, use magnification and blue light.

## **JONES TEST**



The Jones test is used to evaluate patency of the nasolacrimal ducts. Fluorescein is applied to the eye, and within 5-10 minutes, fluorescein should appear at the nostrils if the nasolacrimal ducts are patent. However, fluorescein transit time can vary between animals, sometimes taking several minutes.

\*In certain dogs and cats, particularly brachycephalic breeds, there may be an opening for tears to flow into the oral cavity instead of the nose. If possible, examination of the animal's oral cavity would be ideal to rule out false negatives.

## Content reviewed by DJ Haeussler, Jr., BS, MS, DVM, DACVO To learn more visit domespharma.us/learnmore Bibliography:

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