**DRY EYE: DIAGNOSTIC TEST TEMPLATE**

**RAPPORTEUR**
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**TEST**
Schirmer I (without anesthesia).

**TO DIAGNOSE**
A reduction in reflex tear flow.

**VERSION of TEST**
[V 1 ]
Farris et al. 1981

**DESCRIPTION**
An estimation of tear flow stimulated reflexly by insertion of a filter paper into the conjunctival sac.

**CONDUCT of TEST**
In this study, the test followed an osmolarity measurement and then a basal tear volume assessment.

1. The unanesthetised eye
2. No blotting away of tears
3. Schirmer strips inserted over the lower lid margin, midway between the middle and outer third.
4. Eye open or closed – not stated
5. Wetting read at 5 minutes, or before, if the paper is wetted completely before this time. Measurement is made from the notch.
6. Wetting is measured with rule provided in the packet.

(Papers were stored for later lysozyme and lactoferrin measurements)

In this study, wetting was converted into microlitres of wetting from a standard curve constructed for the strips, using a lysozyme solution for wetting. A similar approach was reported by Lamberts et al. 1979

**Web Video**
Not available:

**Materials:**
- Schirmer Papers (3x35mm. Manufacturer?)

**Standardization**
Time of day [v]  
Temperature [v]  
Humidity [v]  
Air speed [v]  
Illumination [v]. Assumed to influence.

**Variations of technique**
- Calibrated and dyed papers (Eagle Vision - blue)
- Paper housed in a water impervious wrap, to reduce evaporation.  
Holly, Esquivel 1986

**Diagnostic value**
The analyses in this study were based on eyes not people, or averages of eye results.

Normals were:
<41 years: 46M; 53 F  
>40 years: 55M; 65F
KCS (Symptomatic; Osmolality 312 mOsm/L; tear debris, viscous tears, reduced marginal strip; SPK with fluorescein)

Normals: 5.71 ± 5.86 µl/min  
KCS: 3.29 ± 3.57 µl/min  (P< 0.01)

**Repeatability**
Intra-observer agreement. [ - ]
Inter-observer agreement. [ - ]

**Sensitivity**
(true positives)  
[10] cut off 3 mm  
Farris et al 1983
DEW
Schirmer 1
Farris

<table>
<thead>
<tr>
<th>Specificity</th>
<th>(100 – false positives)</th>
<th>100 cut off 3 mm</th>
<th>Farris et al 1983</th>
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</thead>
<tbody>
<tr>
<td>Glossary</td>
<td>‘Reflex tear flow’ implies stimulated reflexly by placement of the Schirmer paper into the conjunctival sac</td>
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References:


