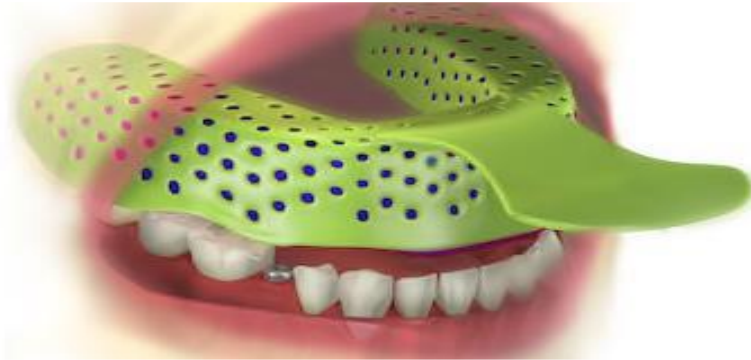
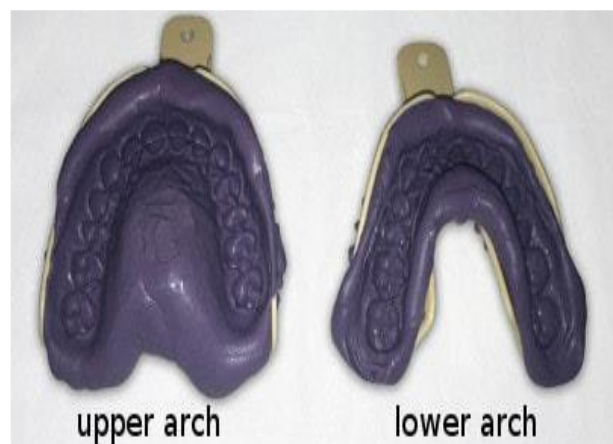


Introduction

- ✚ Impression materials are used to make replicas of oral structures
- ✚ All impression materials must be in a plastic or fluid state while the replica is being made.
- ✚ Physical change, chemical reaction, or polymerization convert these fluid materials into either elastic or nonelastic.



- ✚ Impression materials are materials used to make impressions for the dental arch. (upper or lower)
- ✚ Impressions are an accurate replica of the teeth and oral tissues or negative reproduction of the dental arch.



•The purpose of making models: (casts)

1. To study the cast.
2. To diagnose the case.
3. To plan the line of treatment.
4. To construct indirect restorations e.g. (inlay, onlay, crown, bridge, bridge complete or partial dent

Impression Materials

▪ Procedures for taking impression:

2. Steps:



a. Mixing

Homogenous mix



b. Loading the lower or upper tray



c. Insertion while the material is still soft

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Impression Materials

▪ Procedures for pouring the model: [Cast]

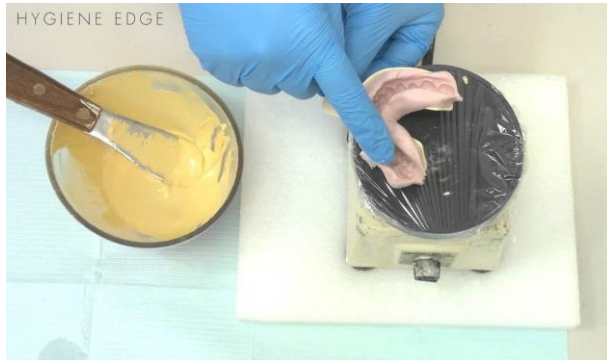
▪ Steps:



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Pouring

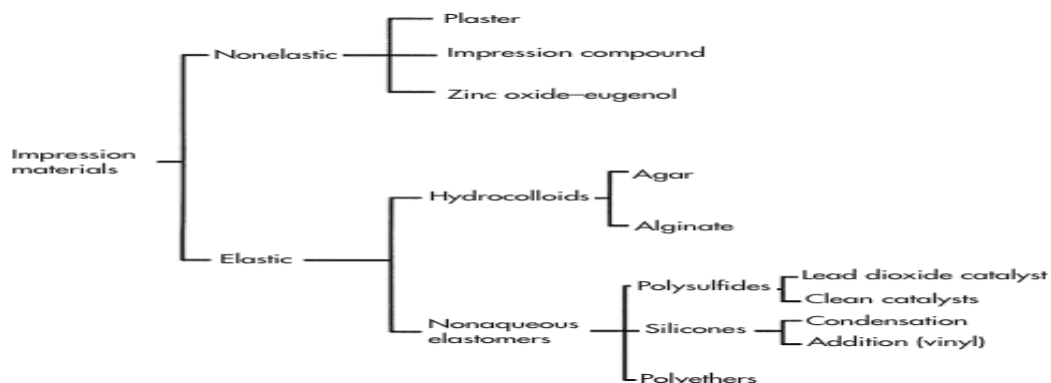
•A model or cast material e.g., high-strength stone) is poured into the impression and, upon setting, produces a positive impression of the tissues.



Requirements

•The requirements of impression materials can be conveniently discussed under four main headings:

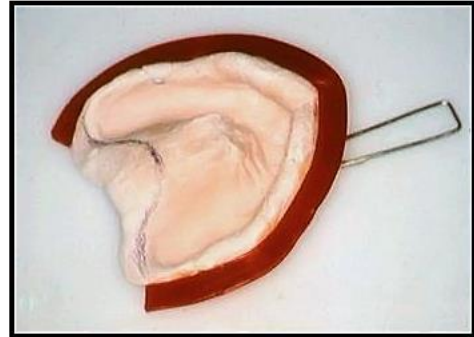
1. Factors that affect the accuracy of the impression.
2. Factors which affect the dimensional stability of the impression, that is, the way in which the accuracy varies with time after recording the impression.
3. Manipulative variables such as ease of handling, setting characteristics, etc.
4. Additional factors such as cost, taste, colour, etc.



Nonelastic Materials

1. Impression plaster

- Plaster of Paris is seldom used as impression material now is used for the final impression of an edentulous patient.
- The main component of impression plaster is calcium sulfate, which reacts with water.



2. Impression compound

- it can be used for impressions of completely edentulous jaws.
- Compound cannot be used to record undercuts since it is not elastic.



- Impression compound is available in either cakes or sticks in various colors
- Dental compound is thermoplastic; it is used warm (45 C) and then cooled to oral temperature (37 C), at which it is fairly rigid.

Advantages

- Dental impression compound is compatible with die and model materials.

Disadvantages

- The handling of dental impression compounds is very technique-sensitive. If it is not prepared properly, can be distorted during immersion in a water bath.

- These materials are nonelastic and may distort on removal from the mouth. The casts should be poured within 1 hour.

2. Zinc oxide eugenol

- Zinc oxide eugenol's main use as an impression material is for complete dentures on edentulous ridges with minor or no undercuts.

- It can also be used as a wash impression over the compound in a tray or in a custom acrylic tray.



Advantages

1. high accuracy of soft tissue impressions due to its low viscosity.
2. The material is stable after setting,
3. has good surface detail reproduction.
4. This material is inexpensive .
5. It also adheres well to dental impression compound.

Disadvantages

1. The Disadvantages of this material are variable setting time due to temperature and humidity
2. Eugenol is irritating to soft tissues.
3. The material is nonelastic and may fracture if undercuts are present.

THANK YOU