

**Clinical evaluations for the  
masticatory efficiency of heat cure  
resin and flexible types of denture  
base materials**

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# ABSTRACT

## ***Statement of the problem:***

Mastication is one of the main functions served by the dentition, specially the posterior teeth. Therefore, the masticatory functions are considered to be a critical outcome measurement for dental treatment.

Thermoplastic non –metal clasp denture became recently the most attractive option for patients due to its esthetic outcome and many other advantages ,such as accuracy, and comfort.

## ***Purpose :***

The purpose of this study was to compare the masticatory efficiency in patients with heat cure acrylic and flexible partial dentures by using two different food types.

## ***Materials and methods:***

Twenty partially edentulous patients were selected (10 male and 10 female) ,each was provided with two types of partial denture (heat cure acrylic and flexible partial denture), the masticatory functions were evaluated with five different measurement scales with the aid of sieving method during chewing the two food types(carrots and peanuts).

## ***Results:***

The result obtained in the present study showed a highly significant difference between flexible and conventional heat cure acrylic partial denture for the different measurements used, it also showed that the flexible denture was associated with the lowest number of chewing strokes, the shortest chewing times, as well as the least number of swallows when compared with heat cure acrylic denture ,furthermore the

masticatory performance index was significantly higher for the flexible denture than that for the heat cure acrylic denture.

***Conclusion:***

The flexible denture provided better chewing efficiency and comfort than those provided with the heat cure acrylic denture for chewing efficiency tests, sieving method record and patients' preference.