

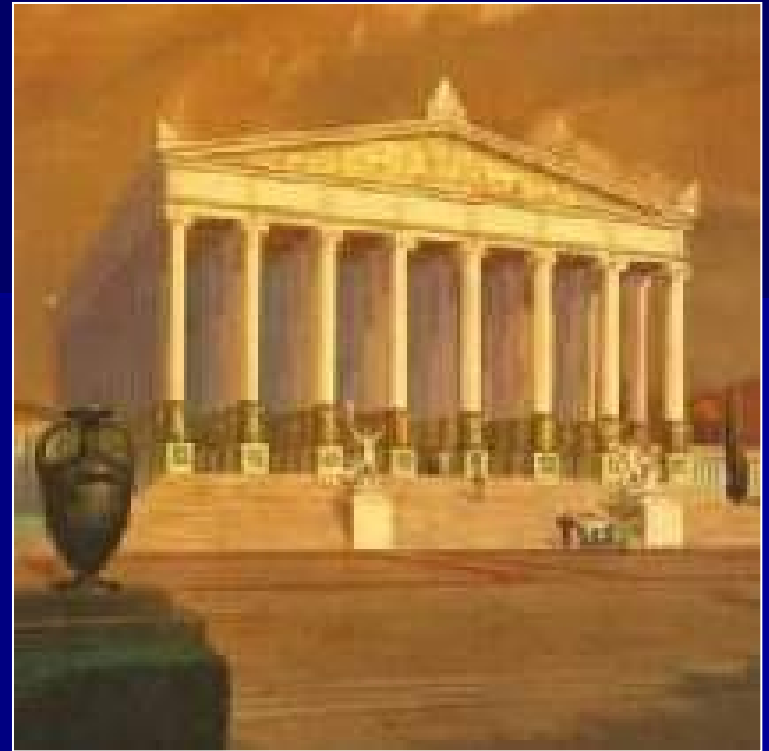
Aesthetics is a science about beauty.  
It is connected with sensual perception.  
Rules are changing during the time and there  
are differences in various regions. .



???

???







„Penta en arithmo“

(Pythagoras)

