

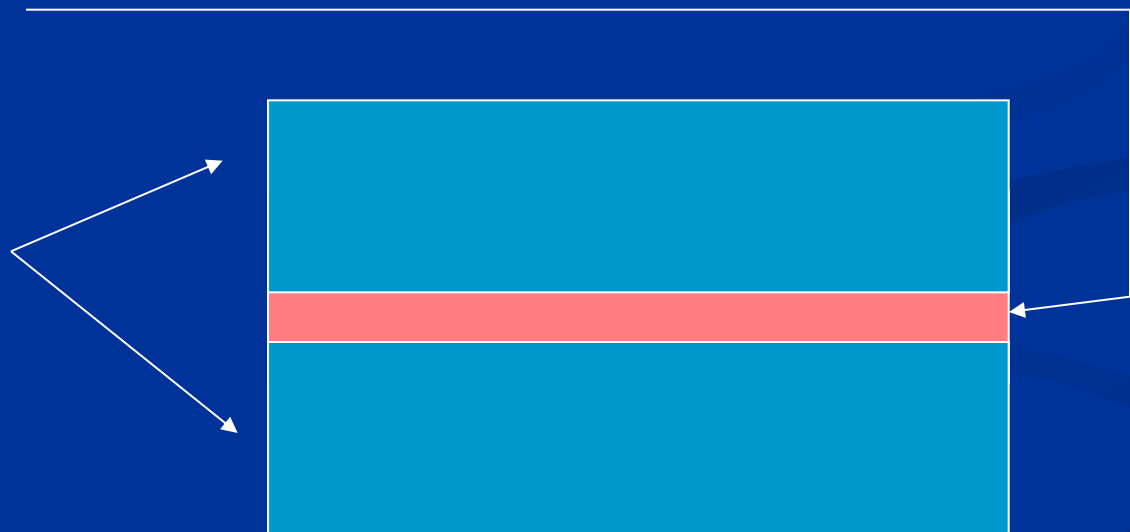
Adhesive dentures

- Fixed dentures, adhesive cementation
- Veneers, inlays onlays, adhesive bridges, adhesive splints with the replacement of one tooth.
- Materials: plastic, ceramics, metal alloy

Adhesion

➤ Adhesive

➤ Adherend



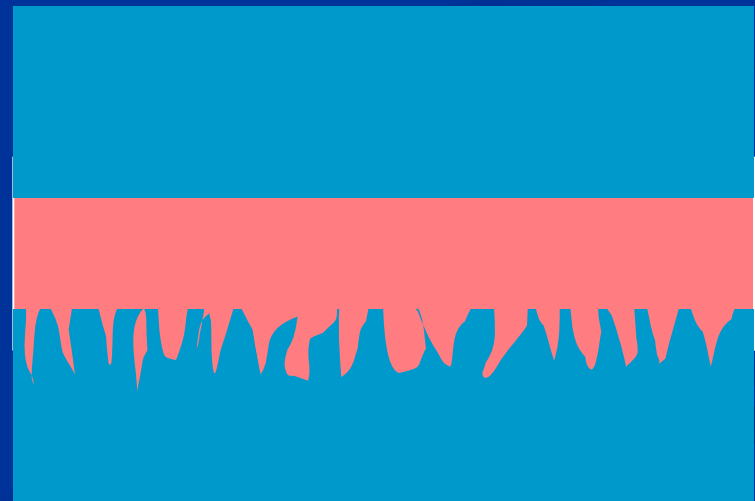
Adhesion

- Mechanic
- Specific

Adhesion

➤ Mechanical

Rough surface



Adheze

➤ Specifická

Fyzikální

Chemická

Adheze

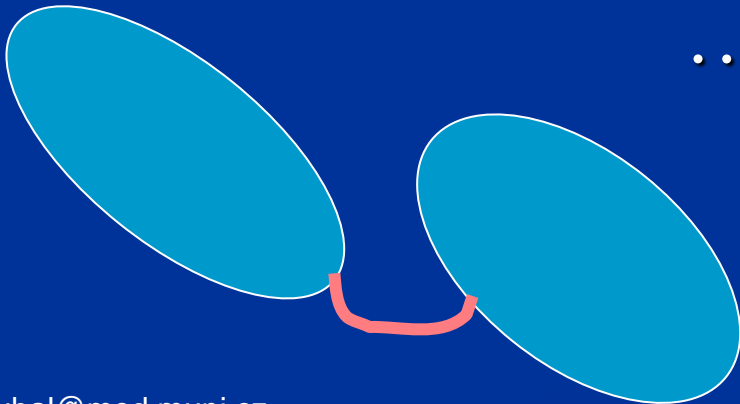
➤ Specific

Physical – intermolecular forces

van der Waals forces

hydrogen bridges

...



Adhesion

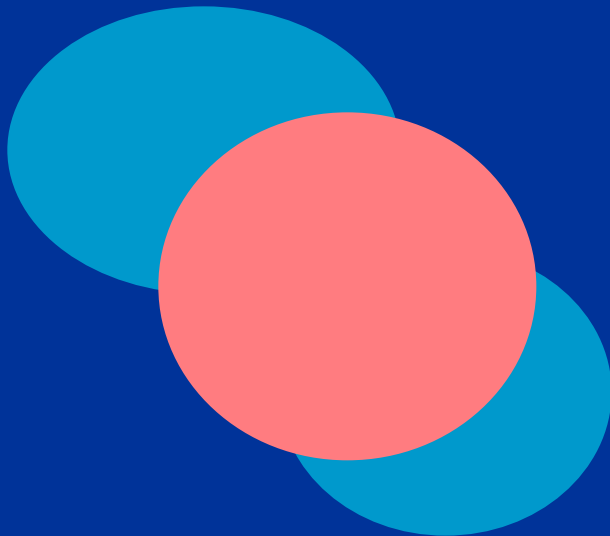
➤ Specific

Chemical

covalent

ionic

metal



Adhesive treatment of surfaces in dentistry

- Sandblasting
- Etching
- Elektrolytic
- Laser
- Plasma coating
- Silanisation

Adhesive treatment

- Rough surfaces
- Increases surface energy
- Improves penetration of liquids to the surface
- Combination

