# Clinical considerations of anterior composite restorations

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- Morphology
- Shade
- Opacity and transparency
- Marginal integrity



# Morphology

#### 1. General contouring

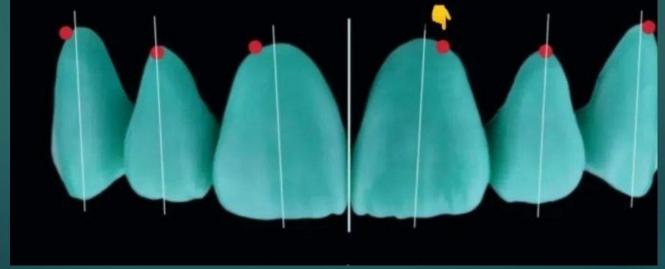




## 2. Zenith







## 3. Axis





## 4. Contact point or area





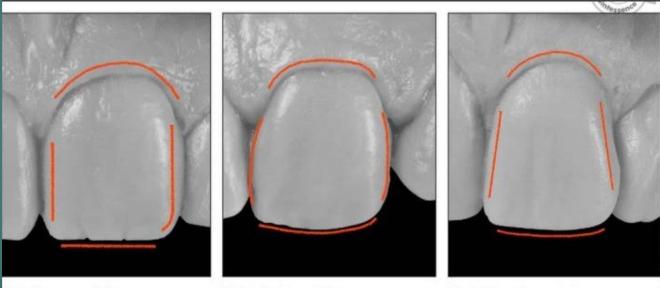
## 5. Incisal embrasures





## 6. Transition lines





#### 7. Macro and Micro geographies

Most anterior teeth have: three main elevations two main depressions.

- The mesial depression is generally longer, deeper, and narrower than the distal depression
- the distal depression ,**shorter**, **wider** and **more curved**.



Perikymata refers to several lines that cross the enamel surface from mesial to distal, and they parallel each other and break light reflection.

Imbrication lines refer to deeper and much fewer lines in the cervical third.