$$1/1,618 = 0,618$$

Golden cut

# Perception of the object

- Composition
- Single items
- Harmony
- Symetry
- Dominanca
- Lines



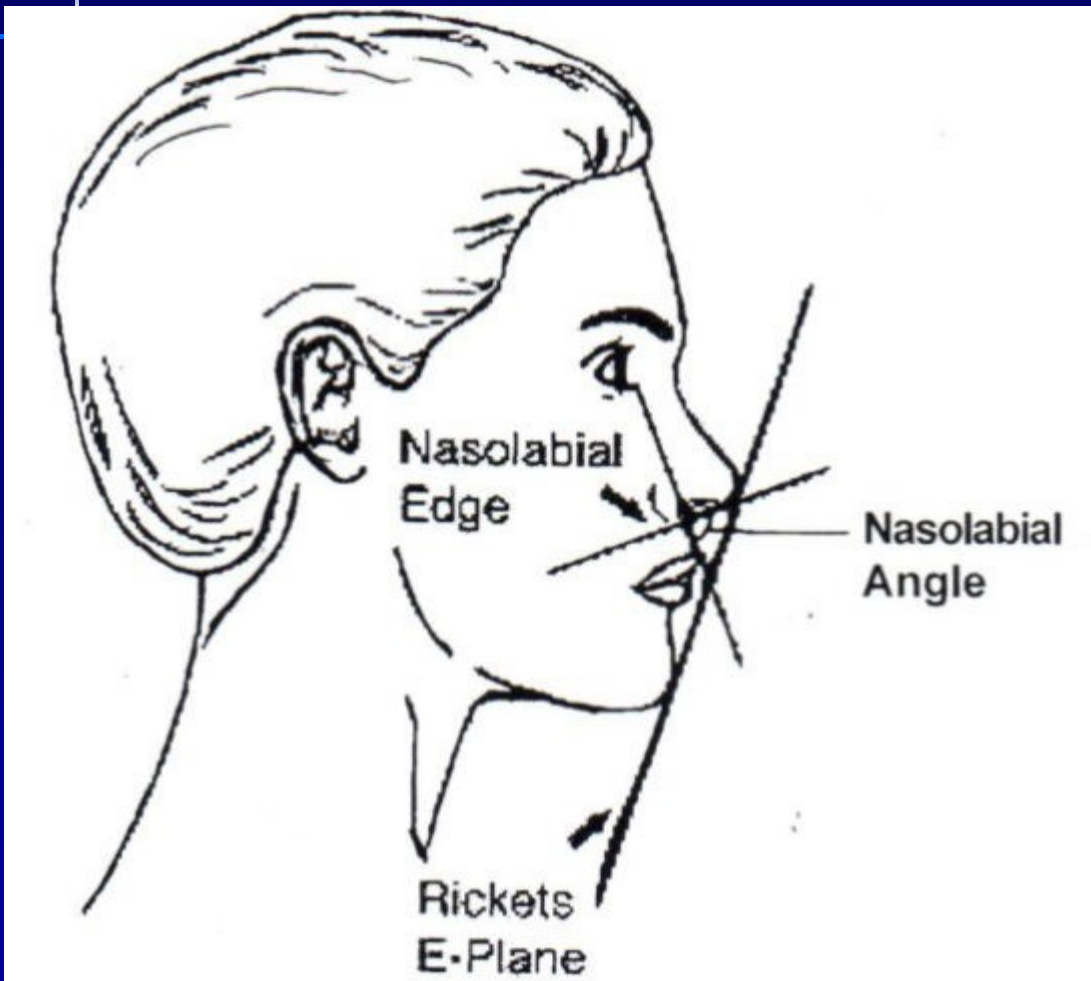
# Dentofacial harmony

- Imaginary lines – structures must have harmonious relation to them
- Teeth are in harmony with the face, they can attract our attention and distract it from other structures

Horizontal  
a vertical lines  
axis



# Profile:



Balance of lip, nose and chin.

Nasolabial angle:  
90 – 95 men  
100 - 106 women

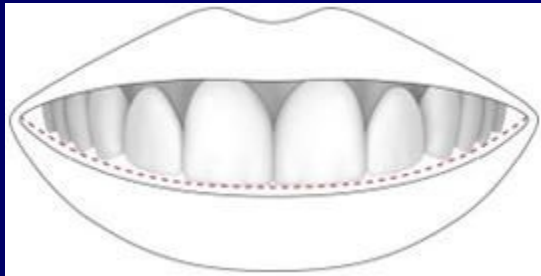
Rickets line:  
4 mm before upper  
2 mm before lower lip



# Line of smile

- Connects incisal edges of upper frontal teeth and touches cusos of upper molars. Lower border is lower lip. Line of lower lip is parallel to line of smile.
- Upper central incisors should be in touch with wett part of upper lip.

# Line of smile



Bilateral negative space



Normal



Enlarged





# Dentál harmony

Inclination of long axis

Slight mesial inclination of long axis

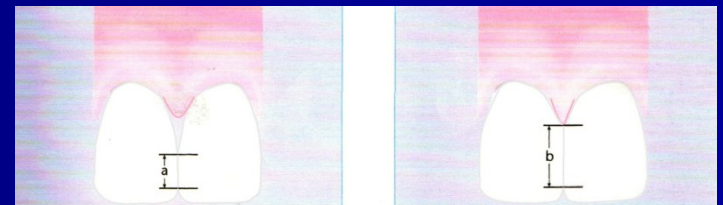
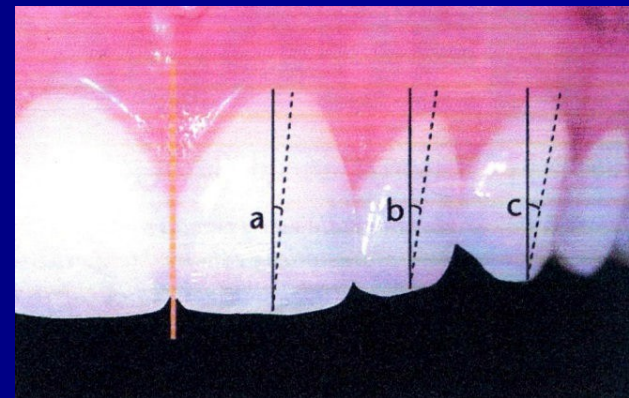
Slight inclination vestibulary

