

Preclinical dentistry I.

Class I. modifications

Modifications of the class I.

– Composite

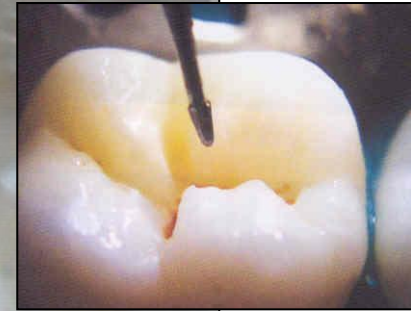
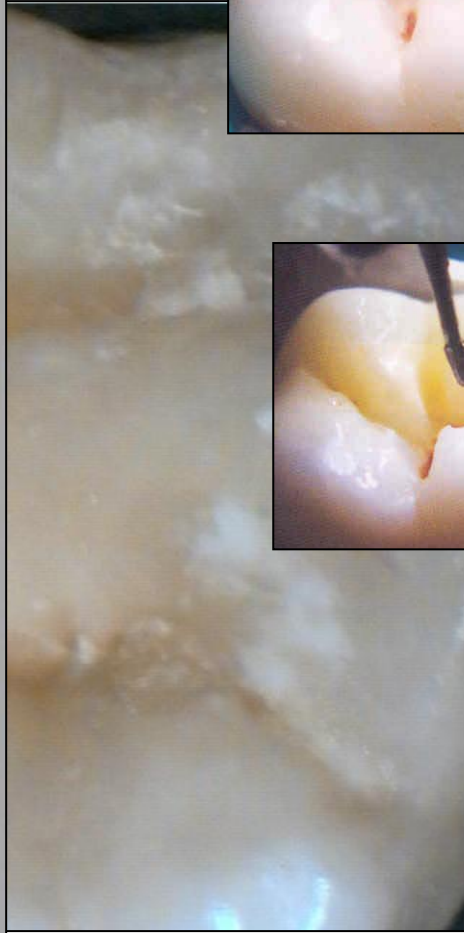
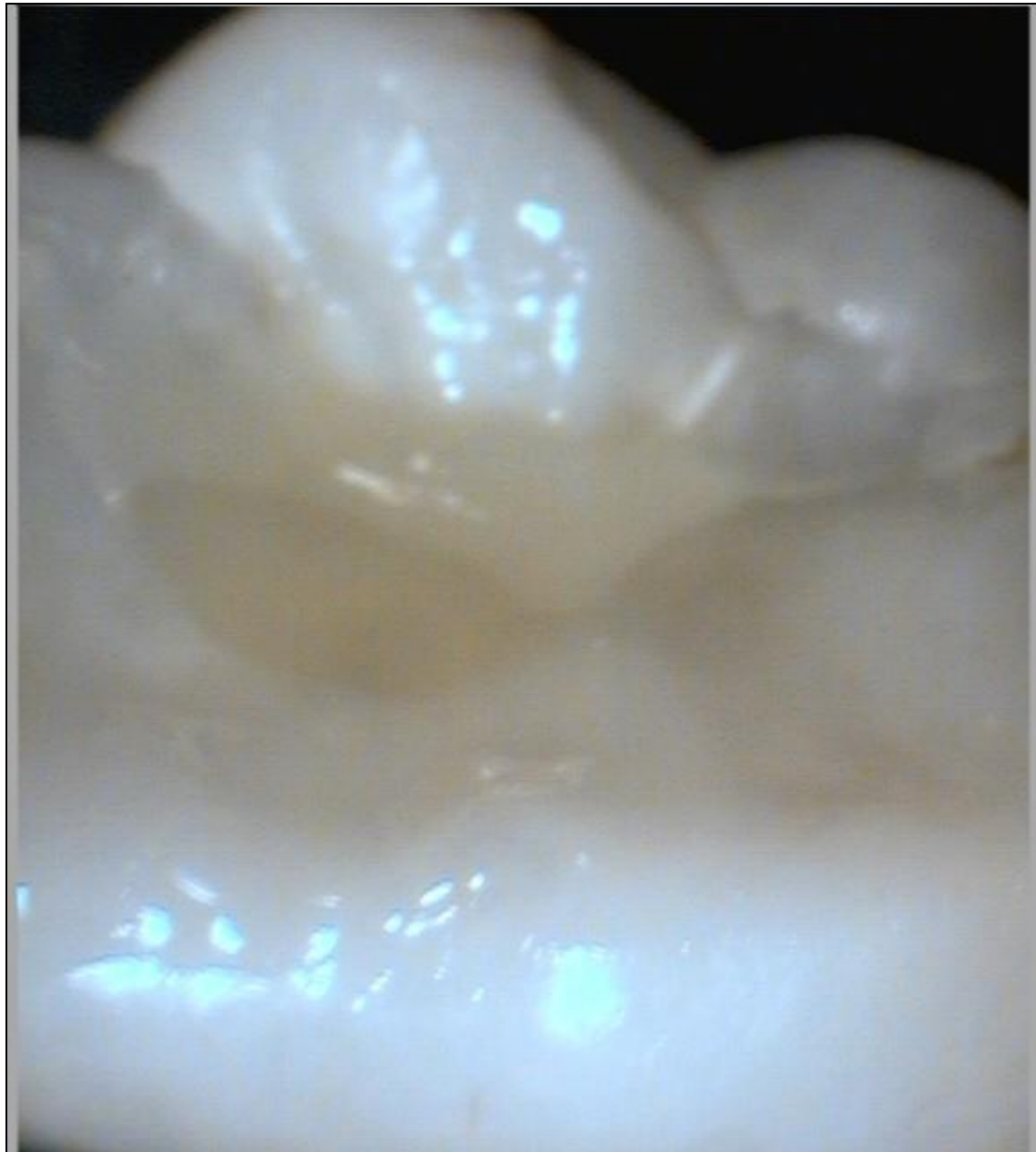
– Inlay

