

New Ideas

ABSTRACT: *There are various techniques used to obtain the shape and size in the fabrication process of ocular prostheses. In this short article, the author briefly describes his method, which is a combination of impression fitting techniques.*

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A FITTING TIP: WAX IMPRESSION TRAYS

It is a common belief among ophthalmologists and the American Society of Ocularists that impressions are the best way to determine the shape and the fit of the anophthalmic socket for an ocular prosthesis. Yet, there are numerous ways to take an impression. Two techniques the author has used are the Modified Impression Technique and the Empirical/Impression Technique. Both are successful fitting techniques which produce excellent results. The beauty in using the Modified Impression Technique, which has been well documented, is that some of the “guess” work can be eliminated, especially with irregular sockets. Unfortunately one can be sometimes limited by the selection of impression trays.^{1,2}

The Empirical/Impression Technique starts with a wax shell and aluminum iris button to determine the anterior portion of the eye. The impression is later taken by filling the posterior or back (hollow) portion of the wax shape with alginate. Speed and efficiency are two advantages in using this technique.³

A third way to take an impression is to combine the two previously mentioned techniques: Custom Wax Impression Trays. Trays take only 10 minutes to make, and they can be used the exact same way a conventional (acrylic) tray would be.

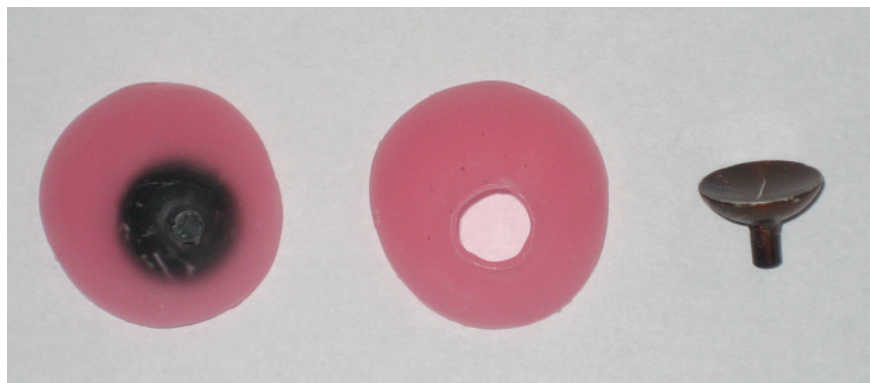


FIGURE 1: Aluminum button is removed from the anterior portion of the wax fitting shape; approx 3cm in length.

KEY WORDS:

alginate, impression, techniques,
wax tray

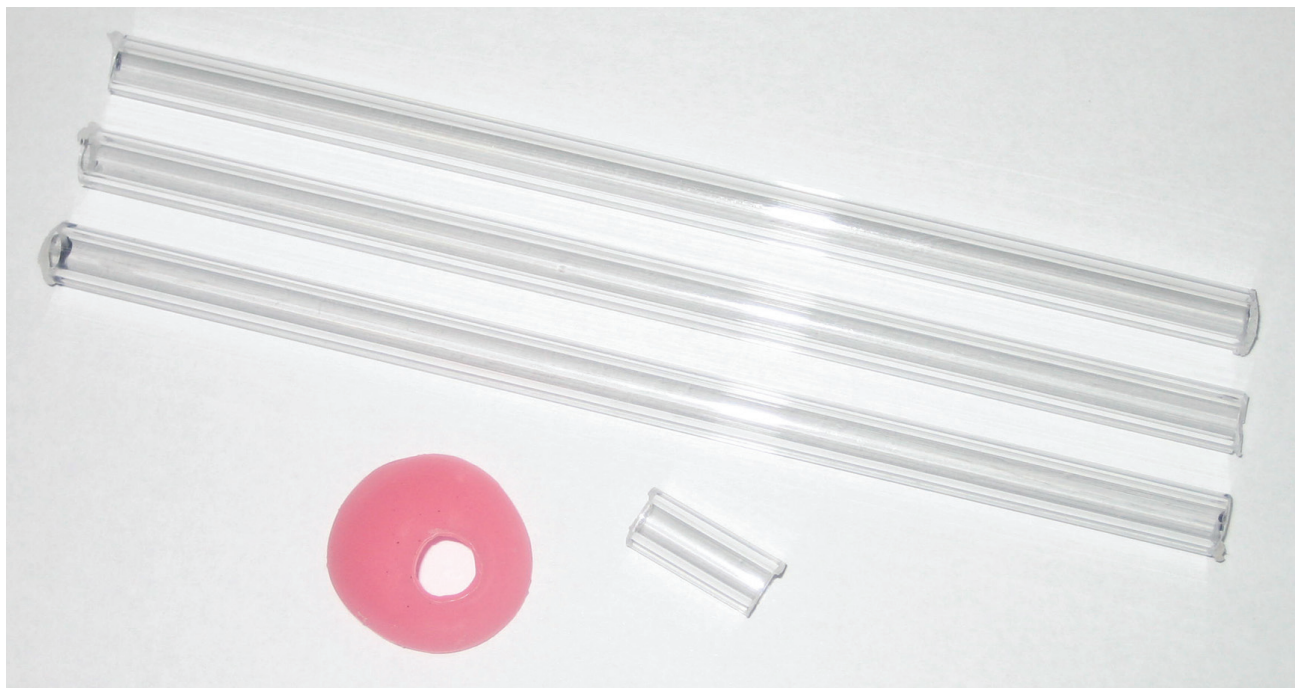


FIGURE 2: Clear, plastic tubing is used (Fisher Scientific) for handle and for alginate pathway.



FIGURE 3: Sticky wax is used to secure tubing onto the wax shape.

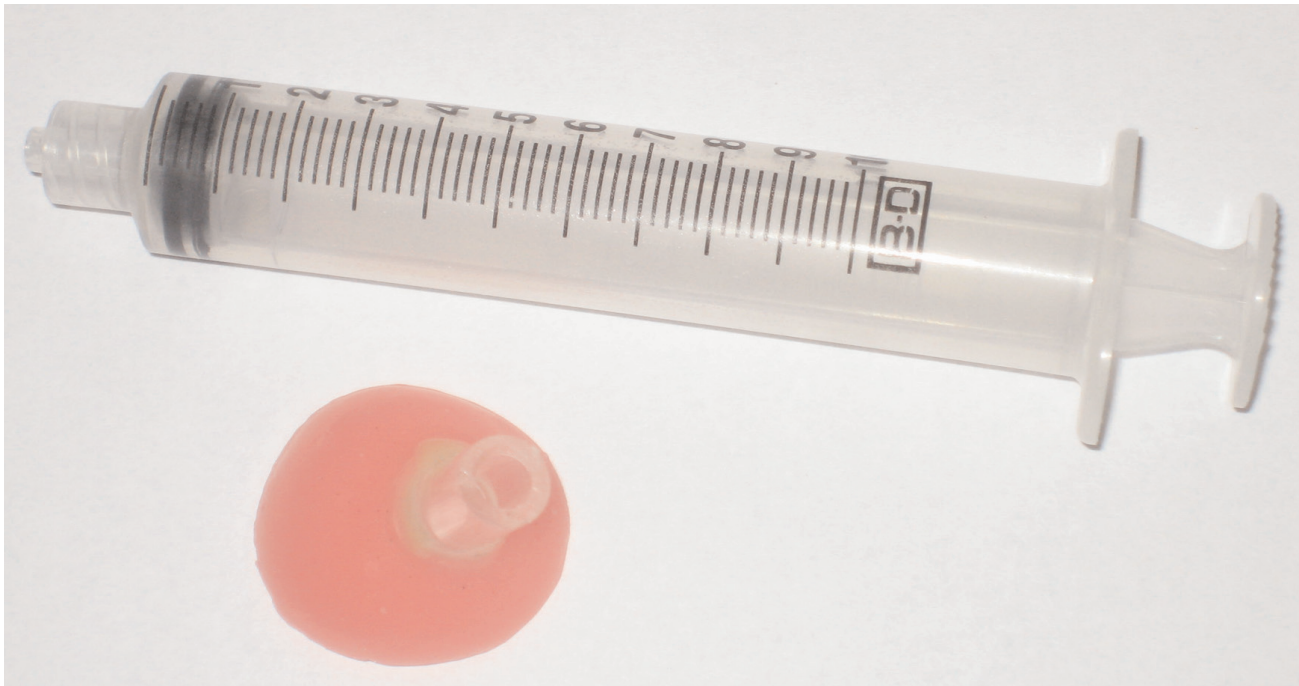


FIGURE 4: Syringe will be used to inject alginate into wax tray – socket.

Additionally, custom, disposable trays are more sterile than conventional trays.

To start, fit the socket using the “stock” wax fitting shell with an aluminum button attached. The aluminum button will make handling the shell easier. (Figure 1) Once the desired shape is obtained, the button is removed and a (premade) plastic tube is attached. (Figure 2, 3) Sticky wax may be used to adhere the tube for extra strength. The tube will then be attached to a syringe and enable alginate to FLOW into the tray/socket. (Figure 4)

Once the alginate is set, a two-piece stone mold is made around the impression and shell. The stone mold is soaked in cold water for a few minutes and a wax cast is poured up and the fitting process is resumed.

While there are no perfect fitting techniques, this combination of impressions may be the solution to the “difficult” fit we seem to get periodically.

REFERENCES

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