

OFFICE OF TECHNOLOGY TRANSFER

AUBURN UNIVERSITY

Disinfecting Contact Lens Solution

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Reference: Contact Lens Solution

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Overview

Auburn University is seeking a licensee or development partner for an antimicrobial agent for contact lens solutions. Chemists at Auburn have demonstrated that a very stable, inexpensive N-halamine compound can be used to inactivate bacteria in aqueous solutions. This innovative compound has been shown to effectively inactivate bacteria without altering the presence of dyes found in many commercially available contact lenses.

Advantages

- Antimicrobial properties inactivate bacteria found in solution and on contact lenses even at low concentrations.
- Exceptionally stable disinfectant able to be employed in soaking formulas.
- Compound is non-bleaching, maintaining important tints and UV protecting dyes.
- Compound is inexpensive and easy to produce.



Description

Successful disinfection of contact lenses is of the utmost importance in the prevention of the spread of pathogenic bacterial infection to the user. Many solutions today fail to provide effective antimicrobial properties. When included in a soaking contact lens solution, this water soluble N-halamine compound acts as a powerful disinfectant that thoroughly kills microbes on the contact lenses. The disinfectant attained six log inactivations of Gram positive and Gram negative bacteria in just one hour at 200 ppm and four hours at 100 ppm.

The stability of the solution was rigorously tested and maintained its ability to provide exceptional disinfectant properties under practical environmental situations. Further, the N-halamine solution improves on other disinfectants with its non-bleaching properties. The dyes found in many contact lenses are necessary for tinting and to protect the eye from harmful UV light. Unlike similar disinfectants, this non-bleaching formula maintains these dyes, even after rigorous testing. Antibacterial activity and non-bleaching properties were maintained in studies running 90 days at both ambient temperatures and at 40°C.

Status

- A non-provisional patent application ([20110200484](#)) has been filed
- Significant antimicrobial activity and a non-bleaching property have been demonstrated (see above)

Licensing Opportunities

- This technology is available for exclusive or non-exclusive licensing
- Joint development opportunities include funded research or a joint venture