

Vanishing Preservative Technology

VET TEARS HA

Sodium Hyaluronate & HP Guar Ocular Lubricant

Class: Viscoelastic Lubricant

Indication: KCS / Corneal Healing / Surface Support

Species: Canine & Feline

1. CLINICAL RATIONALE

Disruption of the precorneal tear film — through immune-mediated lacrimal disease (KCS), surgical intervention, neurological dysfunction, or environmental exposure — leads to corneal desiccation, epithelial breakdown, and progressive visual compromise. **Vet Tears HA** replicates and supplements the natural tear film through three synergistic mechanisms: a viscoelastic mucoadhesive polymer, an adaptive gel-forming matrix, and rapid-acting demulcents.

2. QUALITATIVE & QUANTITATIVE COMPOSITION

Format: Sterile Ophthalmic Solution | **Pack Size:** 10 mL Multi-Dose Bottle

Active Ingredient	Pharmacological Mechanism
Sodium Hyaluronate (Viscoelastic Polymer)	High-molecular-weight glycosaminoglycan. Retains up to 1,000× its weight in water. Binds directly to corneal epithelium forming a sustained lubricating film, promotes epithelial cell migration across defects, and significantly extends tear contact time compared to basic artificial tears.
HP Guar (Adaptive Gel Matrix)	Undergoes ionic cross-linking with tear film electrolytes (Na ⁺ , K ⁺) immediately on contact, forming a soft, protective gel matrix. Extends residence time beyond HA alone while maintaining visual clarity.
PEG 400 & Propylene Glycol (Humectants)	Provide rapid moisture attraction immediately upon instillation, reducing mechanical lid-cornea friction during blinking for instant comfort relief.

Formulated with **Sodium Oxylchloro Complex, a vanishing preservative that converts to water, oxygen, and sodium chloride on the ocular surface, eliminating BAK-associated epithelial toxicity.*

3. CLINICAL INDICATIONS & SAFETY

Indicated for ocular surface lubrication and tear-film support across the following presentations:

- **Keratoconjunctivitis sicca (KCS):** Chronic and recurrent.
- **Post-operative corneal & surface surgeries.**
- **Corneal epithelial defects:** Supports epithelial cell migration.
- **Exposure and pigmentary keratitis:** Adjunct management in brachycephalic breeds.
- **Adjunct to immunomodulator therapy** (cyclosporine/tacrolimus).

✓ Safety Profile

- **No absolute contraindications:** Safe for chronic, daily use for months to years.
- **Adverse Effects (Rare):** Transient mild stinging or temporary blurring (1-2 mins) immediately after instillation due to the viscoelastic formulation.

4. DOSING & ADMINISTRATION

Route: Topical Ophthalmic. Instil 1 drop per affected eye per administration.

Framework A: Chronic KCS / Dry Eye

Focus: Long-term tear film compensation and epithelial support based on STT.

💧 Dosing by Schirmer Tear Test (STT)

- **Mild (STT 10–15 mm):** Vet Tears HA 1 drop, 2–3× daily.
- **Moderate (STT 5–9 mm):** Vet Tears HA 1 drop, 4–5× daily + cyclosporine 0.2% BID.
- **Severe (STT <5 mm):** Vet Tears HA Q2–3H (up to 6× daily) + immunomodulator.

📅 Monitoring Schedule

- **Week 2:** Recheck STT, adjust Vet Tears HA frequency.
- **Week 4–6:** Assess immunomodulator response.
- **Month 2–3:** Re-evaluate STT, transition to maintenance dosing.

Framework B: Corneal Ulcer Post-Healing

Focus: Reducing friction across healing corneal surfaces to prevent recurrence.

🔍 Step 1: Confirm Epithelial Closure

Fluorescein test **MUST** be negative (ulcer fully healed). No signs of active infection or purulent discharge. Corneal clarity improving.

🛡️ Step 2: Post-Healing Support

- **Week 1–2 post-healing:** Vet Tears HA 4–6× daily.
- **Week 3–4:** Taper to 3–4× daily.
- **Maintenance:** Continue 2–3× daily if underlying dry eye contributed to the ulcer.

Framework C: Exposure Keratopathy

Focus: Adjunct management in brachycephalic breeds or neurological deficits.

🛡️ Surface Protection

- **Frequent Application:** 1 drop every 2–4 hours (or as needed) to prevent desiccation and secondary ulceration.
- Apply generously prior to sleep or exposure to harsh environmental conditions (wind, dust).

5. COMBINATION THERAPY SEQUENCE RULE

When using Vet Tears HA alongside medicated drops (e.g., FurrMoxi LP, cyclosporine), **sequence and timing matter**.

1 Medicated Drop First: Requires direct corneal contact for absorption.

2 Wait 5–10 Minutes: Allows the medication to fully absorb into the ocular tissues.

3 Vet Tears HA Last: Acts as a sealing viscoelastic bandage over the surface without washing out the medication.

6. CLINICAL TROUBLESHOOTING

✖ Patient Not Improving on Vet Tears HA

Possible Causes:

- Insufficient dosing frequency (underdosing).
- Underlying immune-mediated lacrimal destruction not addressed.
- Owner compliance issues or incorrect instillation technique.
- Misdiagnosis: Exposure keratopathy, neurogenic dry eye, or concurrent entropion causing ongoing irritation.

Clinical Solutions:

- Increase frequency to 5–6× daily if tolerated.
- Initiate immunomodulator therapy if not already prescribed.
- Repeat STT; rule out other causes of ocular surface disease.
- Refer to a specialist if no improvement after 4–6 weeks of optimised therapy.

🔧 Excessive Discharge Despite Treatment

- Rule out blocked nasolacrimal duct (perform flush).
- Cytology and culture if a bacterial cause is suspected.
- Evaluate for eyelid conformation abnormalities (entropion/ectropion).

7. EXPECTED CLINICAL OUTCOMES

When treating KCS or surface irritation with Vet Tears HA (and adjunct therapies as needed), the expected clinical outcome timeline is:

- **Minutes:** Improved comfort; reduced blepharospasm on instillation.
- **1–3 Days:** Reduced ocular discharge; decreased conjunctival hyperaemia.
- **1–2 Weeks:** Improved corneal clarity; reduced pigmentation progression.
- **4–8 Weeks:** Measurable STT improvement (when combined with an immunomodulator).

**If no response is observed at 2 weeks, re-evaluate diagnosis, confirm compliance, and consider underlying systemic causes.*

8. SELECTED CLINICAL REFERENCES

- Gelatt KN, Gilger BC, Kern TJ, eds. *Veterinary Ophthalmology*. 6th ed. Wiley-Blackwell; 2021.
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- Berdoulay A, English RV, Nadelstein B. Effect of topical 0.02% tacrolimus aqueous suspension on tear production in dogs with keratoconjunctivitis sicca. *Vet Ophthalmol*. 2005;8(4):225–232.
- Moore CP. Diseases and surgery of the lacrimal secretory system. In: *Veterinary Ophthalmology*. 4th ed. 2007:633–661.

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