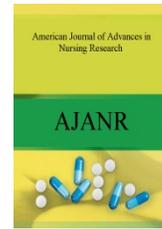




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### A REVIEW ON IMPRESSION TECHNIQUES OF FPD

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#### ABSTRACT

A variety of techniques have evolved over time and selection of the specific technique depends on experience and an evaluation of an individual patient. Time, expense and accuracy must all be considered in making the selection. Copper band technique and putty wash are the two newer techniques used for impression making of an FPD impression. This article focuses on the methods and techniques that is used in these techniques.

#### INTRODUCTION

Impression is an imprint or negative likeness of an object from which a positive reproduction may be made [1]. Different impression techniques can be applied to record an impression for a fixed partial denture. Some of them are as follows:

#### Putty Wash/Stock Tray Technique

Double mix and single mix method can be used. Stock trays can also be used with medium and heavy bodied elastomers normally used with custom trays. If a single mix technique is anticipated with a stock tray, the polyvinyl siloxanes are used [2 - 4].



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**Method for it is as follows**

- Place the patient in supine position and the operator at 9 o'clock position. Select the tray shape and size based on patient's arch shape and size. Coat the tray evenly with adhesive on the inside and rim
- Isolate the areas to be impressed with cotton rolls and dry preparations with short bursts of compressed air. The sulcus should be dry.
- Choose a braided cord to push the tissue aside and physically enlarge the sulcular space by measuring the sulcus depth and width with periodontal probe. Subgingival areas of the finish line that need tissue displacement.
- Cut approximately 1 ± 1/4 inch of cord.
- Choose a dull, blunted picking instrument with a width that fits comfortably into the sulcus.
- Wrap the cord around the tooth and from the buccal, grasp the two ends with your thumb and forefinger. Slide the cord down toward the sulcus.
- Choose the mesiofacial or distofacial line angle to gently pack 1mm of cord into sulcus. This holds the cord in place to facilitate further sulcular displacement.
- Continue packing the proximal sulcus and proceed toward the lingual, not the facial surface. Continue around the lingual toward the opposite proximal surface.
- Control the buccal ends of the cord while pushing the

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cord with a hand instrument toward the tooth.

- Then roll it into the sulcus while pushing toward the already packed cord. This prevents the cord from being displaced.
- Observe the gingiva being displaced laterally from the tooth. Do not push the cord down apically; this strips the attached gingiva.
- Determine the final length of the cord and allow 1mm overlap plus 2mm excess for uncomplicated removal. Cut the cord with sharp scissors to prevent tugging on the cord.
- Complete the packing at the facial surface.
- Evaluate tissue displacement; if you cannot see the finish line in a certain area(s), then additional cord(s) with increasing diameter is/are indicated.
- If no medicaments are applied to the dry cord, then slightly moisten the cord with water. This will help prevent its sticking to the sulcular tissue upon removal.
- Observe the finish line. If you cannot see all areas of the finish line.
- Leave cord(s) in place for 8 to 10 minutes. While the cord is displacing the gingiva, it is compressing the blood vessels.
- Block out undercuts around the teeth in the arch with red rope wax. The tissue is dry but not dehydrated when applying the wax. This facilitates impression removal, reduces distortion and averts tearing.
- Dispense material by placing a replaceable cartridge and mixing tip into the gun and squeezing the trigger to express the material. Choose a spatula that is large enough to pick up the mixed impression material. First use a circular motion combining the two strands, then a figure eight motion to blend and flatten the mixture.
- Grasp the 2 mm excess of cord with forceps and slowly tease the top cord toward the occlusal with a gentle continuous pressure. Repeat for all cords.
- Evaluate the retraction site for seepage, hemorrhage, or debris.
- Quickly blow away seepage with short bursts of compressed air or dry with cotton pledgets.
- Insert the low-viscosity impression material into the tray without overfilling the tray.
- Fill the inside slightly less than the depth of the external borders.
- Position the tray over the arch. Seat from posterior to anterior, allowing the excess to extrude anteriorly.
- Insert two fingers under each side of the tray to break the seal.
- Remove the tray parallel to the preparation(s) path of withdrawal and transfer to assistant. This is crucial with cross arched impression.
- Rinse impression with ambient water, and dry with short, small bursts of compressed air.
- Retraction cord(s) remaining in the impression

material are removed carefully. Check sulcus for residual impression material and remove any debris and clean the oral cavity.

### Copper Band Technique

The copper tube or band is used to salvage an impression of multiple preparations when there are only vague margins on one or two preparations that are not adequately replicated in the impression [5]. The patient's condition, the extent of the aberration evaluated, and judgement determines whether the copper band technique saves time or whether a remake of the original impression is more appropriate [6 – 8]. The steps for a copper band impression of a single prepared tooth are:

- Select copper band diameter by trial and error by deforming the tubes to semi ellipsoidal cross section and trying in.
- Anneal selected tube by heating in flame and quenching in alcohol.
- Mark approximate position of finish line with a sharp explorer tip.
- Cut with scissors and smooth rough edges with carborundum stone.
- Evaluate fit; band should extend approximately 1 mm beyond finish line and produce minimal tissue blanching.
- If fit is tight at finish line area, rock the tube gently from side to side.
- Cut orientation hole in top one-fifth of facial surface of tube.
- Cover fingers with a light coat of petroleum jelly.
- Gently heat red stick compound over a Bunsen burner flame; compress the warm mass with the lubricated fingers.
- Evaluate viscosity and temperature; reheat or temper in a warm water bath if necessary.
- Insert warm compound mass and fill approximately the top one-third of copper tube.
- Seat and orient band onto preparation. Compress excess into hand lightly with lubricated finger.
- Cut approximately four or five evenly distributed holes with a sharp No. 4 or No. 6 round carbide 2 to 3 mm above the bottom of the copper tube. Be careful not to heat the tube.
- These holes will retain the polyvinylsiloxane impression material and provide a suitable space at the finish line area. This additional space prevents marginal tearing.
- Coat the internal surface sparingly with adhesive. Spot the internal surface; do not coat the entire area.
- Clean and isolate preparation for further use.
- Take the impression again if needed.



## CONCLUSION

The Copper Band Technique is a newer type of technique which is less commonly used due to its complexity than Putty wash technique. Though putty wash technique is widely used still band copper technique is

also started to gain its popularity nowadays. This article not only focuses on the methods and techniques that is used in these techniques but also helps us to understand its complex method in a simpler manner.

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