Adhesion of dental materials

Composite materials - micromechanically

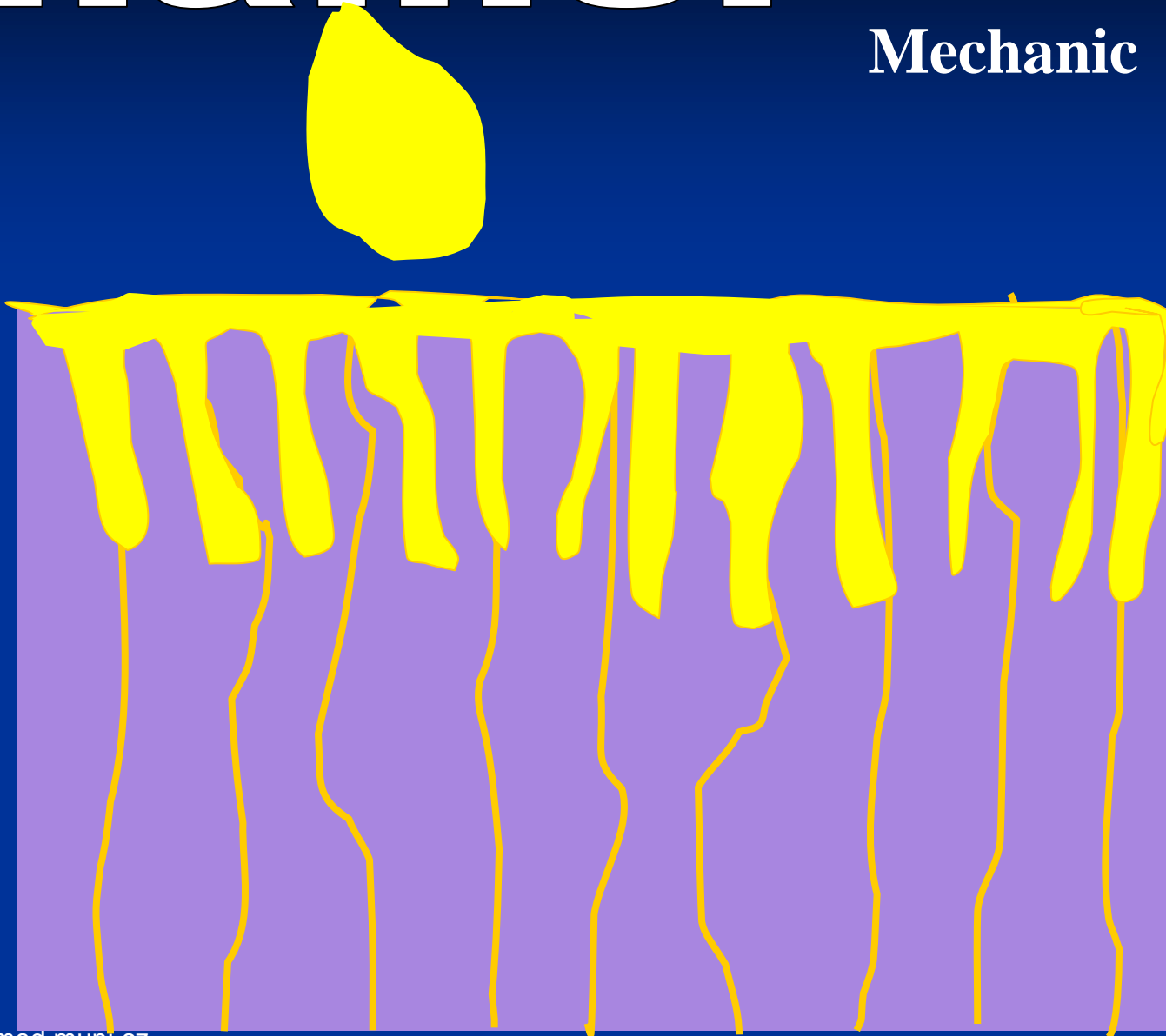
Adhesives— mechanic, specific

Glassionomers and polykarboxylates - specifick

Composites

Enamel

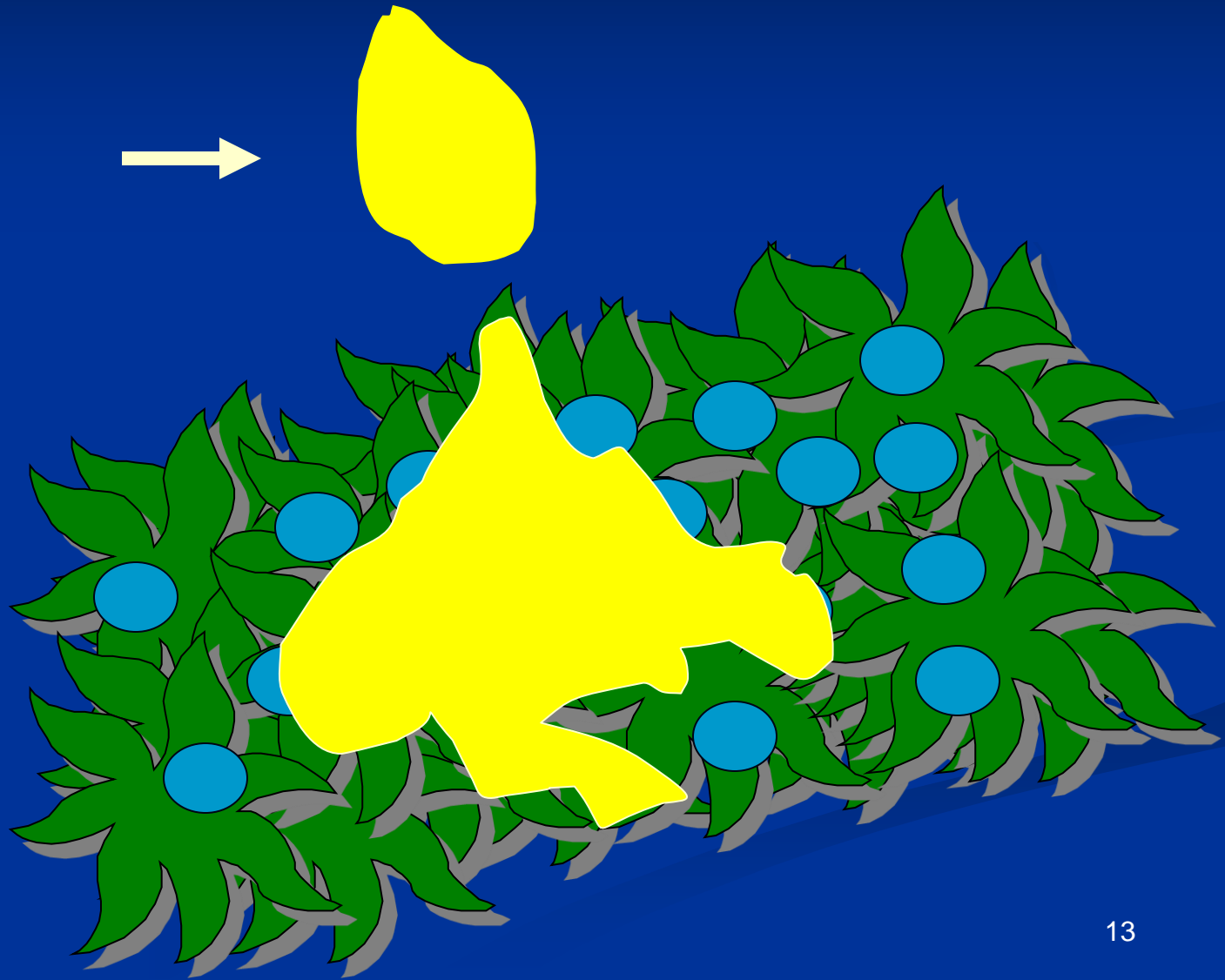
Mechanic



Dentin

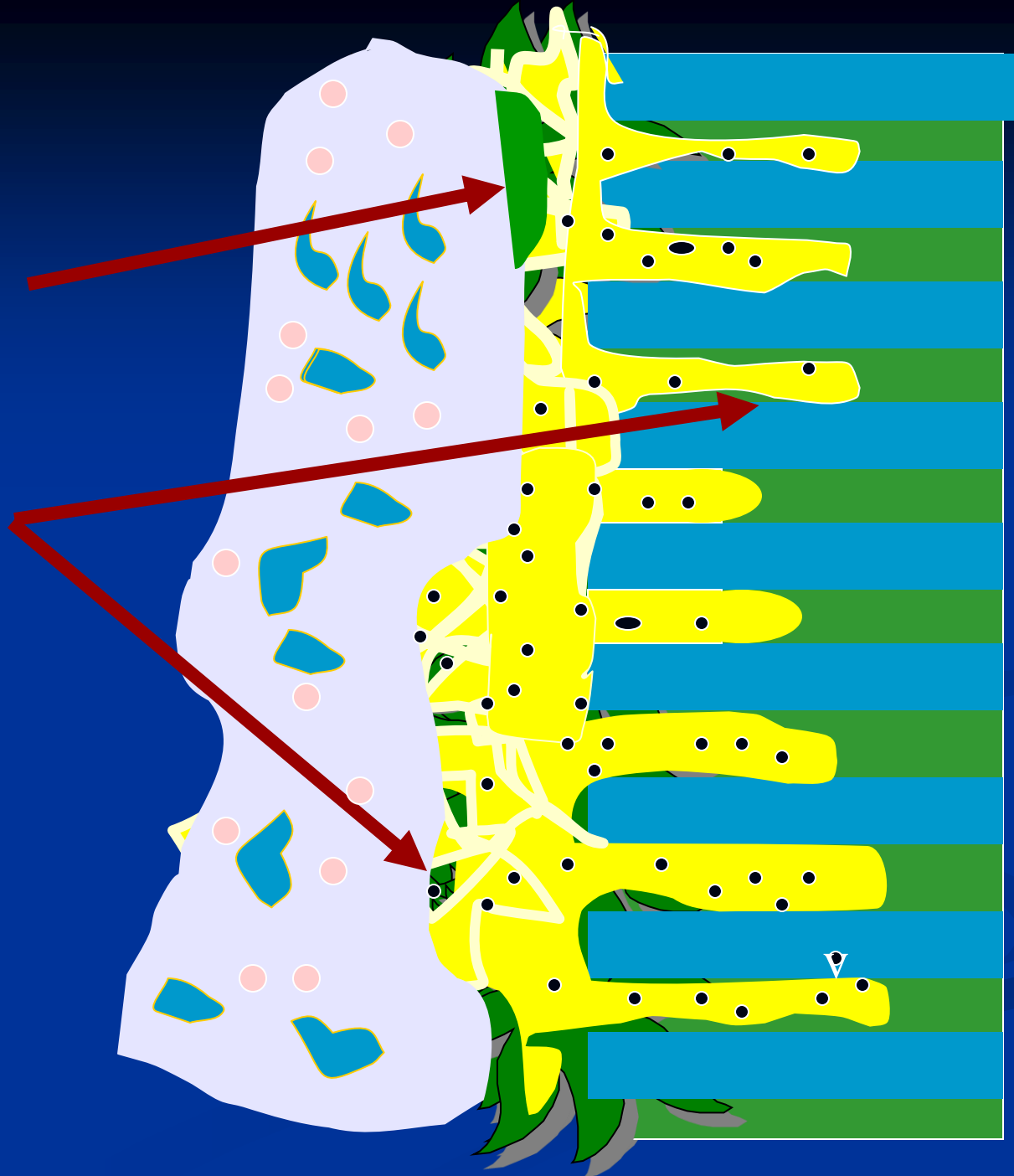
Mechanic

Adhesive
system



Mikronetěsnost

Nanonetěsnost



Conditioner

Demineralization

Increases surface energy

Primer

Open the collagen network and keep it open

Bond

- Penetrate into the collagen network and into the etched enamel

Adhesive systems

Etching	Washing	Priming	Bonding
Etching	Washing	Priming a bonding	
Selfetching priming			Bonding
Selfetching bonding			

