SimuEYE Aphakia – Hard Capsule

The SimuEYE Aphakia model comes with 3 pre-placed incisions including the main incision (red = 3.0mm vs black = 2.4mm) as well as 2 side port incisions for right or left-handed surgeons.

The Aphakia model now comes with a HARD posterior capsule and the Back Half of the eye is already pre-filled with gel to enhance the red reflex. There is no longer a need to fill the back of the eye with water or gel and the Suction Cup should NOT be removed. In the event an air bubble forms behind the posterior capsule then the suction cup can be removed and the back half of the eye can be filled with hand sanitizer gel.

Prior to use, the front of the eye should be filled with viscoelastic. Do not use Ocucoat as it is too thin and will create lots of bubbles. We now supply a Viscoelastic Substitute which can be ordered in 5cc syringes and works very well with this and all of the SimuEYE models.

To prepare the eye for use, remove the cornea cap from the back half eye cup to reveal the back side of the iris along with the anterior capsule in the cornea cap and the hard posterior capsule in the back half of the eye. Fill the capsule with viscoelastic and snap the cornea cap back into place making sure that it is secure all the way around. Use additional viscoelastic agent through the main incision to fill the anterior chamber and to remove or push aside any air bubbles.

Under the operating microscope the simulated red reflex should become easily visible and will allow good visualization of the anterior capsule with the pre-made capsulorhexis as well as the posterior capsule. The cornea cap can be removed to easily retrieve an IOL from the capsular bag for reuse. Note that the cap is actually 2 pieces consisting of an outer ring to which the inner cornea is attached. It is not necessary to disassemble these 2 parts and is best to leave them as 1 unit.
When reattaching the cornea cap be sure that it is pressed down and in place all the way around.

When finished working with the model and before storing it for later use, remove the cornea cap and wash out the viscoelastic from the capsule and from the anterior chamber. Allow the parts to dry and then reassemble for storage. Do not open the back half of the eye which is pre-filled with gel.

The SimuEYE Aphakia model may be used for various surgical techniques such as injecting IOLs, cutting and removal of IOLs, placing CTRs or using capsule retractors. The iris is not designed to accept iris retraction hooks or iris expanding devices such as the Malyugin Ring. Please utilize the SimuEYE Small Pupil model for these devices. To perform more advanced surgical maneuvers such as IOL suturing please utilize the SimuEYE Iris Suturing & IOL Fixation (ISIF) models.

SimuEYE Aphakia should be stored FLAT in the provided container when not being used. Wash out the viscoelastic from the capsule and the AC. With proper care this model can be used over and over.

TIPS:

Use a flat and smooth working surface to attach the suction cup base of the eye. A small amount of water will help to create a great suction so that the eye does not need to be held when working on it. The flexible stalk allows for eye movements when working through the cornea incisions.

Do not use Ocucoat viscoelastic as it is too thin and bubbles form easily which are difficult to manage.

To remove the eye from the working surface simply pull on the small tab located at the periphery of the suction cup base. This will break the seal and allow the eye to be picked up or repositioned.
The SimuEYE Aphakia model typically comes with pre-placed incisions. The main incision is indicated by the larger mark and the 2 side port incisions are indicated by the smaller marks. Note that the incisions are placed in the cornea anterior to where the peripheral marks are for reference. The main incision is typically 2.4 mm but may be 3.0 mm depending on the type of IOL and injection device that is being used.

The physiologic temperature of the human eye allows for certain IOL’s to unfold more quickly and easily in the eye. This can easily be replicated with SimuEYE Aphakia by placing the model in a warm water bath prior to use to increase the temperature of the viscoelastic inside the eye.