Position of contact points:

They become smaller and move apically

(50:40:30)

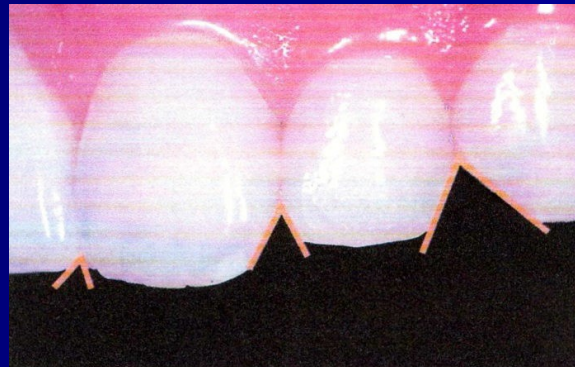
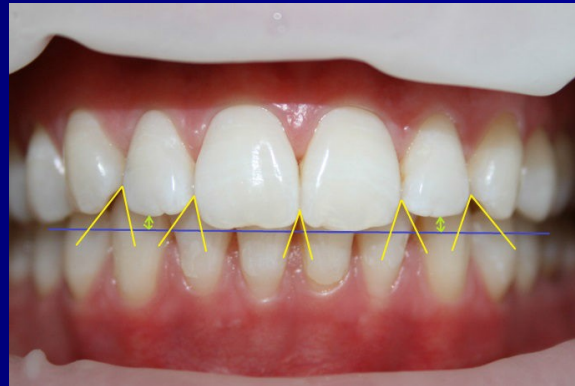
Their elongation can optically widen teeth



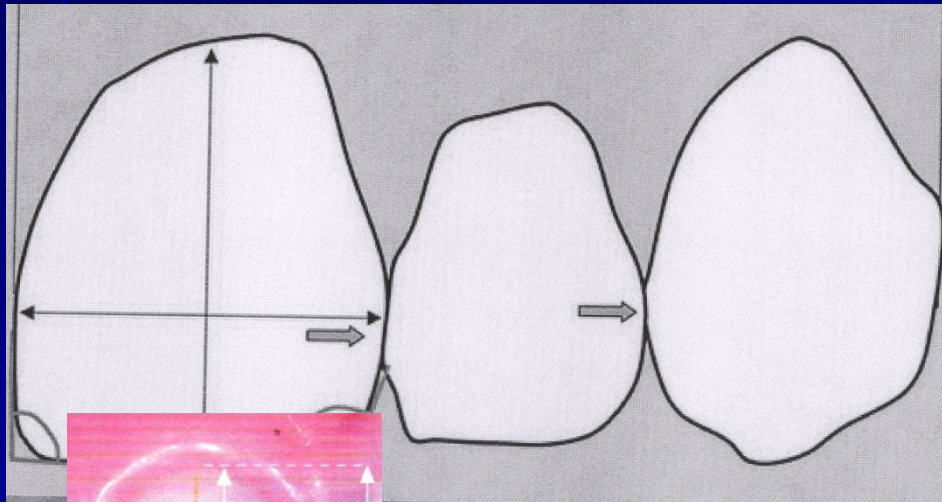
# Dental harmony

Interincisal spaces become smaller in distal direction

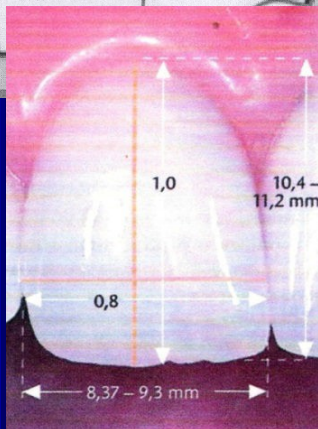
They become smaller in younger individuals