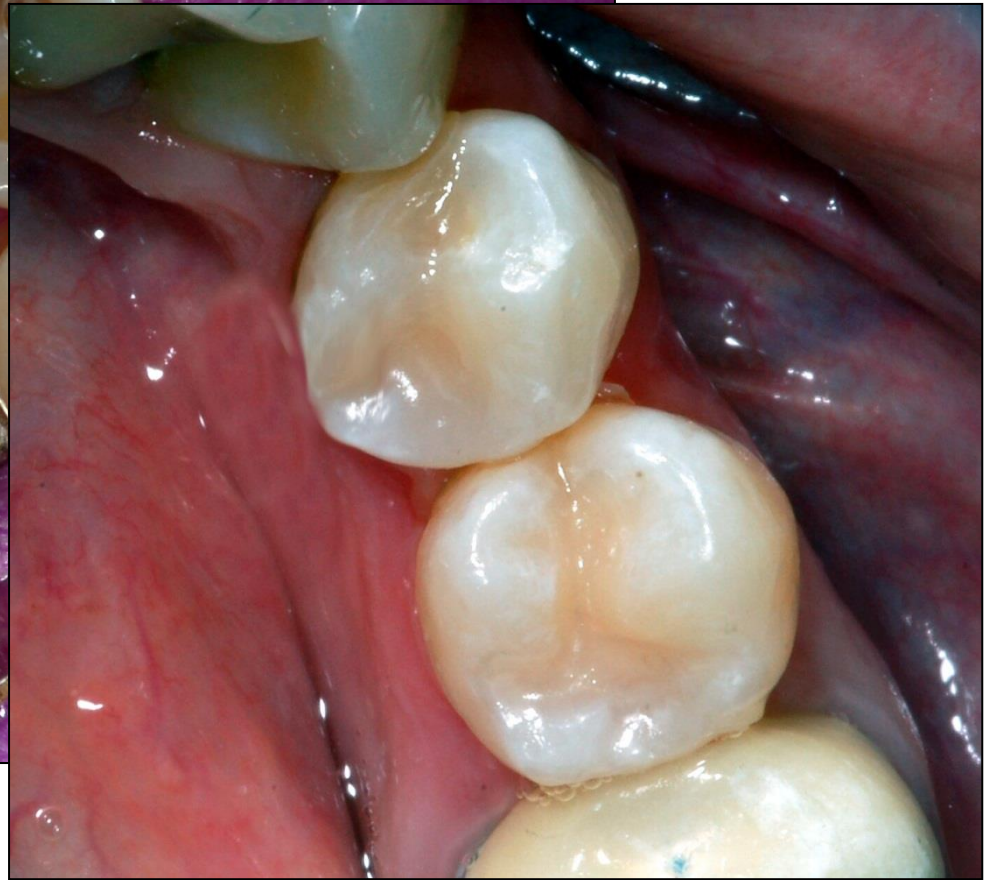
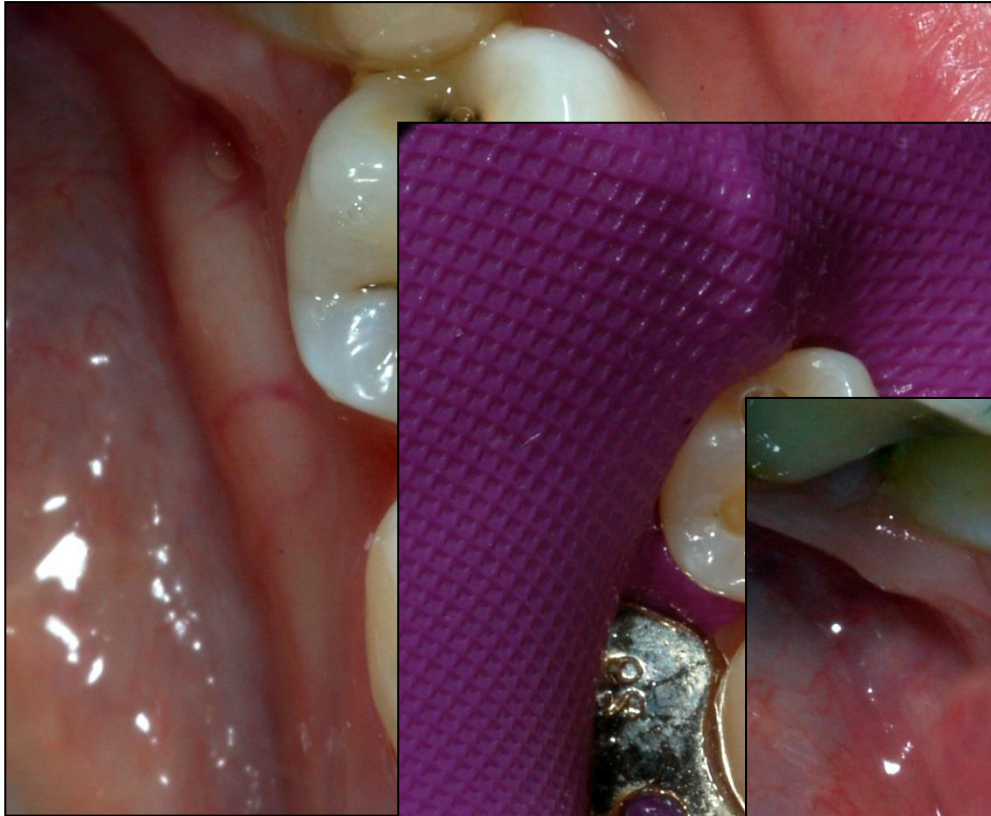
Preparation for composite