Problems

Quality of hard dental tissues

Collaps of the collagen network

Contamination of the surface

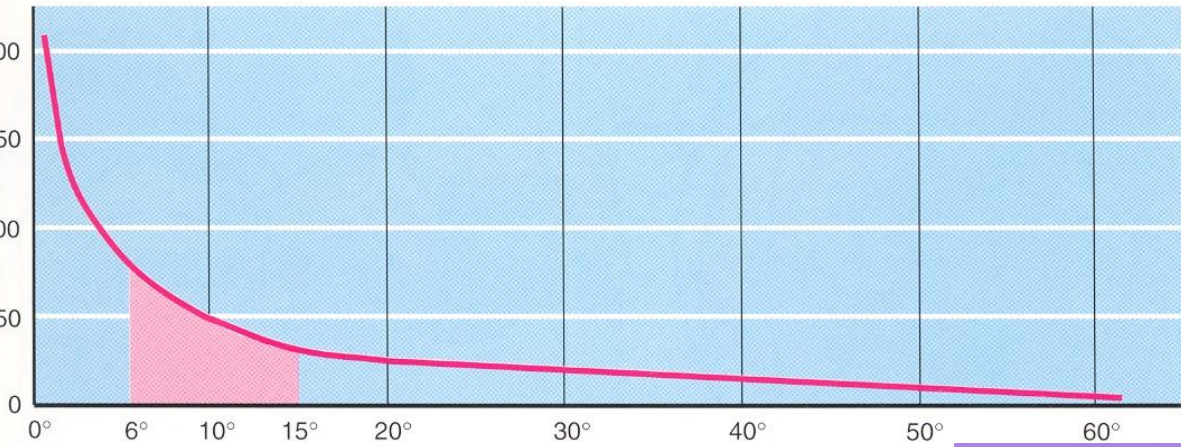
Expiration

lege artis práce !

Cementation

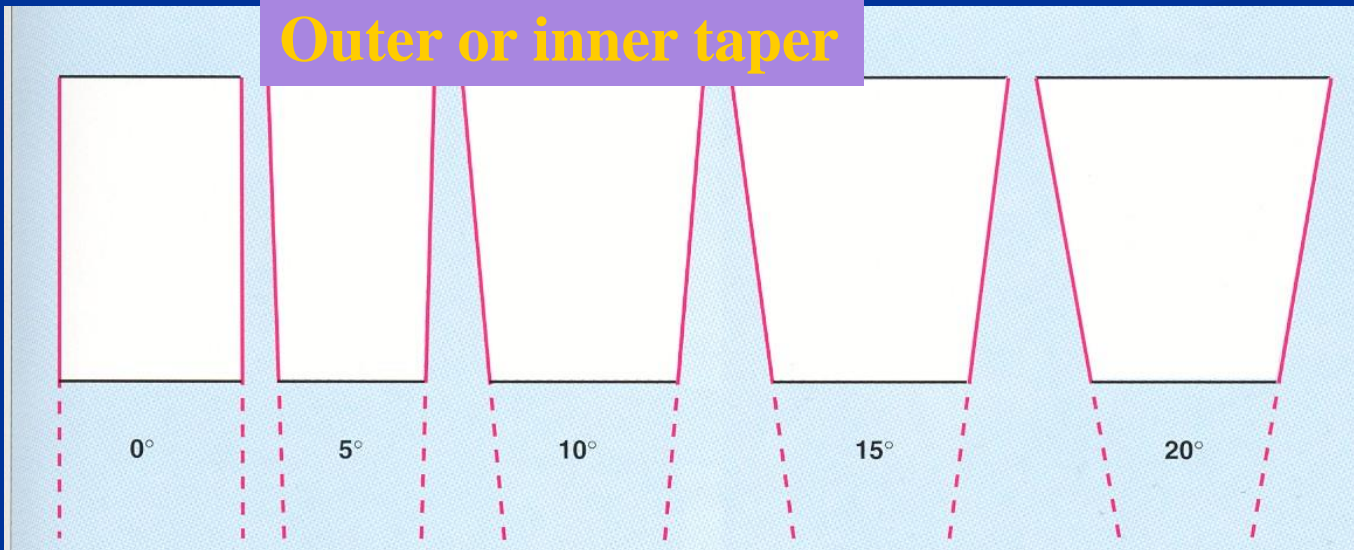
- Quality of the restoration (crown, inlay..)
- Cement
- Size and quality of the surfaces for adhesion

retention g/mm²



Angle of convergence

Outer or inner taper



Cements

- Zinkoxidphosphate cement
- Zinkoxidcarboxylate cement
- Glassionomer cement
- Resin modified glassionomer cement
- Composite cements

Adheze není všude!!!!



**Čím delší čep,
tím lepší retence!!!**

Composite cements

- Composite materials
- Lower viscosity
- Chemically or dual curing.

Adhesive cements

Two component materials

Photoiniciation - primary

Variolink (Ivoclar-Vivadent)

Calibra (Deentsply de Trey)

Bifix (VOCO)

Ena Cem (Micerium)

Chemically initiation - primary

Multilink, Multilink Automix (Ivoclar Vivadent)

Relyx (3M Espe)

Chemically cured only

Panavia 21 (Kuraray)

Dyract Cem (DENTSPLY De Trey)

Adhesive systems for composite cements

- Total etch
- Self etch
- No etch

Compatibility !!!

Selfetching cements

RelyX™ Unicem (3m Espe, Německo)

Multilink Sprint (Ivoclar Vivadent)