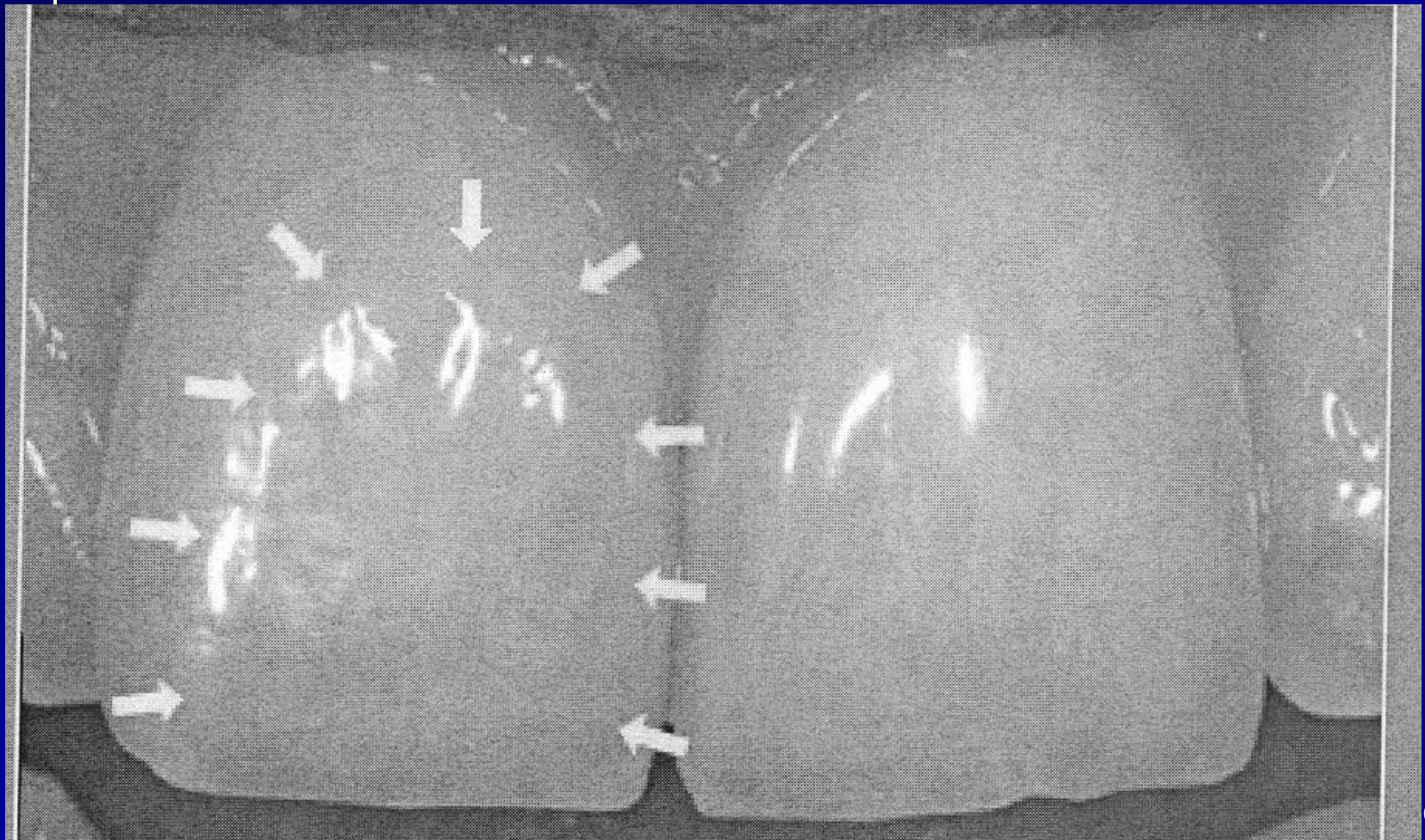
# Relation between width and height



Width of upper central incisor is 70 – 80% its height



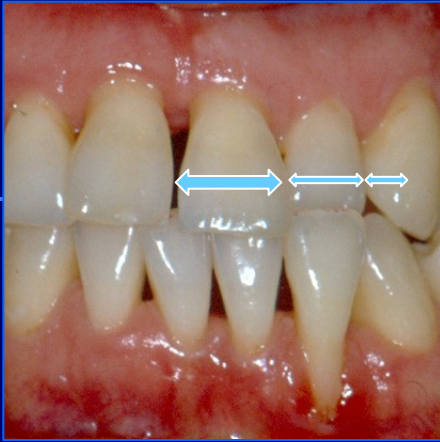
# Optical width





# Golden cut

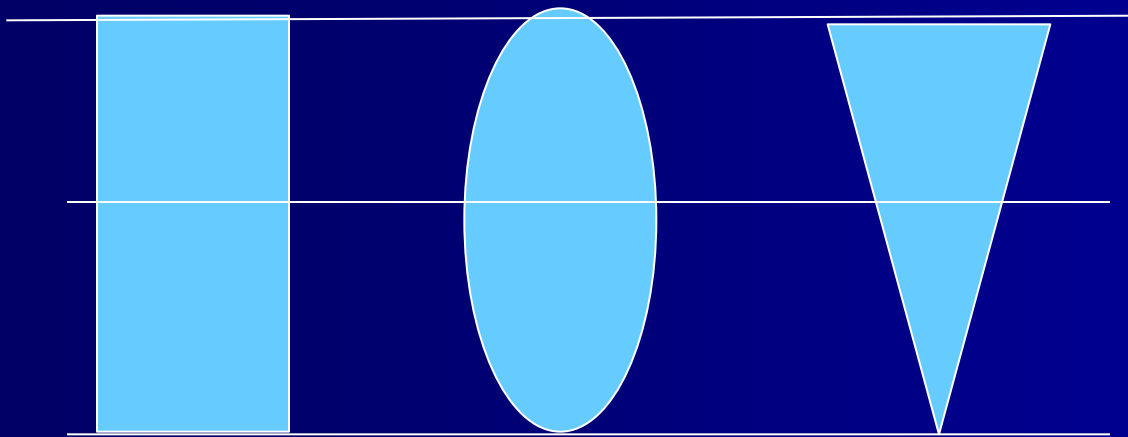
$$\frac{\text{width}}{\text{length}} = \frac{\text{length}}{\text{width} + \text{length}} = 0,618$$



*Roubalíková L. Méně obvyklý případ řešení obráceného skusu.  
Prakt zub Lék;48: 117-120.*

