

# Zone i of Tear Microdesiccates Is a Lipid-Containing Structure

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Copyright © 2016 Wolters Kluwer Health, Inc. All rights reserved. Purpose: Morphological features of tear microdesiccates on glass surfaces have been associated with tear fluid status. Tear-film lipids play a critical role in the pathophysiology of some ocular surface disorders. Tear microdesiccates display 4 distinctive morphological domains (zones I, II, III, and transition band). In this study, we investigated the lipid location in tear microdesiccates. Methods: Tear from individual healthy eyes (assessed by symptoms, signs, and slit-lamp examination) was collected using absorbing minisponges. One- $\mu$ L aliquots were allowed to dry under ambient conditions on microscope slides. Tear microdesiccates were examined by various transmitted light microscopy methods. Tear lipids were located both by partition experiments using 2 lipophilic dyes (Oil red O and Nile blue A) mixed with tear fluid under conditions preserving morphological features of microdesiccates and by assessing the effect of