

Comparison of Keratometry and Total Keratometry between, IOL Master 700 and Cassini Ambient Topographer

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PURPOSE

To evaluate level of agreement between these two devices often used in premium lens surgery.

METHOD

Case series of 91 eyes were recorded on both devices by the same operator. Both devices made 3 measurements, and a mean of the 3 measurements was used for final analysis. K1, K2, axis of K2, TK1, TK2, axis of TK2 were analyzed.

RESULTS

- **IOL M group K1:** 42.41 SD 1.79, K2: 43.26 SD 1.86, K2 axis 87.4 SD 50.88 TK1 42.43 SD 1.82, K2: 43.32 SD 1.91, K2 axis 92.10 SD 56.34
- **Cassini group K1:** 42.4 SD 1.78, K2 43.24 SD 1.82 K2 axis 87.1 SD 46.55 TK1 42.54 SD 1.8, K2 43.47, SD 1.84, K2 axis 85.31 SD 51.5
- K1 values showed no real difference P value 0.88, K2 values no real difference P value 0.94, TK1 P=0.7, TK 2 P=0.73, Axis of K2 showed a P value of 0.89, TK2 axis also showed a statistically insignificant mismatch of P=0.2

CONCLUSION

Both devices offer a very reliable way of obtaining keratometry values for cataract and refractive lens surgery. Keratometry values can be interchanged and used for calculations.

Benefits of Cassini over IOL Master 700 is the ability to present topography data beyond the central 4-5 mm area.