# Shape of crown principally corresponds to shape of the face

- Shape of the face:  
angular, oval a triangular
- Corresponding shapes of teeth



Front

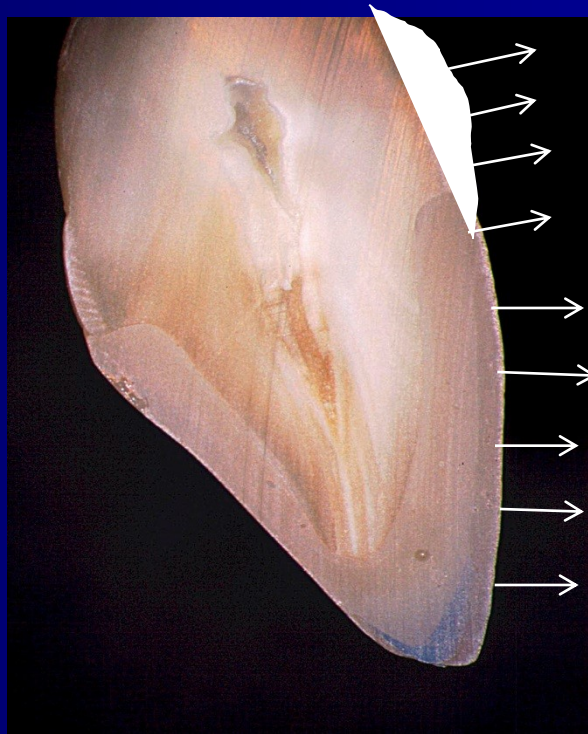
Zygomatic line

Mandibular line

# Harmony



# Curvature of the labial surface – for reflection of the light



Reflexe světla

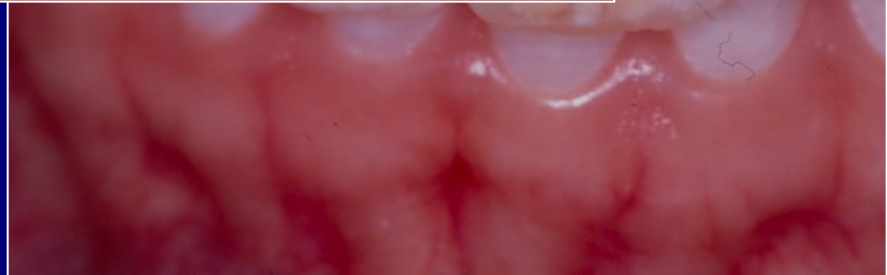
# Surface texture



# Harmony







# Basic terms -optic

We can recognise depth of the colour because of dispersion of light inside the air and water