Refill 50

Recorder # 533670

ivoclar
vivadent
clinical

ivoclar
vivadent

Variolink II Catalyst
ivoclar

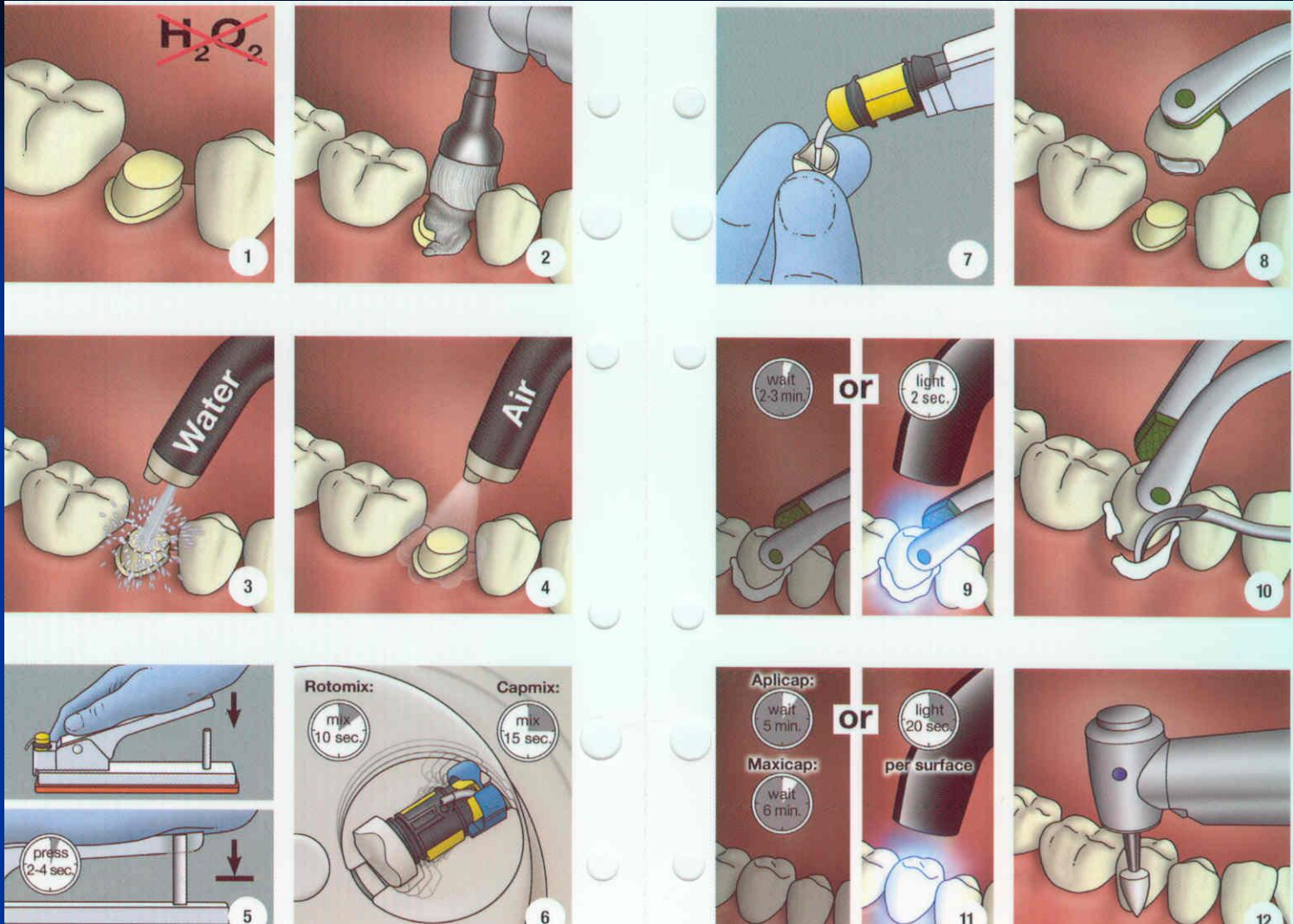
Variolink II Base
2.5 g
2006-06

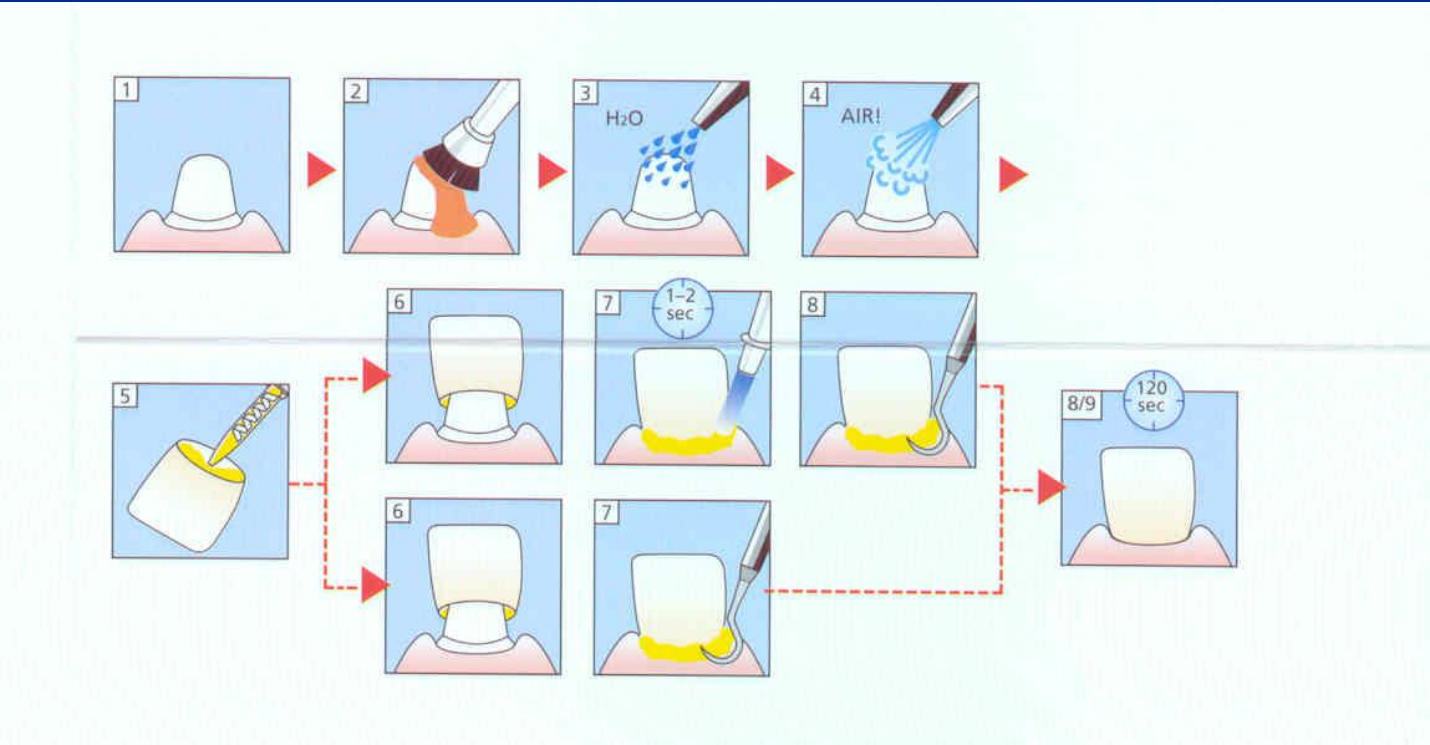
Facite BSC



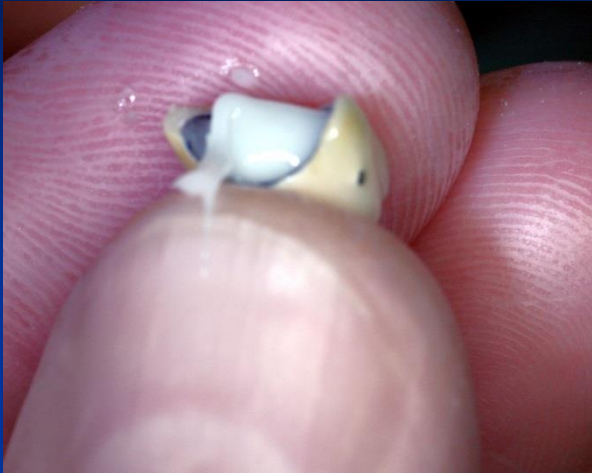












Adhesive dentures with metal framework

Preparation

Preparation in enamel (0,3 -0,5 mm)

Removal of old filling

Adhesion and smaller retention area.

Indikation of adhesive dentures with metal framework

1 tooth replacement in posterior area

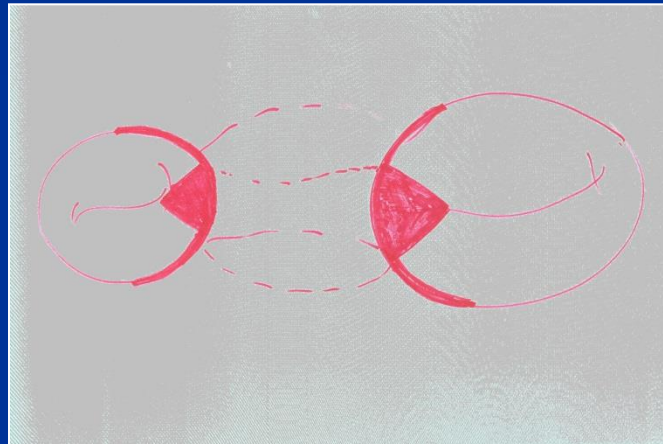
1 -2 teeth replacement in anterior area

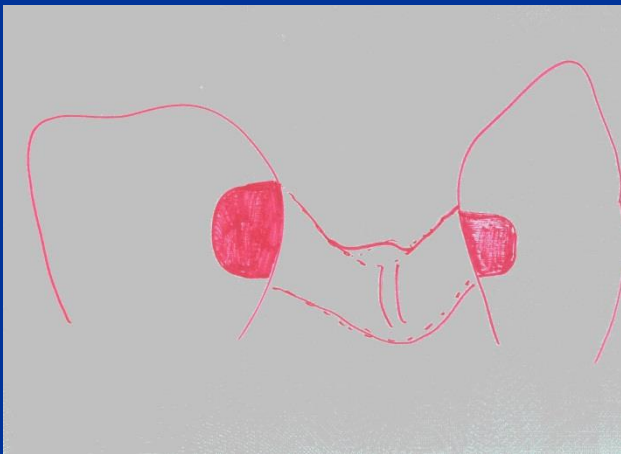
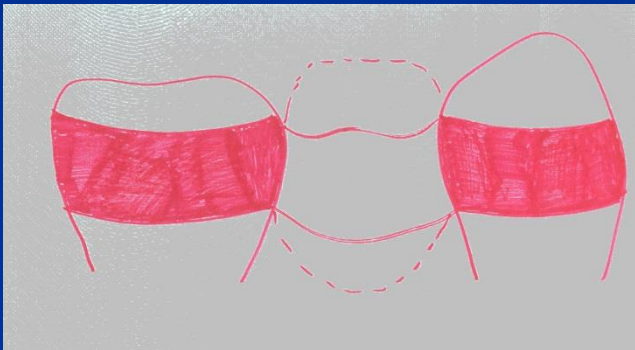
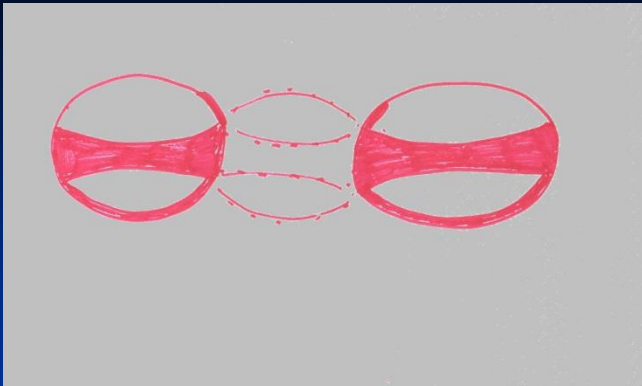
Conditions for adhesive dentures must be fulfilled