# Shade

hue chroma value

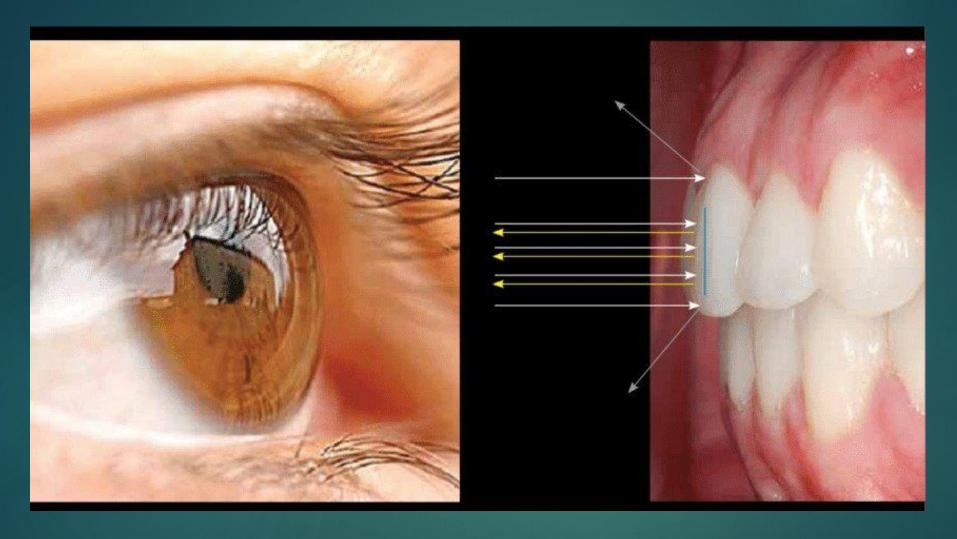












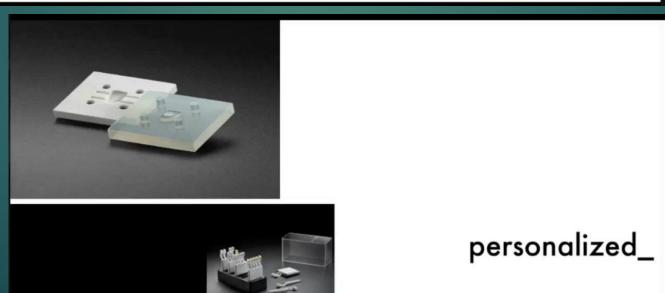
- White & yellow arrows (reflection) of light at the center of the crown
- Grey arrows (deflection) of light at the cervical and incisal borders

#### Enamel =convex Dentine = concave

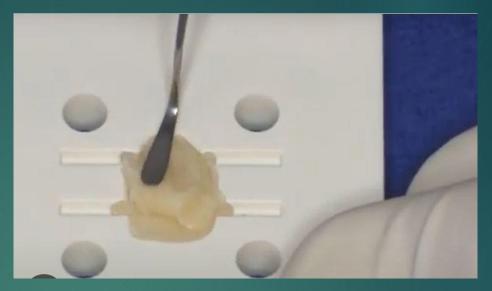


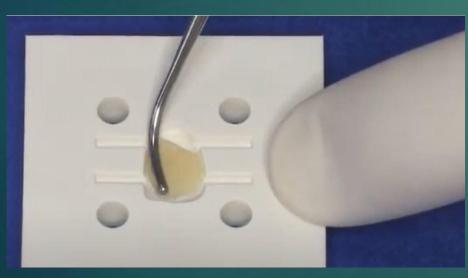
#### **Shade selection**

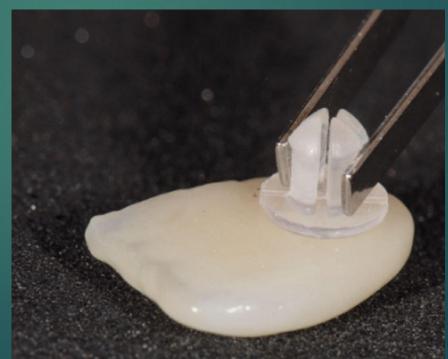








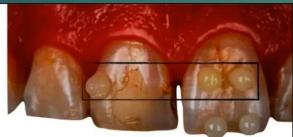




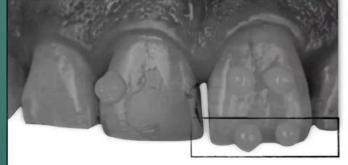
#### bubbles



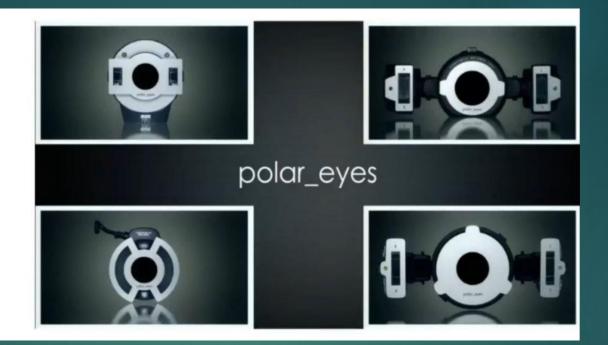
- -Polymerization
- photo



\_High contrast \_Dentine shade



Black & white\_ Enamel shade\_



\_Polar eyes



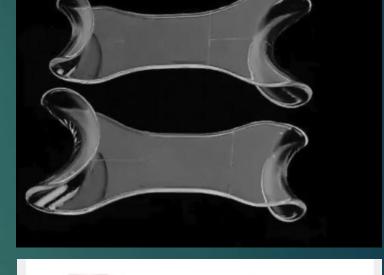


















**Polar eyes** is a cross-polarization filter that makes it easy to eliminate unwanted reflections on the teeth that are caused by the flash.



