It is highly recommended that the manufacturer's instructions of powder and water be adhered to. Although mixing of dental gypsum and water can be done manually using a clean bowl and spatula, it is, however, difficult to prevent air bubbles in the mix [17]. Hence, a vacuum mixer at a rate of 300–400 rpm for 30–45 seconds is highly recommended. Mixing should be homogenous with a creamy constituency. Pouring of the mixed dental gypsum should start with a small portion, carefully vibrating it until the deepest areas of dental arch are filled. Larger portions are to be poured gradually until the margin is filled. Excess casts can be trimmed with a trimming machine to have the desired shape. Care must be taken to avoid excessive trimming of the dental arch. Equally important, the cast must be removed from the impression upon setting and must not be left overnight.

## 7.5 Conclusions

While alginate remains the most common impression material used in restorative dentistry, it is, however, far from being the ideal impression material. In fact, alginate impression has poor dimensional stability, has low tear strength, and hence cannot be stored for more than 5 days or repeatedly reused. Despite these, alginate is easily the material of choice in restorative dentistry due to its low cost, ease of use, nontoxicity, and ability to reproduce sufficient details of the oral cavity. Recent modifications of alginate are noted to have overcome some of the early drawbacks associated with the use of alginate impression materials. This chapter has highlighted some of the improved properties of alginate material. The ability for alginate impression material to reproduce accurate and correct impressions of the dental arch will largely depend on the operators complying with the manufacturer's instructions. Hence, it is highly recommended that operators adhere strictly to the art of impression taking as this could make or mar the quality of the final casts produced.

## References

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