

# Technique to Record Neutral Zone before Teeth Arrangement in Hanau Articulator

Sneha Priya K

Assistant Professor, Faculty of Dentistry  
Melaka Manipal Medical College, MadhavNagar  
Manipal Karnataka, India

## Abstract:-

### ➤ Introduction

Attaining stability in complete denture in resorbed ridges is a challenging aspect. In such conditions complete dentures should be arranged in neutral zone to take advantage of the muscles and tongue to provide retention. This article explains about a simple procedure done after jaw relation to accommodate neutral zone in the same clinical appointment.

### ➤ Materials and Methods

A sheet of base plate wax is adapted on the denture base at the crest of the ridge from the incisors to the molars. Wax occlusal rim is fabricated flush with the base plate and kept to 2/3 rd the height of retromolar pad. After obtaining protrusive records, wax is removed from the occlusal rim and elastomeric impression material (Putty body) is mixed and adapted around the base plate and neutral zone is recorded. Occlusal rims are mounted on the articulator.

### ➤ Results

Complete denture is fabricated on Hanau Wide view articulator and neutral zone is recorded after jaw relationship by constructing occlusal rims with base plate wax scaffold.

### ➤ Conclusion

This article mentions a technique to record neutral zone on a semi adjustable articulator.

**Keywords:-** Dental Articulators, Complete Denture.

## I. INTRODUCTION

Complete Denture Teeth arrangement is challenging when the ridges are thin and atrophic. Hence atrophic ridges will have to undergo ridge augmentation before replacement with complete denture prosthesis. Atrophic and resorbed ridges without bone augmentation techniques has questionable prognosis. Neutral zone is defined as the potential space between the lips and cheeks on one side and the tongue on the other; that area or position where the forces between the tongue and cheeks or lips are equal.<sup>1</sup> This article mentions using a simple technique to accommodate neutral zone philosophy before teeth arrangement on a semi-adjustable articulator. Hence, teeth

arrangement done on a semi adjustable articulator has proven to produce complete dentures that are stable, retentive and functionally acceptable to the patients. This article mentions use of Neutral zone philosophy before teeth arrangement done with semi adjustable articulator, result of which is a complete denture that is functionally, psychologically and physiologically acceptable to the patient.

## II. MATERIALS AND METHODS

The complete denture fabrication is done with semi adjustable articulator. After fabrication of Heat cure denture bases, a base plate wax is softened in the hot water. It is trimmed to 1 cm in width and bent in the form of a U and placed on the denture base and secured with a thin layer of modelling wax.



Fig 1:- Occlusal Rim with Baseplate Scaffold



Fig 2:- Hanau Wide VUE Articulator with the Lower Cast

Occlusal rim is fabricated around the baseplate wax strip. Base plate wax strip that is secured on the ridge will give the support to the wax occlusal rim. Extra or Intra oral tracers can be attached to the occlusal rims. The steps involved in the complete denture involves the same until the face bow transfer. Gothic arch tracing is done. And the occlusal rims are articulated with the new protrusive record obtained. Lower tracers are removed and Addition siloxane elastomeric material is used to make the matrix of neutral zone. Putty addition siloxane elastomer is mixed and is adapted around the base plate scaffold and placed inside the patient's mouth. Patient is asked to perform functional jaw movements. And the putty gets molded to patient's functions. This matrix is used for teeth arrangement. And occlusal adjustments are made to eliminate all protrusive interferences. Final arrangement conforms to stability, support and improved functions provided by the semi-adjustable articulator and also is physiologically, psychologically acceptable to the patient.

### III. RESULTS

Complete denture is fabricated on a semi adjustable articulator with an extra step to accommodate neutral zone. This article mentions using baseplate scaffold to make the elastomeric matrix after mounting the articulator with the protrusive index made.

### IV. CONCLUSION

Resultant complete denture has all the advantages of a semi adjustable articulator and Neutral zone philosophy.

### REFERENCES

- [1]. Angadi PV, Rao SS. Areca nut in pathogenesis of oral submucous fibrosis: revisited. *Oral Maxillofac Surg* 2011;15:1–9
- [2]. Cawood JI, Howell RA. A classification of the edentulous jaws. *Int J Oral Maxillofac Surg* 1988;17:232–6
- [3]. Alfano SG, Leupold RJ. Using the neutral zone to obtain maxillomandibular relationship records for complete denture patients. *J Prosthet Dent* 2001;85:621–34. Makzoume JE. Morphologic comparison of two neutral zone impression techniques: a pilot study. *J Prosthet Dent* 2004;92:563–8
- [4]. Mou SH, Chai T, Shiau YY, et al. Fabrication of conventional complete dentures for a left segmental mandibulectomy patient: a clinical report. *J Prosthet Dent* 2001;86:582–5
- [5]. Goyal BK, Bhargava K. Arrangement of artificial teeth in abnormal jaw relations: maxillary protrusion and wider upper arch. *J Prosthet Dent* 1974;32:107–11
- [6]. Goyal BK, Bhargava K. Arrangement of artificial teeth in abnormal jaw relations: mandibular protrusion and wider lower arch. *J Prosthet Dent* 1974;32:458–61