# Světlo

## ■ Elektromagnetic undulation

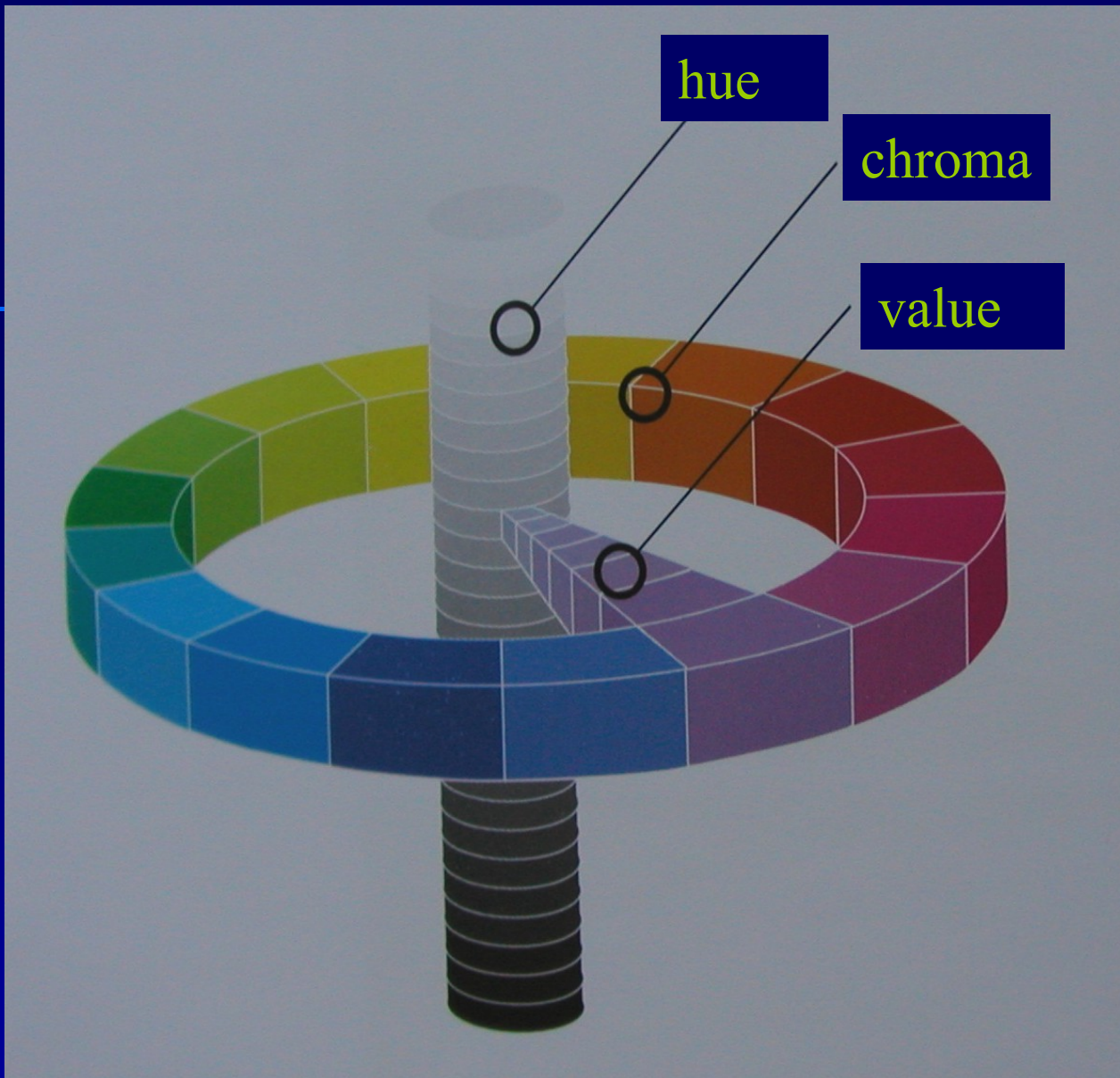
- Wave length
- Amplitude
- Quantum



### Ray

- reflection
- deflection

**Various velocity of the light in various environment  
Relation of these velocities in twpo various environments  
is index of refraction**



