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Paper Abstracts
Monday 9 March 2026, Netherlands, Veldhoven, NH De Koningshof, Baroniezaal

Clinical comparison of a novel weekly replacement silicone hydrogel soft contact lens with a biweekly replacement contact lens

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Purpose: To compare the clinical performance and safety profile of a novel 1-week replacement serafilcon A silicone hydrogel (SH) soft contact lens (SCL) and a commercial biweekly replacement senofilcon A SH SCL.
Method: A multicenter, prospective, randomized, daily wear, double-masked crossover study was conducted in the United States (NCT05766787), involving adult participants (≥18 years) who were currently using spherical SCLs. Subjects randomized (1:1) to wear serafilcon A or senofilcon A lenses bilaterally for ≥10 hours/day for 14-16 days, followed by crossover to alternate lens. At the end of each wear period, assessments included distance visual acuity (VA [primary endpoint]; non-inferiority margin=0.05 logMAR), Likert rating for comfort at 16 hours, lens movement, and positioning. Safety evaluations included analysis of adverse events (AEs) and biomicroscopy findings.
Results: A total of 187 subjects were randomized (mean±SD age: 34.0±8.8 years), with 180 completing the study. Serafilcon A was noninferior to senofilcon A for distance VA (mean±SD logMAR: -0.11±0.07 vs -0.10±0.08; 95% upper confidence limit of least square mean difference: -0.01). At 16 hours, higher percentage of subjects wearing serafilcon A (77.8%) vs. senofilcon A (71.0%) strongly agreed/agreed to Likert statement for comfort "The lenses felt comfortable even when looking at my smartphone/computer screen for an extended period of time" (p≤0.05). All lenses (100%) showed optimal/acceptable movement for primary and peripheral gazes, and optimal centration/acceptable decentration. All ocular treatment-emergent AEs were mild/moderate in severity with no serious AEs reported. Most biomicroscopy findings were Grade-0 (none) or Grade-1 (trace) for both lenses.
Conclusions: The novel 1-week replacement SH SCL serafilcon A demonstrated noninferiority to senofilcon A for distance VA. Significantly more wearers agreed serafilcon A was comfortable even when looking at their smartphones or computers, at 16 hours at the end of lenses' respective wear period. Both lenses exhibited optimal movement and centration, with comparable safety profiles.

This research received funding from: *Study was funded by Alcon Research, LLC.*