## Dental loups with light





# Composite instruments





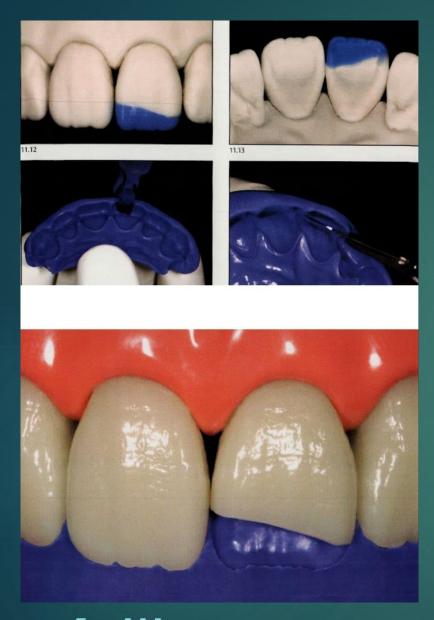


#### Silicon index

color harmony and contour of the restoration as close to nature by using the incremental method through the special matrix impression obtained from silicon

- Correct occlusion
- Correct Incisal contour





1- Wax -up



2- direct mock -up

No prep No etching No adhesive



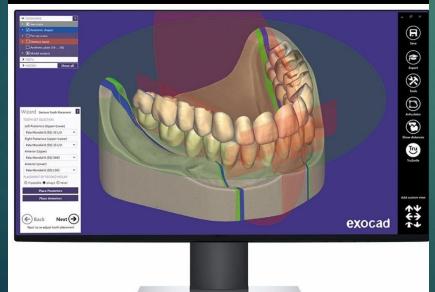
Old restoration

Addition silicon (silicon A) better than condensation silicon (silicon C)

# Digital scanner

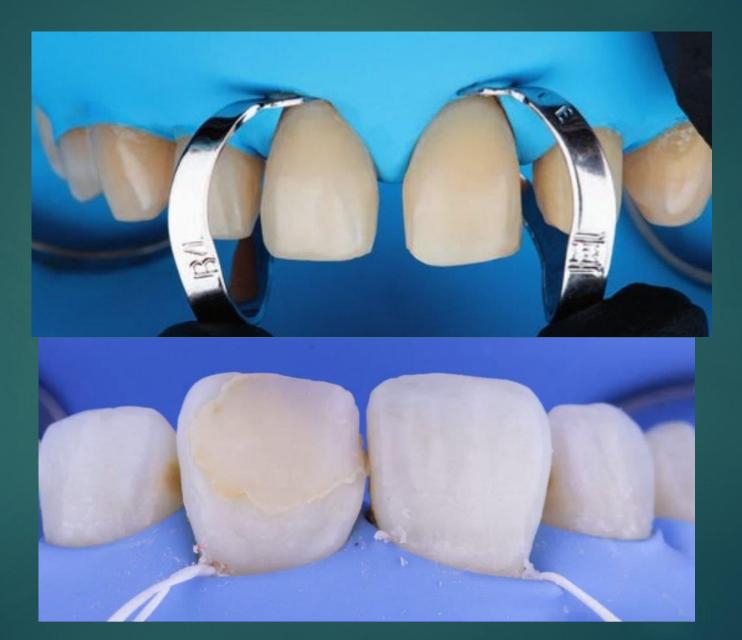








#### Isolation







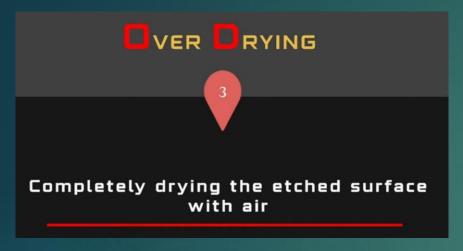


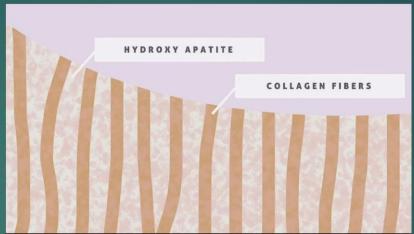
## Dry without drying





## Post operative sensitivity











#### **Universal** bond

Selective enamel etching 15 sec.
Don't etch the dentin
Rub the adhesive for 10 seconds
Apply 2 coats of adhesive
Blow air for 10 seconds