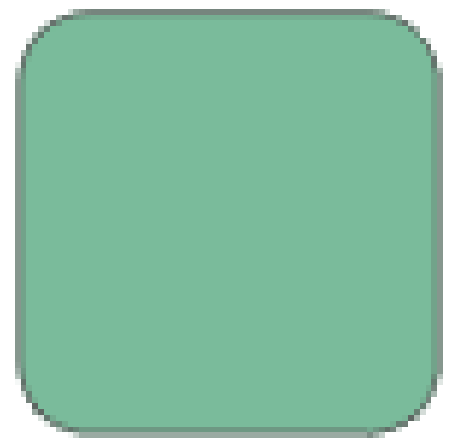
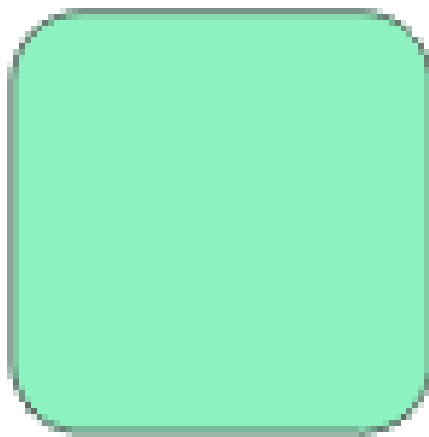
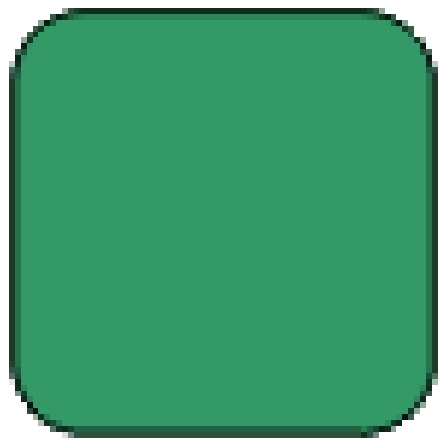
### 3 Variables of colour

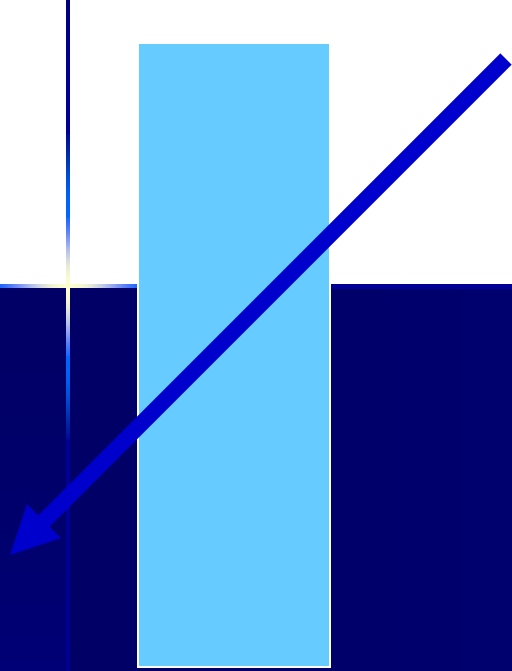
Chroma – colour.

