Indian Journal of Dental Education
Volume 6 Number 4, October - December 2013

Modification of Conventional Auto Polymerizing Acrylic Resin to Make Customtray

Dhananjay S. Gandage*, Gangadhar S.A.**

Abstract

Custom trays are used in prosthodontics to make final or definitive impressions. Custom trays are fabricated mostly in special auto polymerizing acrylic resins called tray resins or visible light activated (poly urethane) resins. The following technique is a quick and effective technique to modify auto polymerizing acrylic resins whenever commercial tray resins are not available.

Keywords: Custom trays; Auto polymerizing acrylic resins; Tray resins; Talcum powder.

The use of custom trays for making impressions in prosthodontics has been advocated in literature.[1-3] Conventional auto polymerizing acrylic resins are best suited for fabricating record bases with sprinkle on method. Now-a-days most custom trays for complete denture impressions are fabricated in either tray resins or visible light polymerizing acrylic resins. Tray resins are usually finger adapted onto the casts.[4] Modifications in the composition of the polymer by the manufacturers; makes it possible to finger adapt the resin.[4] Such modified resins are commercially known as tray resins[4] or forma tray material. The following is an easy and quick method to modify the conventional auto polymerizing acrylic resin to make it suitable for finger adaptation and use as a tray resin.

Method

1. Take 50 gms of polymer
2. Add 50 gms of commercial talcum powder to it
3. Mix the two powders thoroughly.
4. Now add this ad mix powder to monomer maintaining the polymer monomer ratio of 3:1 by volume.
5. When the mix reaches dough stage; it is finger adapted onto the cast. After set the excess is trimmed; it can be checked intra orally before proceeding ahead with the final impression.

Addition of talcum powder upto 50% of the weight will control the tackiness of the dough. The handling characteristics of this ad mixed polymer are much better as compared to the polymer of auto polymerizing acrylic resin

Fig 1: Auto Polymerizing Acrylic Resin Polymer and Commercial Talcum Powder

Author's Affilation: *Reader, **Professor & Head, Dept. of Prosthodontics, Rural Dental College & Hospital, Rural Dental College, Loni, Maharashtra.

Reprints Requests: Dr. Dhananjay S. Gandage, Reader, Dept. of Prosthodontics, Rural Dental College & Hospital, Rural Dental College, Loni, Maharashtra.

E-mail:dhan_gandage@hotmail.com

Fig 2: Custom Tray Fabricated from Ad Mix Polymer

alone. Adding talcum powder makes it much easier to manipulate conventional auto polymerizing acrylic resins by adapt on method to fabricate custom trays; when tray resins are not available.

References

1. Jamieson. A complete denture impression technique. *J Prosthet Dent.* 1954; 4: 17-29.
2. LaVerra A, Freda AI. An individual impression tray utilizing the patient's existing dentures. *J Prosthet Dent.* 1976; 36: 334-346.
3. Munz. Impressions in transparent trays. *J Prosthet Dent.* 1954;4:596-605
4. Rudd, Morrow. Dental Laboratory technology. Vol 1. CV Mosby; 1986.