Solvent = water + alcohol







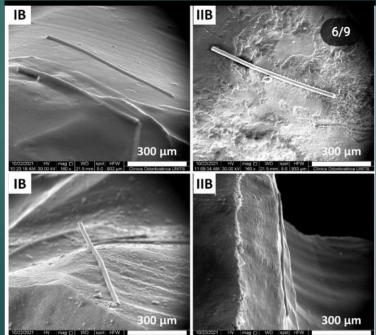


#### **Adhesive**

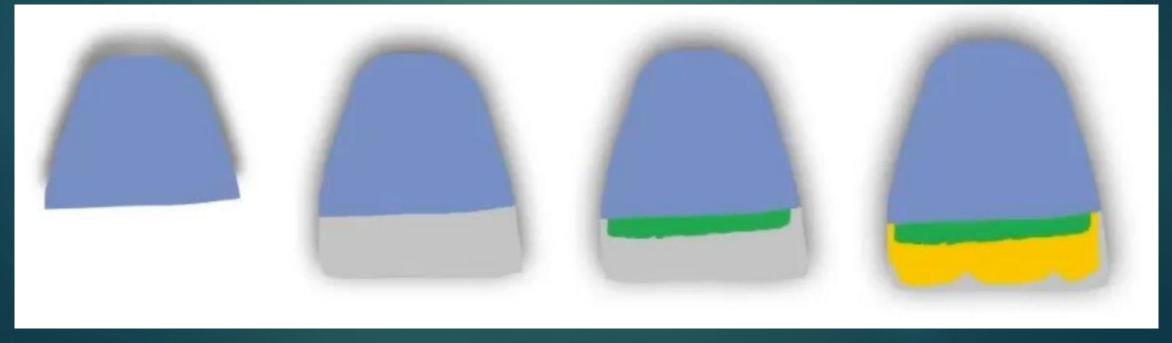


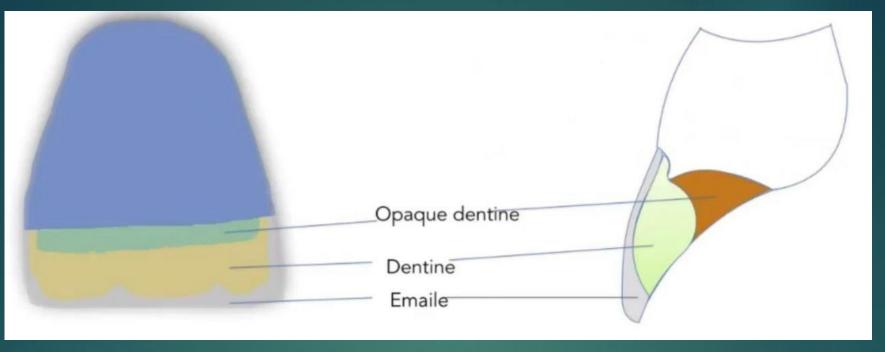


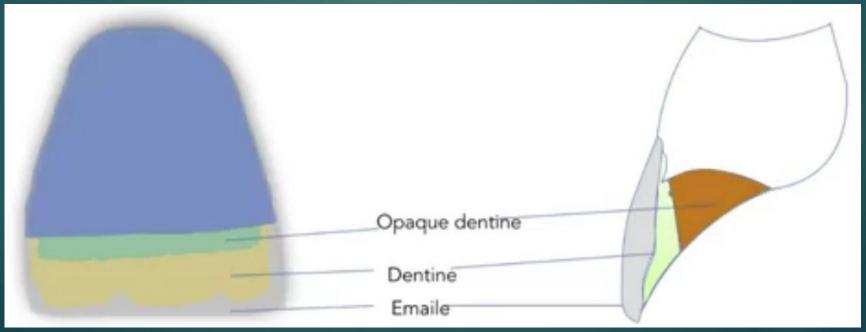


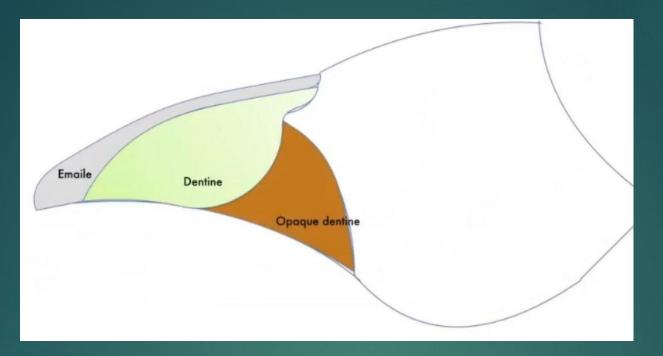


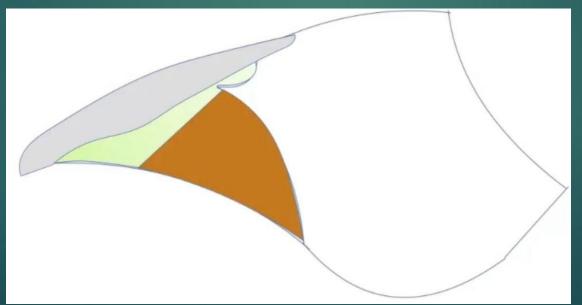






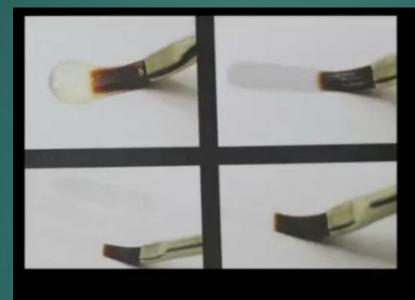






Enamel thickness (0.8-0.9)mm





Brush humidification



### Opalescent type I

Consisting of three mamelons

Mesial, central and distal mamelon



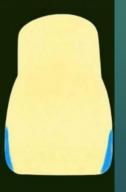