Pros and cons

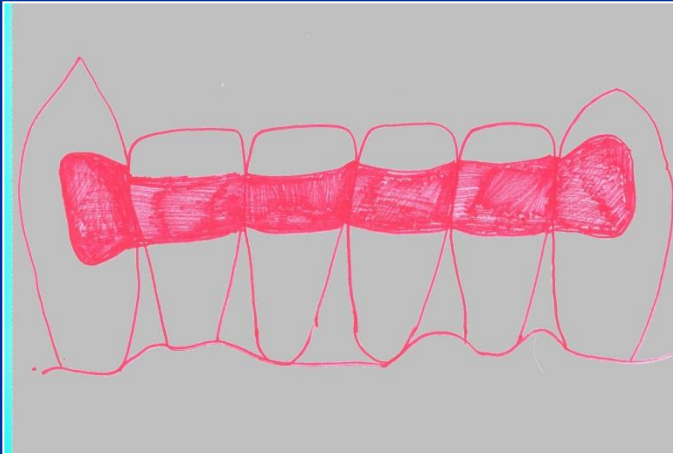
- Minimal preparation
- Compromised aesthetics
- Risk of recurrent caries
- Semipermanent solution

Maryland bridge



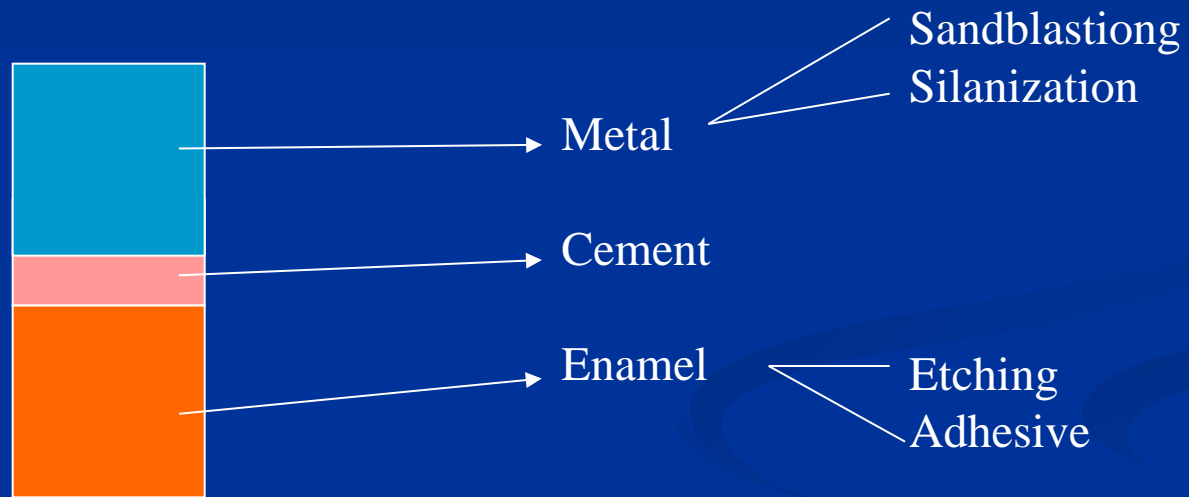


Adhesive bridge with metal framework
horizontally stabilized

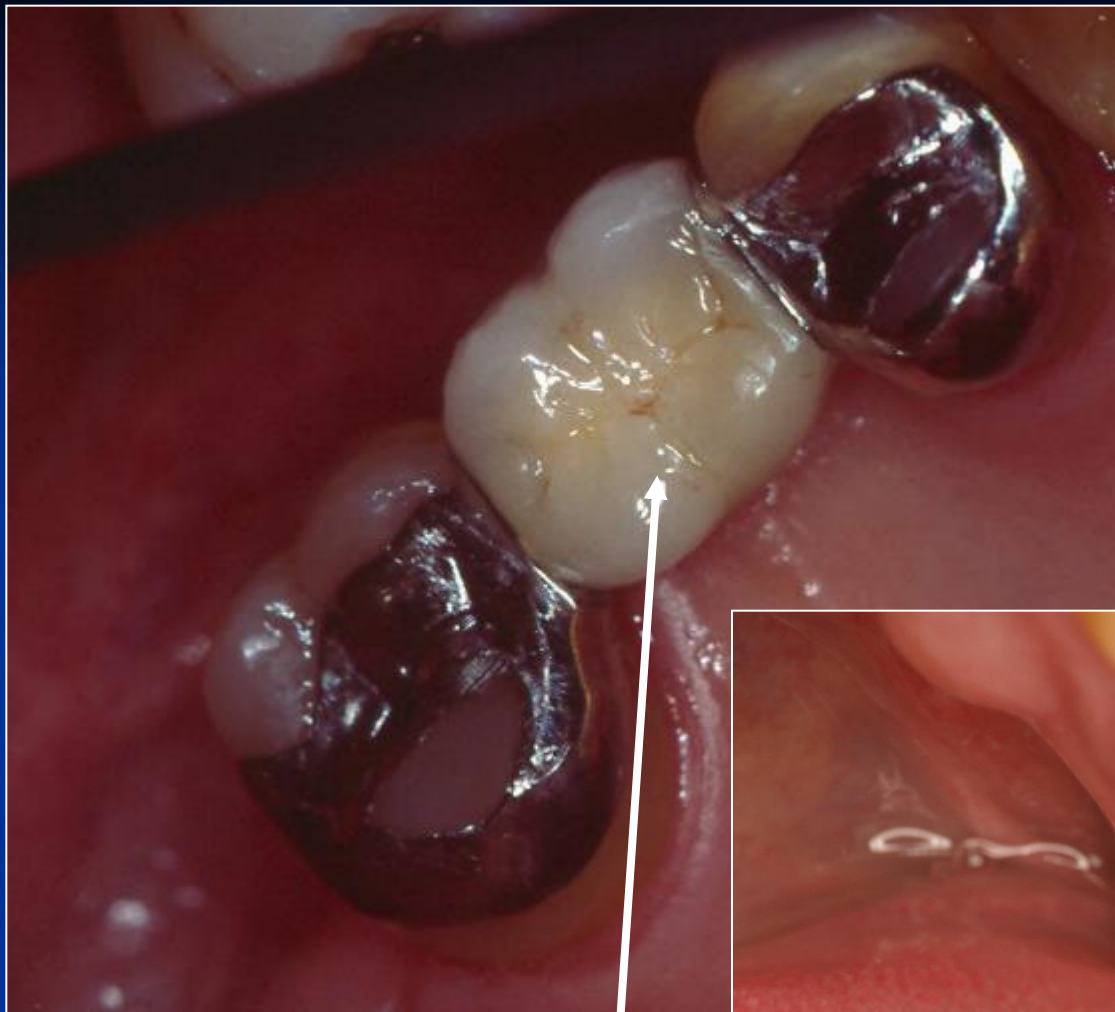


Adhesive splint with
metal framework

Adhesive connection







Pontic - ceramics

Pontic – compsite resin





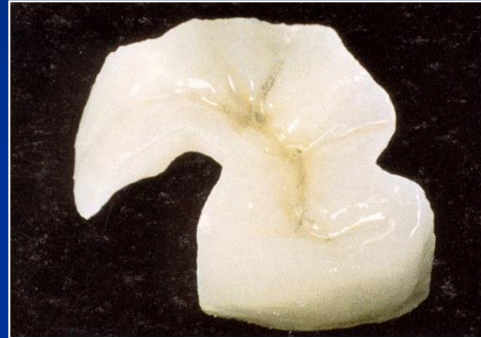




Selfetching cements

Non metallic adhesive dentures

Kompozit



Keramika