The cavity is smaller – more narrow depending on the size of the carious lesion. The shape is a box with rounded edges.

Undercuts are not prepared, the Walls are smooth.

In the case when the lesion is small the cavity could be limited on carious lesion only, fissures going to the lesion are opened and sealed.





Sequence of operation

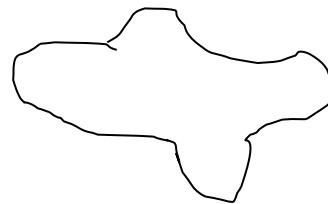
- Preparation
- Acid etching (enamel 30 s, dentin 10 s)
- Washing (10s at least, better as long as the etching lasted in enamel)
- Removal of access of water
- Application of the primer
- Application of the bond
- Layering of the composite material
- Finishing and polishing

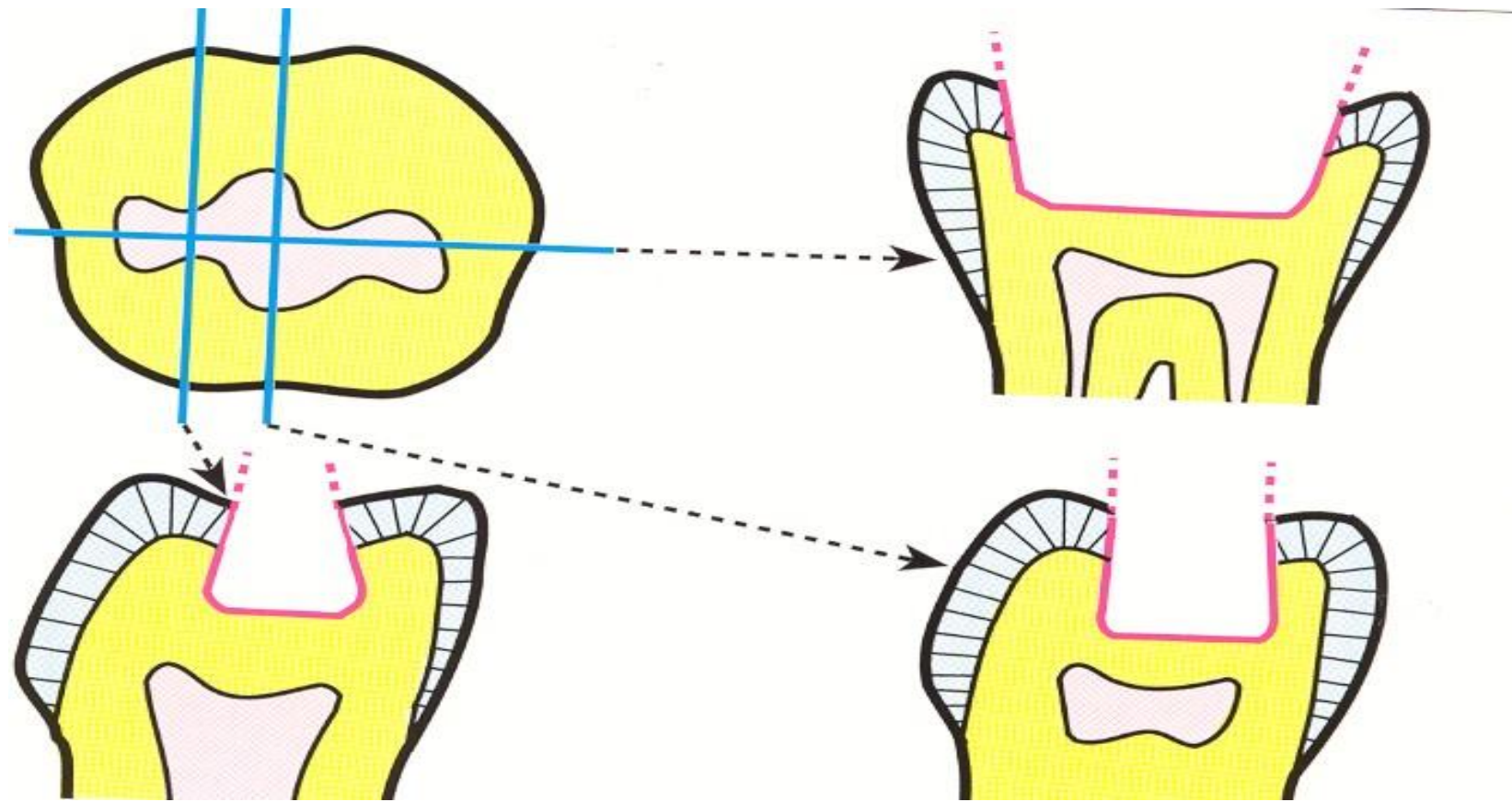


The filling is built cusp by cusp

Preparation for inlay

- Inlay is a rigid filling
- Made out of cavity (dental laboratory) and luted into the tooth
- Preparation is different: box with walls that are slightly divergent
- Preparation is slightly asymmetric – orientation by application into the cavity is then easier