### Opalescent type III

Consisting of multiple mamelons effect



### Opalescent type V

Proximal mamelons
Seen at the mesial and distal incisal angle



### Opalescent type II

Consisting of four mamelons

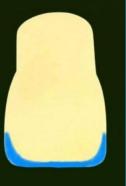
Mesial , central (separated ) and distal mamelon



### Opalescent type IV

Absent mamelons

It's seen as a straight line in the incisal edge

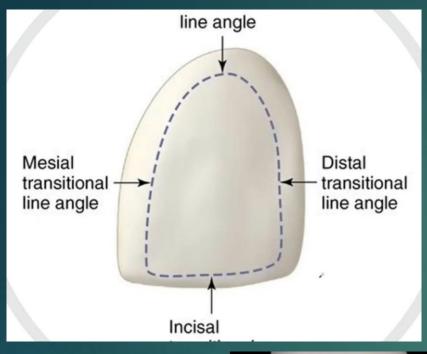




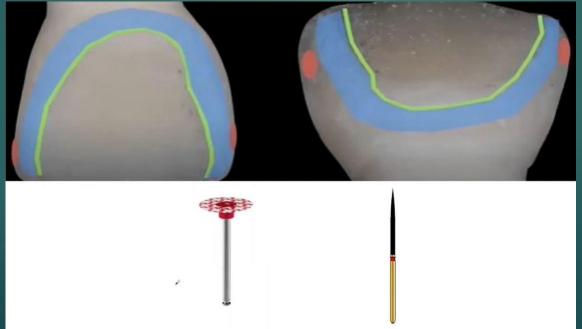
## Finishing & polishing

- \* Macrosurface texture
- \* Microsurface texture
- \* High lustering shining surface

