

ideal material for taking impressions. The previous sections have highlighted some of the drawbacks of alginate and the need for modification of alginates. As stated earlier, the modification of alginates created tailored products that have overcome most of the initial drawbacks associated with conventional alginates. Despite these, accurate impression taking using alginates still poses a difficult challenge even for skilled and experienced clinician. For instance, and as reported by Christensen [36], the premature contacts on indirect restorations are a consequence of inaccurate opposing arch impressions from alginate materials. Echoing further, the earlier report of Ashley *et al.*, [37] accentuates that failure of alginate impression was largely due to poor operator technique more than the inherent limitation of the alginate impression material. As such, a clinical reliable impression using alginate material is only feasible when the art of impression-taking protocol is strictly adhered to. Essentially, Nandini *et al.*, [17] outlined some of the required protocols for an effective impression taking using alginate material. These protocols include the following stages:

- Selection of appropriate impression trays,
- Mixing and loading of alginate impression material,
- Preparing the oral cavity,
- Taking the impression,
- Removal of the impression, and
- Cast production.

#### 7.4.1 Selection of Impression Trays

Since the human oral cavity (mouth) differs from one person to another, it is highly pertinent to select the correct trays for individual patients that will match the dental arch. Another factor that is noteworthy when selecting impression trays is their ability to retain the alginate impression material. Consequently, a perforated stock tray is recommended since alginates have poor retention abilities on trays. However, recent modification introduces alginate adhesives that have helped counter the poor retention properties of alginates. Hence, the use of alginate adhesive is highly recommended, particularly to overcome the displacing forces that occur when impression is withdrawn from the oral cavity [17].

For some patients with unusual dental arches such as those with high palatal vault, there is a need for modification of trays prior to use for impression taking. Materials like wax, tracing stick, impression compounds, or heavy-bodied silicone are often considered for tray extension in the sulcus