ISSN: 2582-9904

SHORT COMMUNICATION

A Novel Single Step Border Molding Technique using Conventional Low Fusing Impression Material – A Clinical Tip

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ABSTRACT

A simple technique has been described which uses a conventional low fusing impression material, for border molding of complete denture impressions. It has the following advantages: 1. Border molding of the entire peripheral regions can be accomplished in a single step. 2. More controlled dispensing of the green stick compound around the periphery. 3. Corrections if any, for specific areas can be redone with ease. 4. This technique is easily mastered.

Key words: C*omplete denture, Green stick compound, Impression, Single step border molding*

How to cite this article: *Eswaran B, Kanmani R. A novel single step border moulding technique using conventional low fusing impression material – A Clinical Tip. J Clin Prosth Impl 2021;3(1):29-30*

INTRODUCTION

A well-fitting denture is one of the prime concerns for operating dentists and the patient for improving his oral masticatory and esthetic function. This can be achieved only by adequate extension and reproduction of peripheral tissues.[1,2] Though many recent advances available, the conventional method of using a low fusing compound is still the method of choice for a physiologic impression at many institutions. A single-step border molding with elastomers consumes less time and allows shaping of the borders to duplicate the contour and size of the vestibules eventually minimizing the errors of multiple placements of the impression tray. However, due to the high cost of elastomers, the low fusing compound is still the material of choice for undergraduates and economically constrained practitioners since its inception in 1907 by Green brothers.[3] In a study by Kakatkar VR, it is reported that green stick compound is being used by 83% of practitioner for border molding.[4] The traditional border molding method, proposed by Boucher, uses low fusing impression compound for recording the limiting structures and posterior palatal seal area, in segments.[5]

Over the years, the segmental border molding method has proved cumbersome due to an increase in the number of insertions and patient discomfort that makes the technique imprecise. Moreover, softening the low fusing compound over the flame to dispense in the borders of the special tray becomes unpleasant to the operator. It would be desirable if the entire custom tray could be border molded with the cost-effective low fusing compound in a single insertion. In this article, we are introducing a simple technique modification that makes use of conventional thermoplastic material with ease, for recording the entire periphery in a single step.

THE TECHNIQUE

Green stick compound is broken into small fragments and placed inside the barrel of a 10 ml syringe with the plunger open. The plunger is then closed and the syringe without a needle is placed inside the hot water bath for 4 to 6 mins at a temperature of 60°C. The softened low fusing compound flowing through the nozzle of the syringe indicates that the material ready for use and can be loaded directly, under controlled pressure on the borders of the special tray, to record the peripheral extensions. (*Figures 1, 2 & 3*)

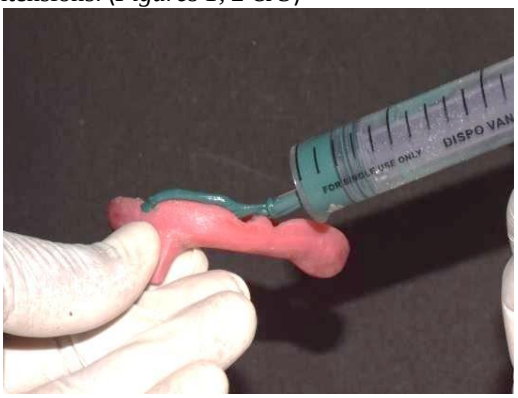

Figure 1: Softened Green stick compound injected over the periphery if the special tray

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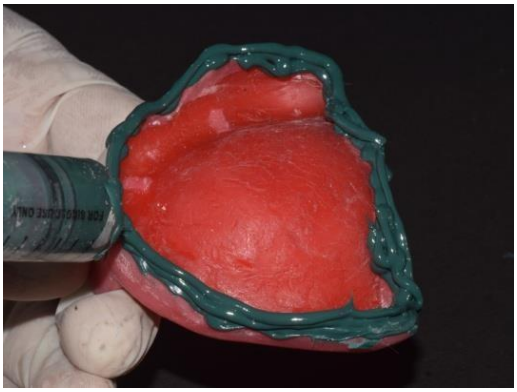

Figure 2: Border molding material dispensed over the entire periphery in a single step

Figure 3: Border molded special tray

ADVANTAGES:

1. Controlled dispensing of the softened low fusing compound.
2. Single-step border molding
3. Refining and corrections if any, can be done sectionally.
4. Infection control is superior when disposable syringes are used.
5. Less messy to work with.
6. Can be used even with sectional border molding procedures.

This technique combines the advantages of both single step and sectional border molding along with the cost-effectiveness of readily available green stick compound.

CONFLICT OF INTEREST

There is no conflict of interest

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