# MACROSTRUCTURE Distal transitional transitional buccal contour

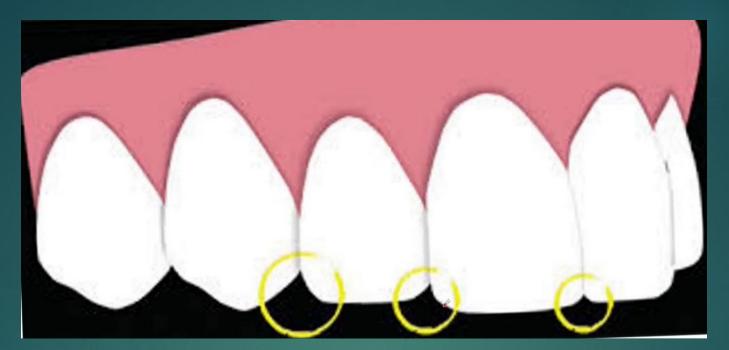




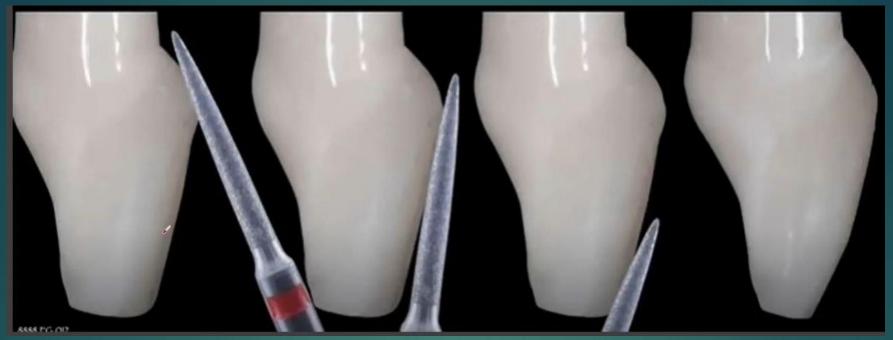


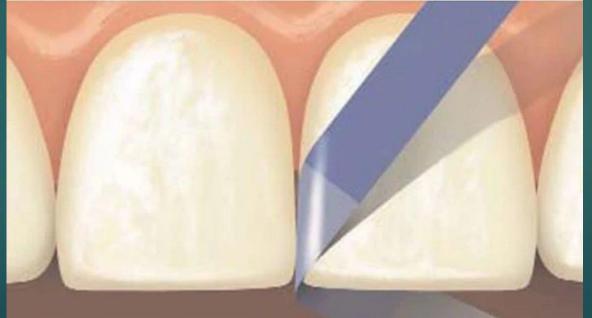












## VERTICAL MACROTEXTURE





## VERTICAL MACROTEXTURE



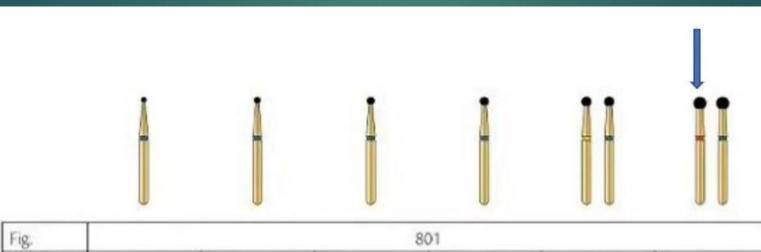


## HORIZONTAL MACROTEXTURE



ISO





### **Polishing burs**







## Halo technique











