Inlay

- Can be made of metal alloy
- or comopsit or ceramics



Indication

- Large defects that can not be restored with plastic fillings

Inlay - disadvantages

1. More hard dental tissues are lost
2. The fabrication is more difficult

Contraindication

1. Small and shallow cavities
2. High caries risk.
3. Frontal area

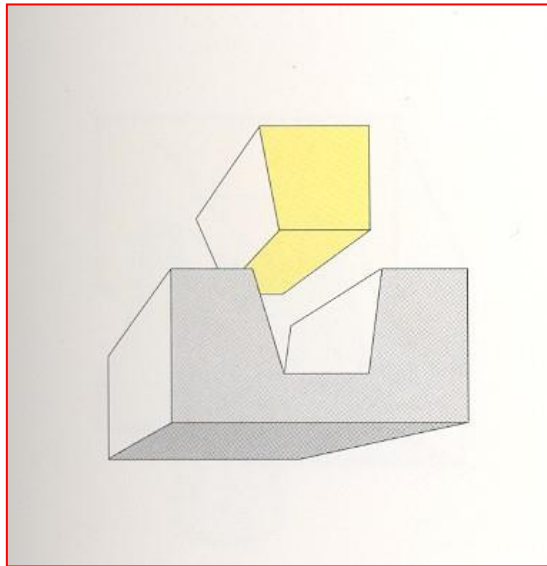
Classification

Inlay

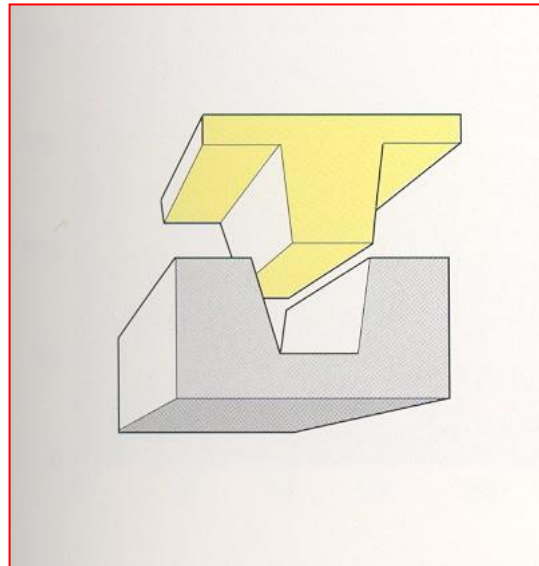
Onlay

Overlay

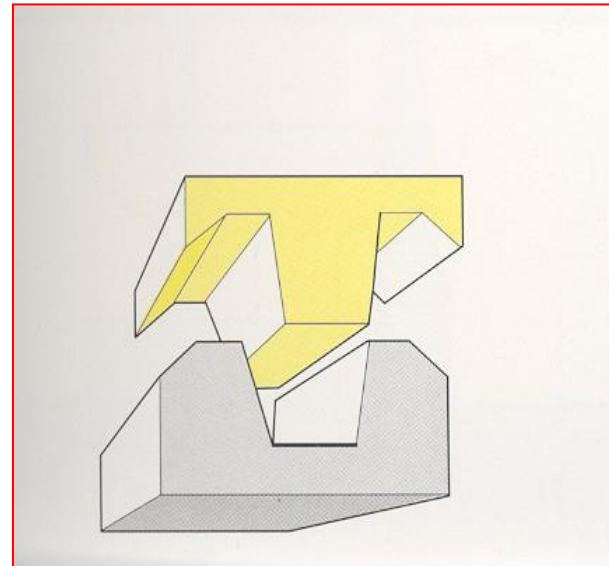
Inlay



Onlay

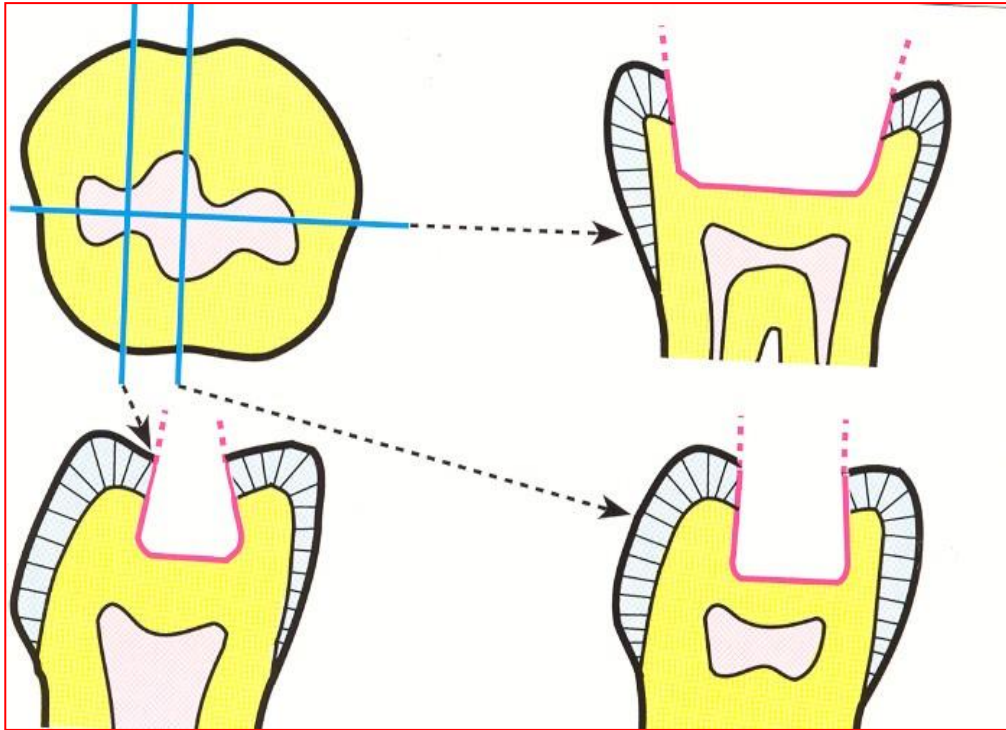


Overlay



Basic rules of the preparation

- Box
- No undercuts
- Slight divergency of walls



Usnadňující forma

Metal inlay - fabrication

- Direct method

- Indirect method

Direct method

