Supplement 1. Swelling experiment of the bovine corneal strips

To find an appropriate solution for keeping corneal hydration without swelling, we conducted a swelling experiment to analyze the corneal thickness and width varying with the immersion time in different solutions. During the experiment, twelve 2-mm-wide corneal strips were equally divided into two groups in two solutions (0.9% saline and Eusol-C) respectively at room temperature. The thickness and width in the central region of the cornea were measured using a micrometer at each required intervals (0.5th, 1th, 2th and 4th hour). Figure s1 shows the variation of the thickness when the specimens were kept in the two solutions.

Figure s1. The variation of the corneal thickness in 0.9% saline and the Eusol C solutions.