Inlaye, inlayové můstky

Indications

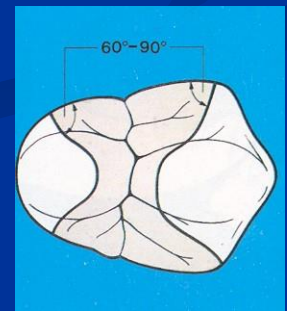
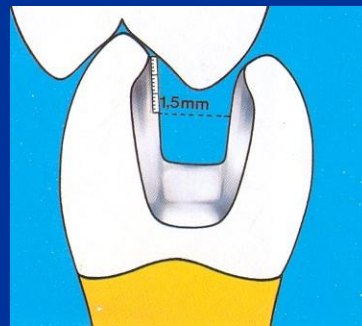
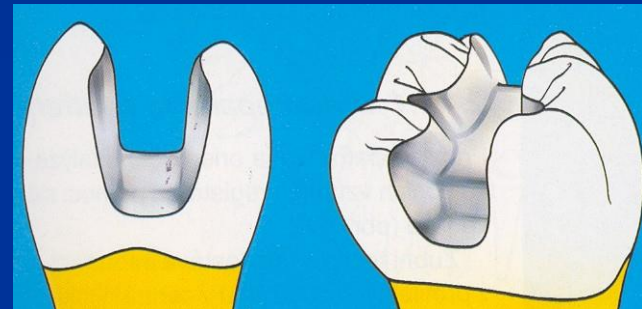
1. Replacement of a part of tooth or entire tooth
– aesthetics reasons

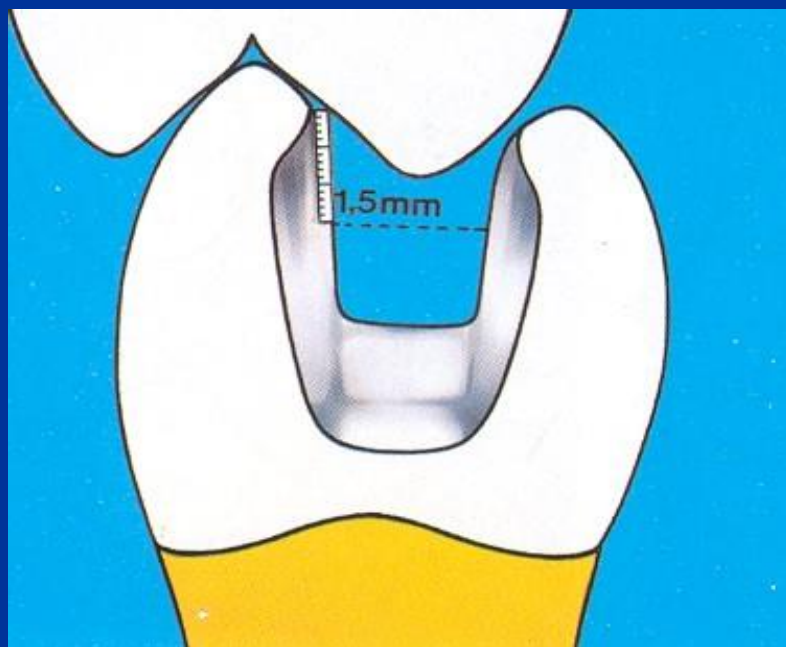
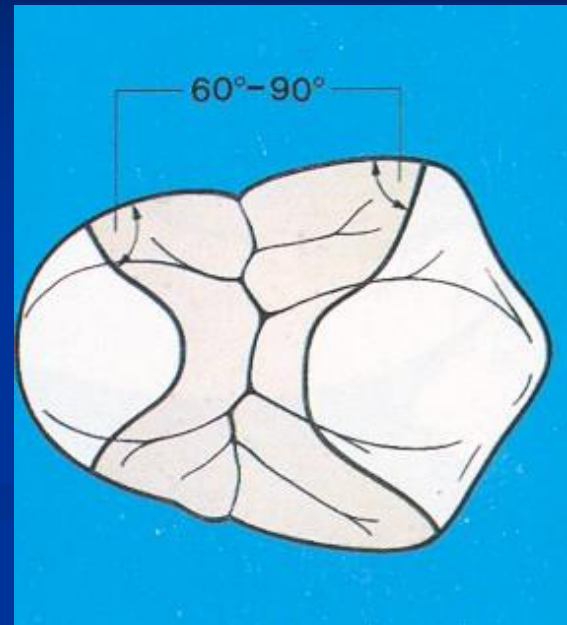
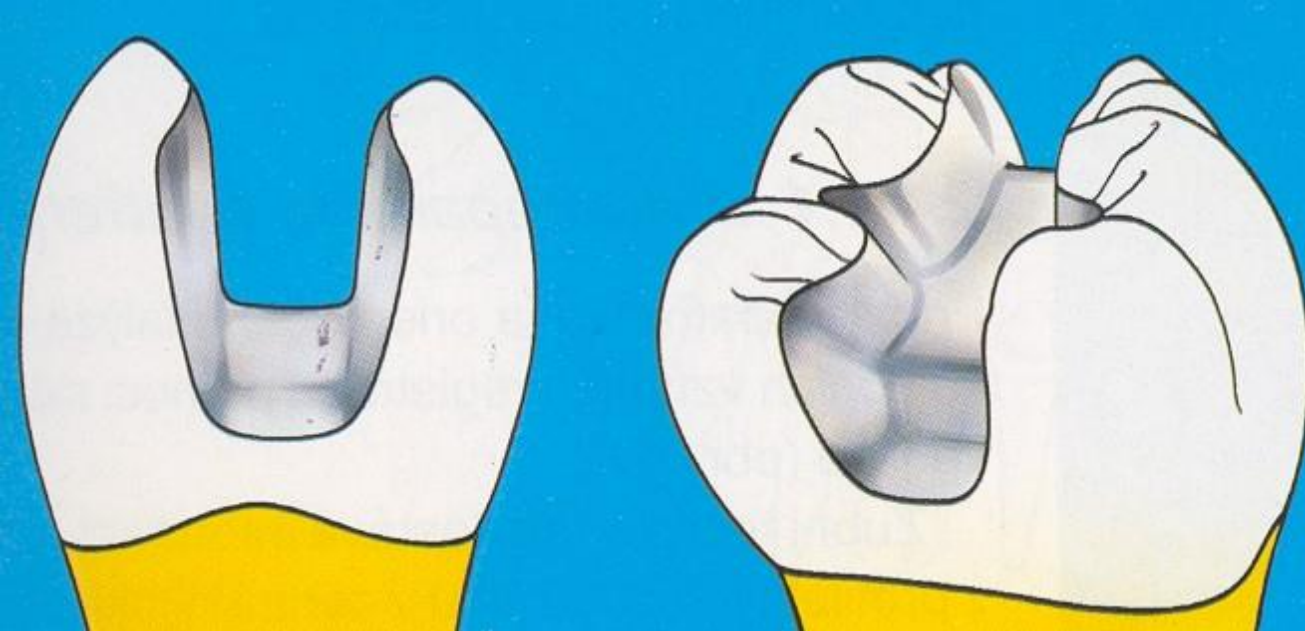
Contraindications

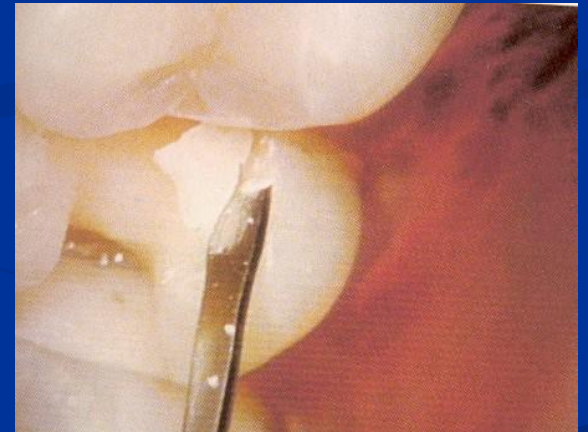
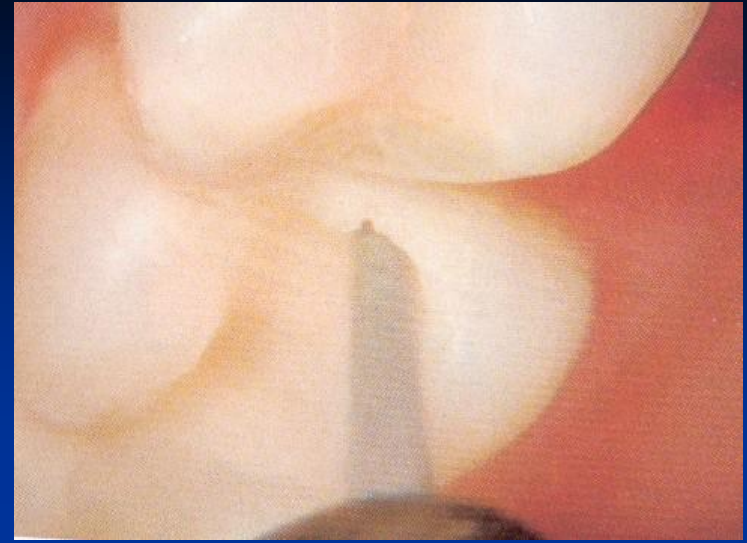
- Bad oral hygiene
- Bad intermaxillar relations
- Subgingival defects
- Bruxism
- Bad quality of hard dental tissues