- Central cavities only
- Wax pattern is made directly in oral cavity

Direct method

1. Phase in dental office

Preparation

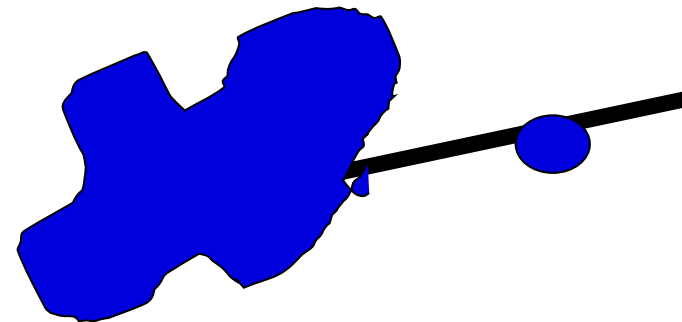
- Isolation
- Modelling
- Sprue pin with the reservoir
- Taking from the cavity

Phase in dental lab

- Investment
- Casting - lost wax method
- Finishing, polishing)

2. Phase in dental office

- Trying
- Luting



Indirect method

1. Phase in dental office

Preparation

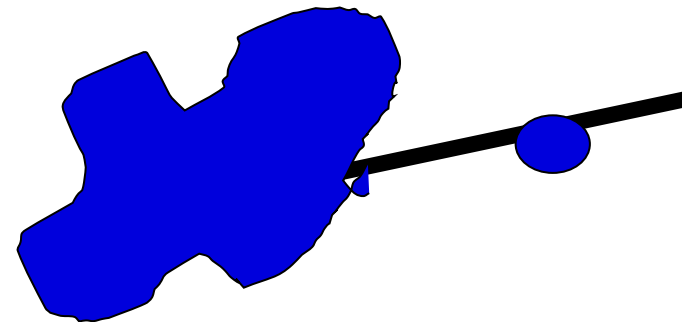
Taking impression – elastomeric material, antagomal impression – alginate, registration of intermaxillary relationships - wax

Phase in dental lab

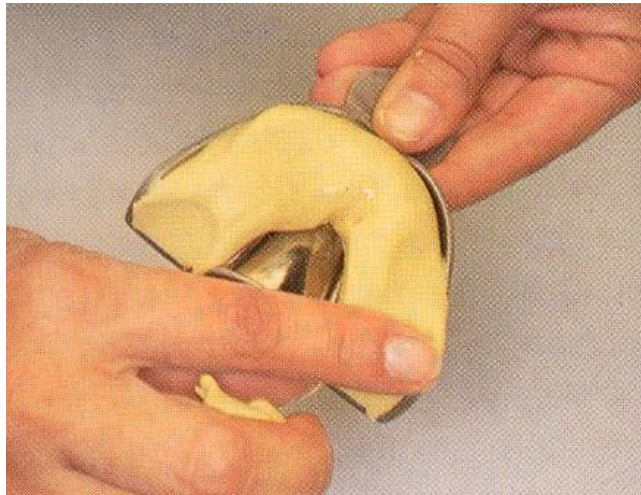
- Investment
- Casting - lost wax method
- Finishing, polishing)

