

<b>DEWS</b>	<b>DRY EYE: DIAGNOSTIC TEST TEMPLATE</b>	
<b>RAPPORTEUR</b>	James P. McCulley, M.D.	8 <sup>th</sup> 11 2004
<b>TEST</b>	<b>Microbiological contribution to meibomian performance</b>	
<b>TO DIAGNOSE</b>	To diagnose type of chronic blepharitis and contribution of bacteria to ocular surface disease, i.e. "dry eyes"	REFERENCES
<b>VERSION of TEST</b>	[1]	
<b>DESCRIPTION</b>	Aerobic, anaerobic, and fungal standard culturing technique.	
<b>CONDUCT of TEST</b>	Calcium alginate swabs moistened with enrichment media are passed along the lid margin and directly plated. A separate similar swab is also passed through the inferior <i>cul de sac</i> and plated directly.	
<b>Web Video</b>	Not available	
<b>Materials:</b>	<ul style="list-style-type: none"> <li>• Calcium alginate swab</li> <li>• Blood agar and chocolate agar plates</li> <li>• Saboraud's media without inhibitor</li> <li>• Liquid enrichment media, e.g. thioglycollate</li> <li>• Gas pack</li> <li>• Incubator</li> <li>• Capable microbiologist</li> </ul>	
<b>Variations of technique</b>	Various less intense approaches.	
<b>Standardization</b>	Time of day [ ] Temperature [ ] Humidity [ ] Air speed [ x ] Illumination [ ] Other:[ ]	
<b>Diagnostic value</b>	This version : [ I ] Varies depending upon the type of blepharitis or dry eye being assessed from tremendously important to being of little value.	
<b>Repeatability</b>	Intra-observer agreement. [ high ] Inter-observer agreement. [ high ]	
<b>Sensitivity</b>	( <b>true positives</b> ) [ variable depending upon type of disease being assessed ]	
<b>Specificity</b>	( <b>100 – false positives</b> ) [ variable depending upon type of disease being assessed ]	
<b>Other Stats</b>	High correlation between clinical appearance of Staphylococcal blepharitis and mixed staph/seborrheic blepharitis, with recovery of <i>Staphylococcus aureus</i> . Otherwise, no specific pathogen relationship found, except that many of the different bacteria normally found in the ocular flora produce lipolytic enzymes that would degrade the normal meibomian secretions, releasing potentially "noxious" lipids.	
<b>Test problems</b>	Arduous and require a competent ocular microbiology lab,	
<b>Test solutions</b>	Probably the majority of the time significant microbiological evaluation will be limited to research protocols and not clinical practice except when there is an obvious infectious component.	

<b>FORWARD LOOK</b>	The role of bacteria has been at least partially if not well defined. There are other potential bacterial lipolytic enzymes, e.g., phospholipase A, that could contribute to the production of disease.	
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## References

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