SUMMARY OF CONTACT LENS STUDIES*

Study #1 - Interactions of Similasan Eye Drops #1 With Contact Lenses: Optical & Physical Parameters

Four types of hydrogel lenses and three types of rigid gas permeable lenses were stored in 10 ml of Similasan Eye Drops #1 for 10 days. The control lenses were stored in a 0.9% saline solution for the same period. Measurements were taken before lenses were placed in the eye drops, after 10 days in the eye drops, and after soaking in 10 ml of 0.9% saline for 30 minutes.

Results: Rigid Gas Permeable: Back vertex, back optic radius, and lens diameter remained very stable.

Soft Contact Lenses:Back vertex power and overall size of the lenses did not change significantly.

Conclusion: Similasan Eye Drops #1 solution does not appear to alter the optical parameters of either the rigid gas permeable or the soft contact lenses.

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Study #2 - Effects of Similasan Eye Drops #1 on Hydrophil Contact Lenses

Permalens lenses (the most sensitive in their reaction to storage solutions) were stored in four different solutions: sodium silver-chloride complex 0.001% solution without NaCl, sodium silver-chloride complex 0.001% solution with 0.9% NaCl, Similasan Eye Drops #1, and Oxysept 2 (Allergan) neutralizing and storage solution for contact lenses. (Used to provide an acceptable yardstick for changes in the contact lens parameters.)

Results: The greatest change in the parameters was found in the lens stored in 0.001% sodium silver-chloride without NaCl. Oxysept 2 showed surprisingly large parameter changes. The active substances in Similasan Eye Drops #1 had no effect on the lens parameters.

Conclusion: Similasan Eye Drops #1 do not alter the lens parameters of hard gas permeable or hydrophil contact lenses.

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Study #3 - Light Transmission and Uptake/Release Effects from Similasan Eye Drops #1

Two test lenses from each of the four material groups were used. Each group was left for 10 days in a vial containing 4 ml of test solution. Then one lens from each material type was tested. The light transmission spectrum was compared with the reference lens that had not been submerged in the solution. The second test lens was kept as a duplicate to confirm any differences noticed with the first lens. One rigid lens from each material type was blotted with absorbent paper. The light trransmission spectrum was then compared with the reference lens that had not been immersed in the test solution. Uptake & Release: Lenses of each group were placed to a vial with 5 gm of test solution for 10 days, then in a second vile with 3 gm saline solution. Both were sealed to determine the sodium & silver contents.

Results: Light Transmission - No significant difference between lenses soaked in test solution & those soaked in 0.9% saline.

Uptake & Release of Silver - Silver was not significantly absorbed by any of the lens polymers. In the saline, very small quantities of silver that may have been taken up are not released back into the solution.

Conclusion: Similasan Eye Drops #1 do not appear to alter the light transmission properties of these contact lens materials. The silber constituent of the product does not appear to be absorbed by the same range of contact lens materials.

*The use of Similasan Eye Drops with contact lenses has not been evaluated by the United States Food and Drug Administration