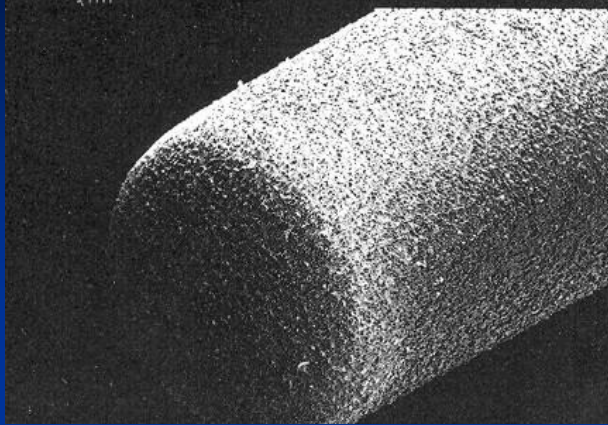
preparation

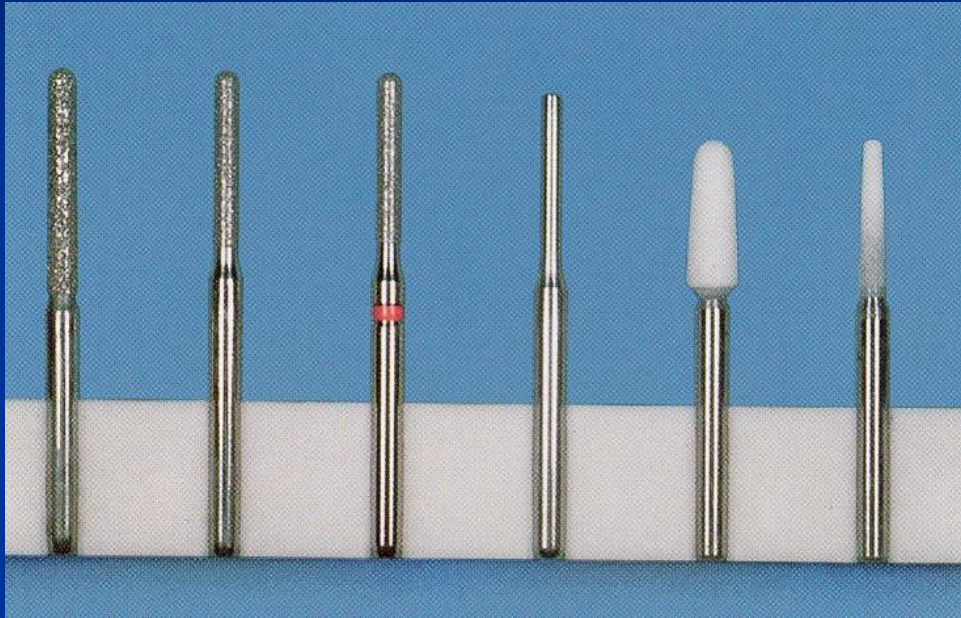
- Divergency cca 6°
- No bevel
- Smooth borders
- Thickness of the material
1,5 – 2 mm.

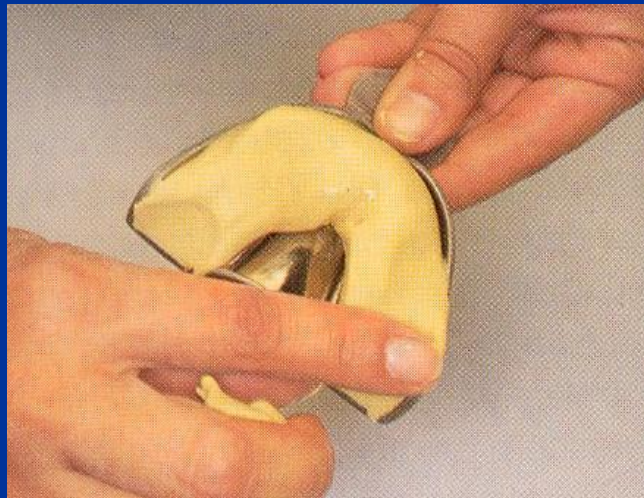












SILOFLEX[®] PLUS PUTTY

*Condensation curing polysiloxane impression material
Kondensationsvernetzendes Silikon-Abdruckmaterial
Silikonová otiskovací hmota kondenzačního typu
Силиконовая оттискная масса конденсационного типа*

Storage / Lagerung / Skladování / Хранение:

Store in a dry and dark place at 5 - 25 °C, in a well sealed container.

In trockenen und dunklen Lagerräumen bei Temperaturen von 5 - 25 °C
in gut verschlossener innerer Verpackung lagern.

V suchu a temnu, při teplotě od 5 °C do 25 °C, v dobře uzavřeném vnitřním obalu.

В сухом и тёмном месте при температуре от 5 до 25 °C в хорошо закрытой упаковке.





Antagonal impression

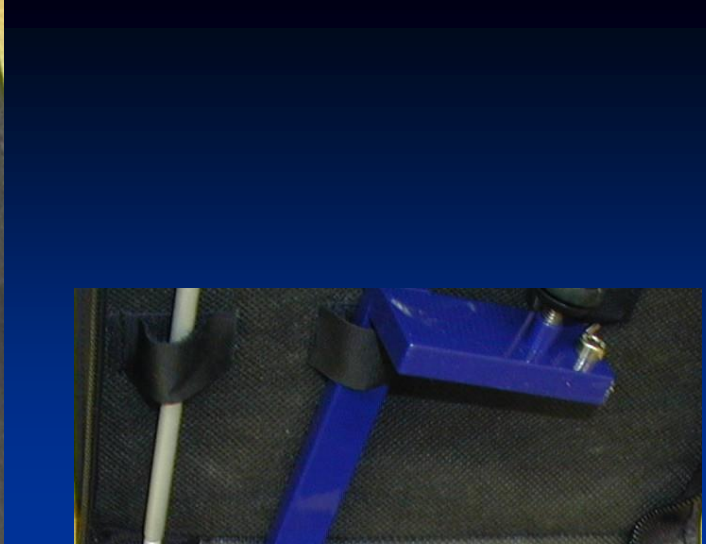
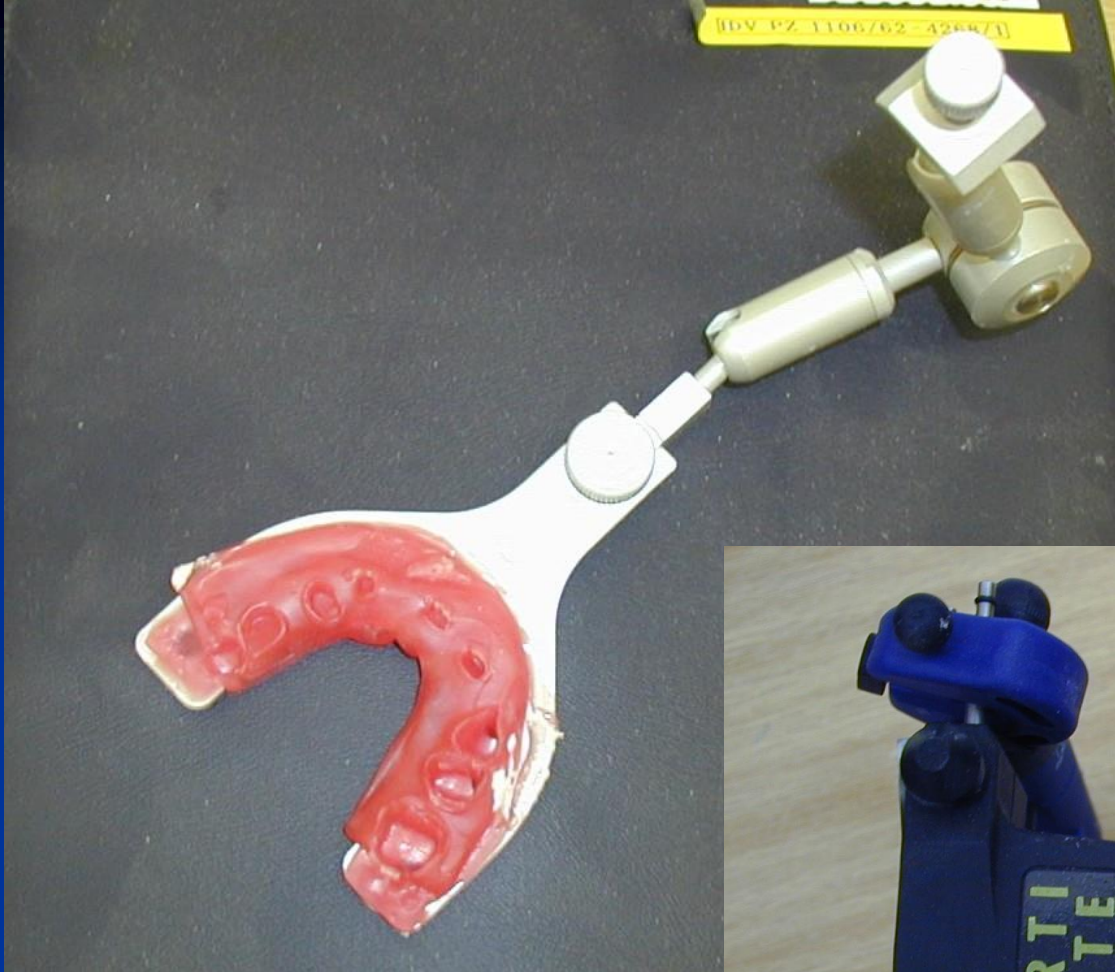
- Alginate

