

FREE

ARVO Annual Meeting Abstract | May 2005

Microbiology Assessment of a Multi-Dose Preservative Free Tear Product

R.P. Stone; R.A. Rosenthal; S.L. Buck; B.A. Schlech

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science May 2005, Vol.46, 2041. doi:

Abstract

Abstract: **Purpose:** Preservatives are added to products to prevent contamination. Multi-dose products are required to meet preservative efficacy standards. But sometimes these useful preservatives cause irritation to the eye, and a preservative-free product may be desirable. A new preservative free product in a multi-dose container (MDPF product) was developed to meet these needs. The purpose of this study was to show that a new preservative free product is capable of controlling and preventing contamination under extreme microbial conditions. **Methods:** The new preservative free product was repeatedly challenged with *Staphylococcus aureus*, *Pseudomonas aeruginosa*, *Escherichia coli*, *Candida albicans* and *Aspergillus niger* throughout a 6-month period. Additionally, multiple lots of the new formulation were stored at elevated and room temperatures for over 6 months. **Results:** The results consistently showed that the new product is capable of preventing contamination of the product. The new product showed greater than a 3 log reduction of the challenge bacteria. **Conclusions:** Though the MDPF product contains no preservatives, it is formulated with a unique blend of ingredients that allow it to maintain efficacy when exposed to extreme microbial conditions.

Keywords: cornea: tears/tear film/dry eye • bacterial disease • fungal disease

© 2005, The Association for Research in Vision and Ophthalmology, Inc., all rights reserved. Permission to republish any abstract or part of an abstract in any form must be obtained in writing from the ARVO Office prior to publication.

EXHIBIT