2. Phase in dental office

- Trying
- Luting



Impression – elastomeric material



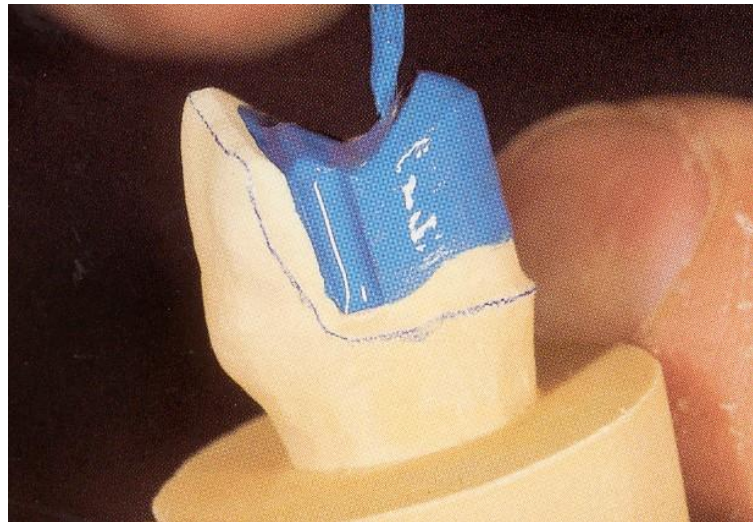
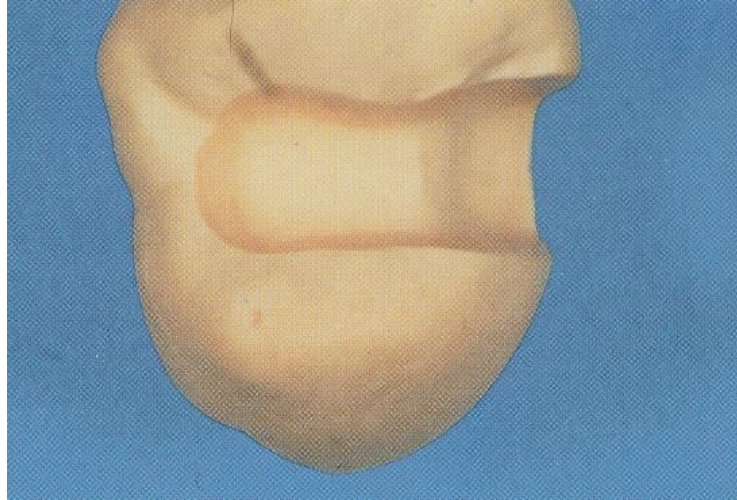
Antagonal impression



Registration of in termaxillary relationship - wax



Wax pattern on the model

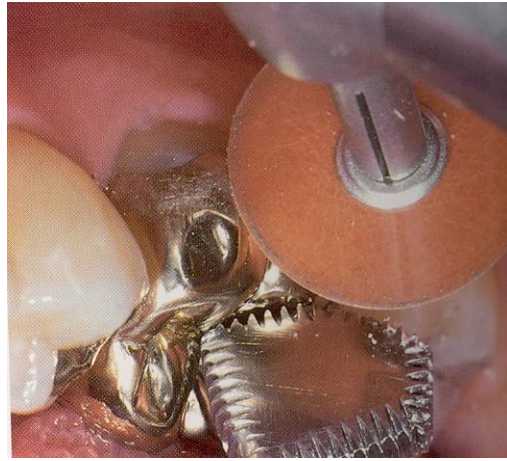
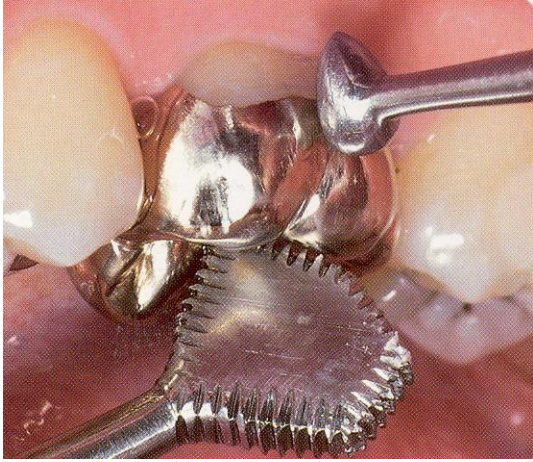


