## FLUORESCEIN TESTING IN VETERINARY MEDICINE:

## **A Brief Test Overview**

### **ULCER STAINING**

# TEAR FILM BREAK UP TIME (TFBUT)

## **ASSESSES**

Corneal stromal exposure and/or descemetocele.

WHY?

Fluorescein adheres to hydrophilic tissues such as the corneal stroma.

Fluorescein does not adhere to hydrophobic tissues such as intact corneal epithelium or Descemet's membrane.

NOTE: descemetocele is a surgical EMERGENCY.

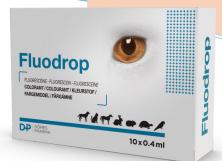
#### **HOW**

Apply one drop onto the cornea and allow the patient to blink. Rinse with sterile eye wash. Use a cobalt blue light to examine the cornea for stain uptake.

Quality of the precorneal tear film.

Mucin and lipid layers of the tear film affect spreading and retention of tears on the cornea. Conditions affecting these layers affect how long the tear film remains intact across the cornea before it starts to break up.

- Apply a drop of fluorescein onto the cornea and induce one or two forced blinks to spread evenly.
- Hold the eyelids open and count the seconds until the uniform tear film starts to break up (as evidenced by the appearance of dark spots). Observe a specific area of the eye - usually the dorsolateral quadrant.
- Normal results in the dog are > 20 seconds.
- Normal results in the cat are around 17 seconds.



Fluodrop™ by Dômes Pharma, a premade fluorescein drop offers a consistent, standardized concentration for ophthalmologic exams, delivered in a single-use pipette to ensure optimal hygiene and prevent cross-contamination



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## **JONES TEST**

# SEIDEL TEST

#### **ASSESSES**

Nasolacrimal duct patency.

## WHY?

Fluorescein travels down the nasolacrimal duct when instilled into the eye and appears at the nares if patent.

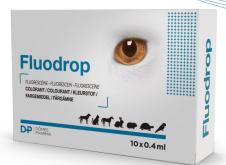
#### **HOW**

- Apply several drops of fluorescein into the eye
- Visibility is expected at the nares within 5-10 minutes, but this time may vary between patients.
- NOTE: In certain dogs and cats, especially brachycephalics, there may be an opening for tears to flow into the oral cavity instead of the nose. If possible, examine the oral cavity to rule out false negatives.

Full thickness corneal perforation.

Aqueous humor leaking through the cornea disrupts fluorescein staining.

- Apply a generous amount of fluorescein to the affected eye.
- Do not rinse and allow animal to blink so the entire corneal surface is covered (thin film of green stain).
- If there is a perforation, aqueous humor will leak from the anterior chamber, diluting the fluorescein. Using a cobalt blue light, a green stream or runoff will be visible on the surface of the cornea.



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