

COLLAMER® CHARACTERISTICS & MATERIAL PROPERTIES



Evolution in Visual Freedom™



PRODUCT INFORMATION

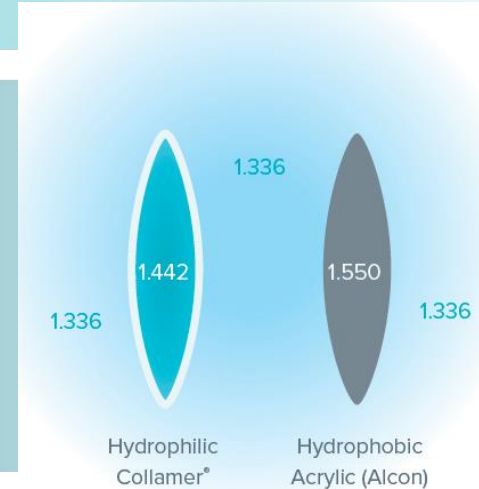
ATTENTION: Reference Product Information for a complete listing of indications, warnings and precautions.

COLLAMER COMPOSITION

- Collamer is derived from two words that describe the composition of the material which are called “Collagen” and “Co-polymer.”
- The Collamer material is bonded with UV absorbing chromophore into a poly-HEMA based copolymer that offers UV protection.
- Collamer is exclusive to STAAR Surgical. It has a proven history for over 20 years with more than 1 million lens implants worldwide.

COLLAMER CHARACTERISTICS: REFRACTIVE INDEX

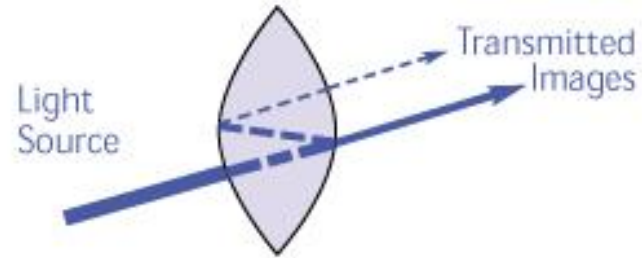
- The risk of dysphotopsia due to internal reflections increases as light passes through materials with more greatly differing refractive indexes (RI).^{1,2}
- The hydrophilic nature of Collamer promotes a high water content (40%) in the lens minimizing the difference in refractive index between the lens and aqueous of the eye.



1. Radford S, BM, BCh, Carlsson A, MD, FRCSC, Barrett G, FRACS, FRACO. Comparison of pseudophakic dysphotopsia with Akreos Adapt and SN60-AT intraocular lenses. J Cataract Refract Surg. 2007;33(1):88-93.
2. Tester R, Pace NI, Samore M, et al. Dysphotopsia in phakic and pseudophakic patients: Incidence in relation to intraocular lens type. J Cataract Refract Surg. 2000;26:810-816.

COLLAMER CHARACTERISTICS: INTERNAL REFLECTANCE

- Intraocular lenses (IOLs) have been plagued with patient complaints of glare, halos, and reflections.^{1,2}
- The RI of Collamer minimizes reflections and may contribute to a lower potential for dysphotopsia.



1. Radford S, BM, BCh, Carlsson A, MD, FRCSC, Barrett G, FRACS, FRACO. Comparison of pseudophakic dysphotopsia with Akreos Adapt and SN60-AT intraocular lenses. J Cataract Refract Surg. 2007;33(1):88-93.
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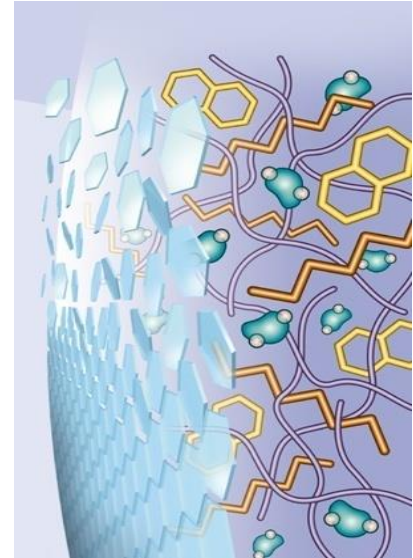
COLLAMER CHARACTERISTICS: LOWER HOAs

- Study conducted by Robert G. Martin, MD and Donald R. Sanders, MD, PhD.³
- The objective of the study was to determine if implantation of 4 different foldable lens designs resulted in different amounts of higher order aberrations.
- Results:
 - All lenses tested induced more higher order aberrations than the Collamer lens.
 - Significantly less third and fourth order aberrations: coma, trefoil, spherical aberration, and tetrafoil were observed postoperatively in the Collamer lens.

3. Martin RG, Sanders DR. A comparison of higher order aberrations following implantation of four foldable intraocular lens designs. J Refract Surg. 2005; Nov-Dec;21(6):716-21.

COLLAMER CHARACTERISTICS: PHYSIOLOGICAL RESPONSE

- Post operative “Quiet Eye”.^{4,5}
- The unique properties of Collamer minimize inflammation, flare and cellular reaction.^{4,5}



4. Schild G, Amon M, Abela-Formanek C, et al. Uveal and capsular biocompatibility of a single-piece, sharp-edged hydrophilic acrylic intraocular lens with collagen (Collamer): 1-year results. *J Cataract Refract Surg.* 2004 Jun;30(6):1254-8.

5. Brown DC1, Ziembra SL, Collamer IOL FDA Study Group. Collamer intraocular lens: clinical results from the US FDA core study. *J Cataract Refract Surg.* 2001 Jun;27(6):833-40.

COLLAMER CHARACTERISTICS: SUMMARY

- Collamer Attributes
 - COLLAMER is a collagen containing lens material that provides **biocompatibility**.
 - Collamer is a copolymer biocompatible material that promotes Post-operative “Quiet Eye.”^{4,5}
 - Collamer has anti-reflectance properties.⁶

4. Schild G, Amon M, Abela-Formanek C, et al. Uveal and capsular biocompatibility of a single-piece, sharp-edged hydrophilic acrylic intraocular lens with collagen (Collamer): 1-year results. J Cataract Refract Surg. 2004 Jun;30(6):1254-8.

5. Brown DC1, Ziemba SL, Collamer IOL FDA Study Group. Collamer intraocular lens: clinical results from the US FDA core study. J Cataract Refract Surg. 2001 Jun;27(6):833-40.

6. N. A. Peppas. Hydrogels in Medicine and Pharmacy Volume 1: Fundamentals. Boca Raton, FL. CRC Press Inc. 1986.

REFERENCES

1. Radford S, BM, BCh, Carlsson A, MD, FRCSC, Barrett G, FRACS, FRACO. Comparison of pseudophakic dysphotopsia with Akreos Adapt and SN60-AT intraocular lenses. J Cataract Refract Surg. 2007;33(1):88-93.
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