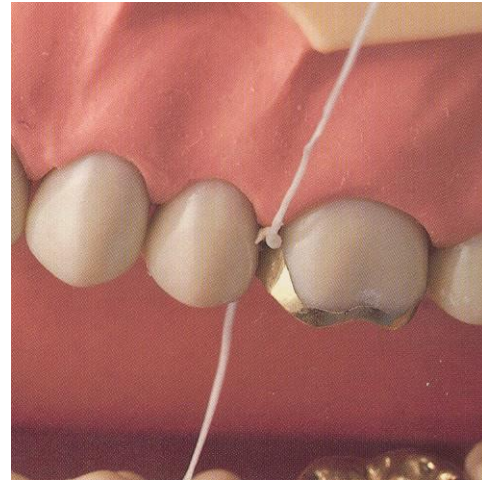
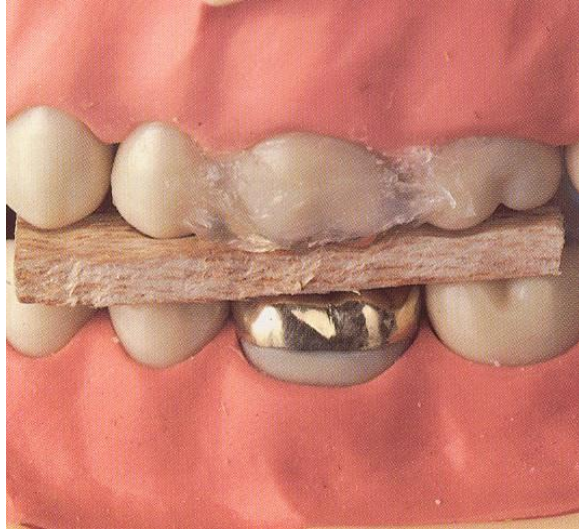
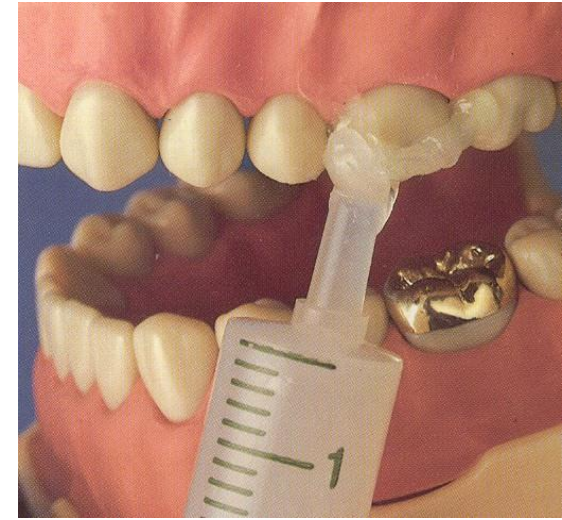
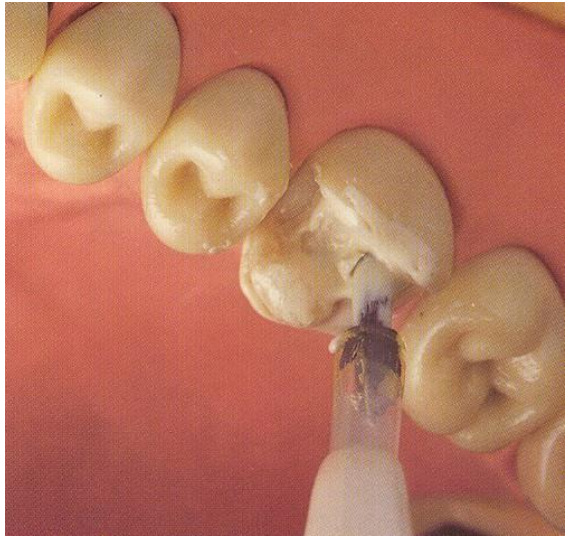
Inlays made of metal alloy



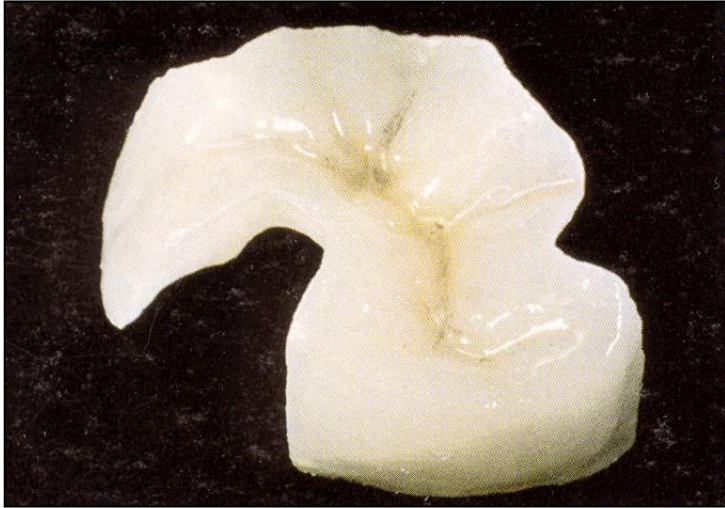
Cementation

- Trying, checkig
- Polishing of the borders using special instruments
- Cementation





Non metallic inlays



Composite

Ceramics





Non metallic inlays

- Indirect method
- Special procedures
- Cemented using special composite materials – composite cements. These materials are usually dual curing.
- This cementation is adhesive cementation: hard dental tissues are etched, primed and bonded. Restorations are etched (hydrofluoric acid or sandblasted, treated with silane)