Registration of intermaxillary relations

Wax or special procedures



[IDV PZ 1106/62 3326871]



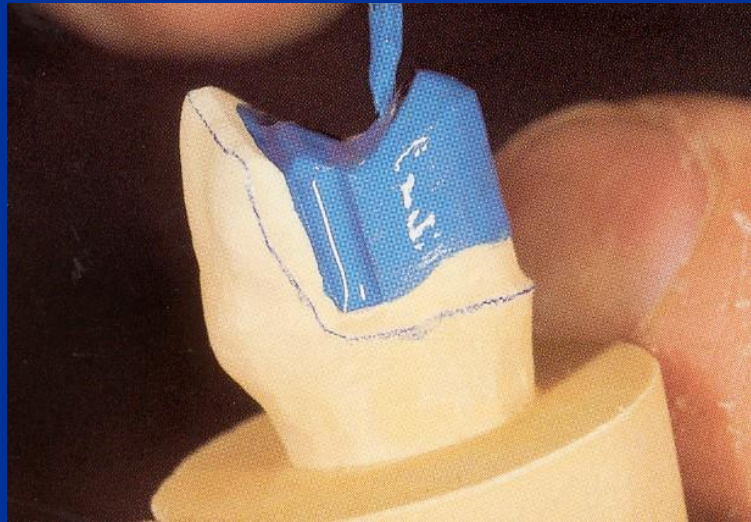
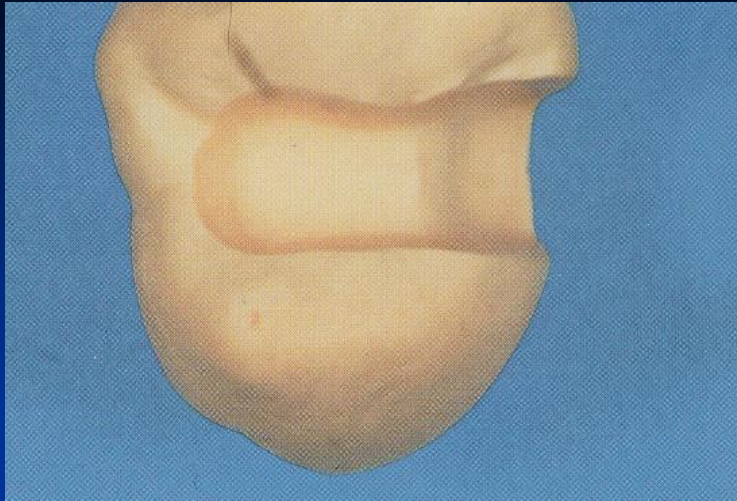
Temporary

(Fermit, Clip)

- Temporary inlay (Systemp - Vivadent, Protemp - Espe)



Laboratory procedures





G.E. 2

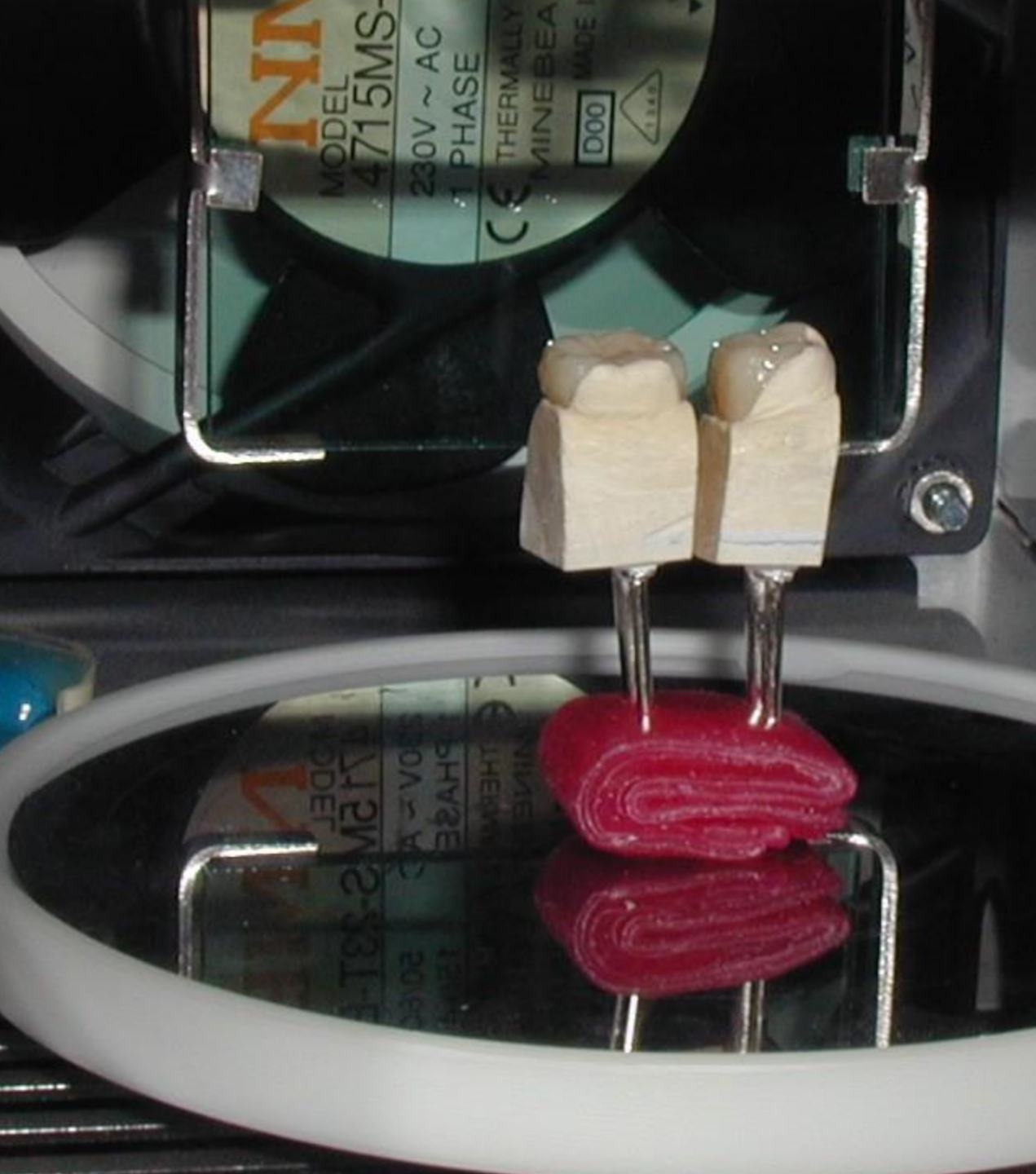
2005.10

Manufacturer: GDF GmbH, 6119
Distributor: Alcedium s.r.l. 46020

COMPOSITO FOTOPOLIM







Inlay bridges

- Material:

Composite

Ceramics

Inlay bridge

- Indications:

Small defects, good oral hygiene.

Adhesive cementation.

Reinforcement of composite bridges with FRC.

