

A New Simplified Beading and Boxing Procedure for Elastic Impression

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Received: 15 February 2011 / Accepted: 8 April 2011 / Published online: 17 April 2011
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Abstract Beading and Boxing of impression is taught in most dental colleges. The boxing procedure is crucial step to preserve the details of the final impression especially of the vestibular area. This article describes an alternative beading-boxing procedure that is compatible with all impression materials, is efficient, simple, inexpensive, and practicable. Use of commercially available instant adhesive around the border to act as a joining agent between elastic impressions and beading wax or bead made up of base plate wax is advocated in this technique.

Keywords Impression · Beading · Boxing · Elastic impression · Complete denture · Master cast

Introduction

Beading is done to preserve width and height of sulcus in a cast and boxing is done to obtain a uniform smooth well shaped base of the cast. Boxing can be defined as the enclosure (box) of an impression to produce the desired size and form of the base of the cast and to preserve desired details. Beading and boxing final impressions before pouring preserves the extension, as well as the thickness, of

the border; controls the form and thickness of the base of the cast; and boxing also facilitates placing remounting plates in the cast; and conserves artificial stone. It ensures the capture of the mucobuccal and mucolingual borders of impression. Beading and boxing the impression can facilitate to pour a base on the secondary impression without inverting. Inverting can sometimes cause the stone in the impression to move. The use of vibrator at the time of pouring the stone into the boxed impression causes the heavier particles fall to the bottom. This means that the tissue surface of model will be stronger. The more watery mix will now be on the base of the cast which is now on top.

As per literature survey the various methods used for beading and boxing of impressions are available [1]. Methods are wax beading and boxing method, denture flask to box the impression [2], plaster and pumice boxing, and caulking compound and paddle boxing method, and the materials are wax, metal strips, plaster of Paris alone [3] or modified by adding pumice, caulking compound, and fast setting irreversible hydrocolloid [4–6].

Boxing with wax is especially suitable for impressions made in zinc-oxide impression paste, since wax beading adheres to this material readily. However, boxing an elastic, rubber base or silicone impression with wax is almost impossible to make the wax stick to these materials. Another method of boxing rubber impression makes it necessary to settle the impression into a mix of plaster and pumice, and after setting, to trim the plaster to the desired border outline, box the impression, and pour it in artificial stone. In a modification of this procedure, the addition of pumice to the plaster mix weakens it, thereby facilitating retrieval of the cast from the boxed impression. This method, which is excellent for boxing impressions made in elastomeric materials, serves equally well for zinc-oxide

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paste impressions. There are many more methods described by different authors to box the rubber impression. This article describes an alternative beading boxing procedure that is compatible with all impression materials including elastic impression material. It is an efficient, simple, inexpensive, and practical method. The method described here uses a commercially available instant adhesive at the mark line designating desired border extension to make it tacky for luting of wax bead.

Procedure

1. After taking and disinfecting the impression, remove the excess water from the impression.
2. Use permanent marker to place a line around the entire impression approximately 3 mm from the peripheral border roll to designate the desired extension for the border (Fig. 1).
3. Adapt two or three pieces of beading wax to the tray's polished surface to adjust the impression above the countertop to keep the ridge level.
4. Invert the tube of the commercially available instant adhesive downwards and then squeeze gently to apply it along the marked line, taking care that it does not contact the skin (Fig. 2).
5. Take the pre-prepared bead of the wax or bead made up of base plate wax and stick it at the mark line with instant adhesive (Fig. 3).
6. Further strengthening of the junction of bead and elastic impression is done by melting the wax around.
7. Place the boxing wax over the wax beading in usual manner by instant adhesive or by melting the wax (Fig. 4a, b).
8. Make a mix of dental stone and pour the boxed impression in the customary manner to control the thickness of the stone for the base (Fig. 5).

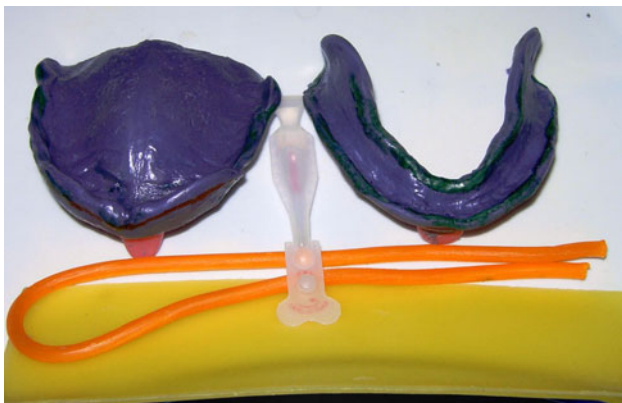


Fig. 1 Instant adhesive, beading and boxing wax and polyether impressions



Fig. 2 Instant adhesive applied on the border along the mark line designating desired border extensions



Fig. 3 Wax beading sticks to the elastic impression

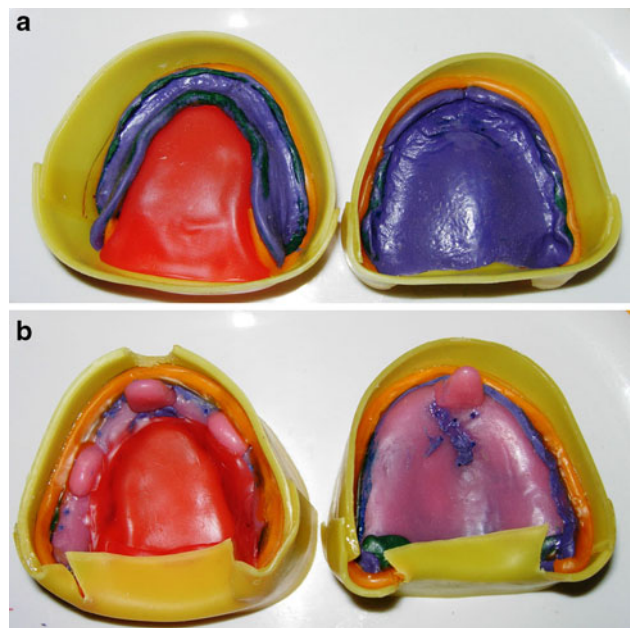


Fig. 4 Beading and boxing of the maxillary and mandibular elastic impression by using instant adhesive. **a** Inner view and **b** outer view

9. After the stone is set, remove the boxing and beading from the impression and trim the cast if required to preserve the land of the cast (Fig. 6).



Fig. 5 Stone plaster poured in boxed impression



Fig. 6 Completed master casts require minimal trimming

Summary

The alternative beading and boxing procedure described permit final impression to be quickly and accurately poured

while minimizing the possibility of failure to control the details of the final impression especially of the vestibular area. There were many methods of beading and boxing proposed by many authors. This technique can be applicable to most of the situation and is a simple, economic, and clean way to bead and box the elastic impression. This technique can also be used for hydrocolloid impression. Precaution should be observed that the adhesive should not contact with skin.

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