DEW
Schirmer 1
Farris

DEWS	**DRY EYE: DIAGNOSTIC TEST TEMPLATE**	
RAPPORTEUR	A.J.Bron	16th Oct 2004
TEST	**Schirmer I test (without anesthesia).**	
TO DIAGNOSE	A reduction in reflex tear flow.	REFERENCES
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. Measuremnt 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 [√] Temperature [√] Humidity [√] Air speed [√] Illumination [√]. 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)	Farris et al. 1981
Repeatability	Intra-observer agreement. [-] Inter-observer agreement. [-]	
Sensitivity 3 mm cut off	**(true positives)** [10] cut off 3 mm	Farris et al 1983

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Specificity	**(100 – false positives)** [100] cut off 3 mm	Farris et al 1983
Glossary	'Reflex tear flow' implies stimulated reflexly by placement of the Schirmer paper into the conjunctival sac	

References:

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Lamberts DW, Foster CS, et al. (1979). Schirmer test after topical anaesthesia and the tear meniscus height in normal eyes. *Arch Ophthalmol.* 97: 1082-1085.