Result of wavelength

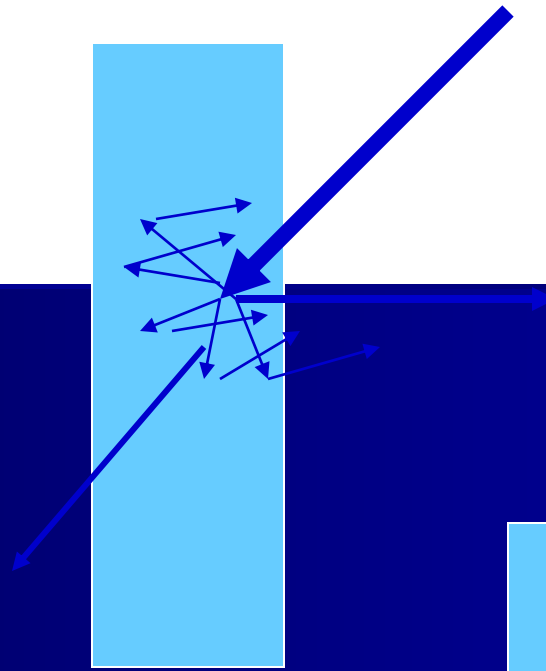
Hue – result of amplitude

Value - cleanliness

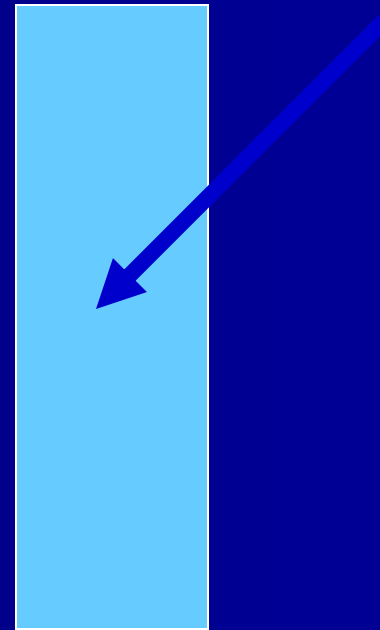




**Transparency**



**Translucency**



**Opacity**





**1**

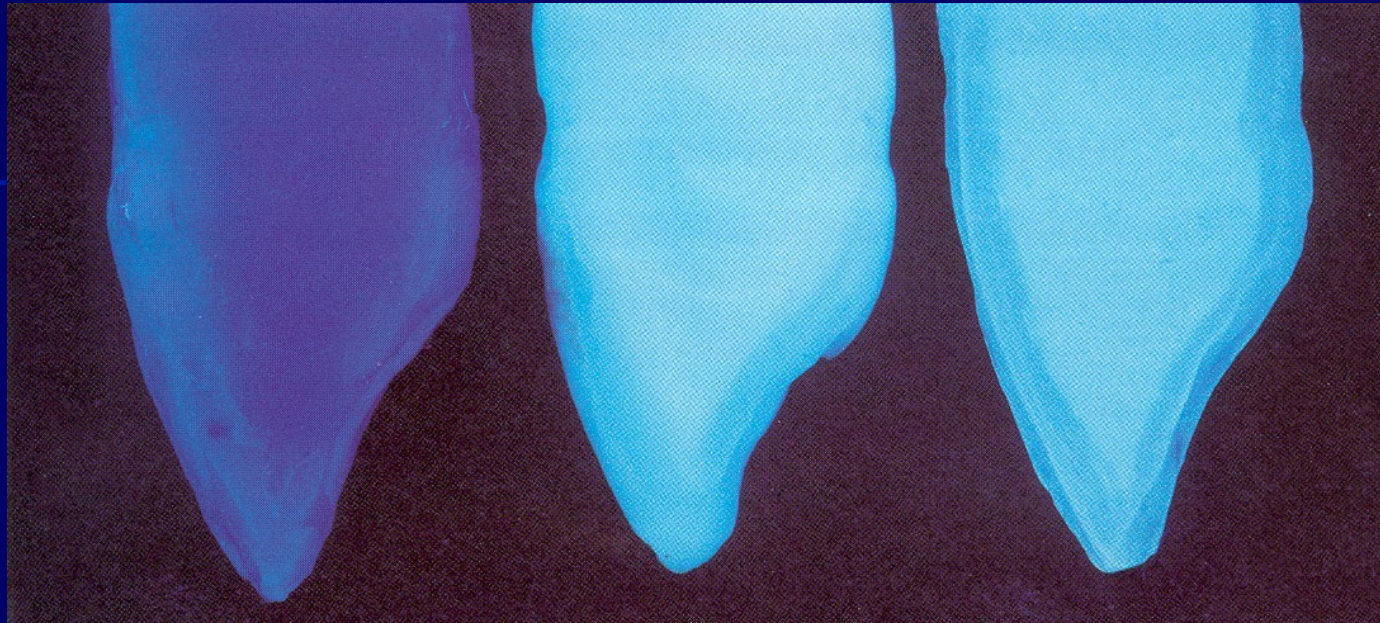


**2**



**3**

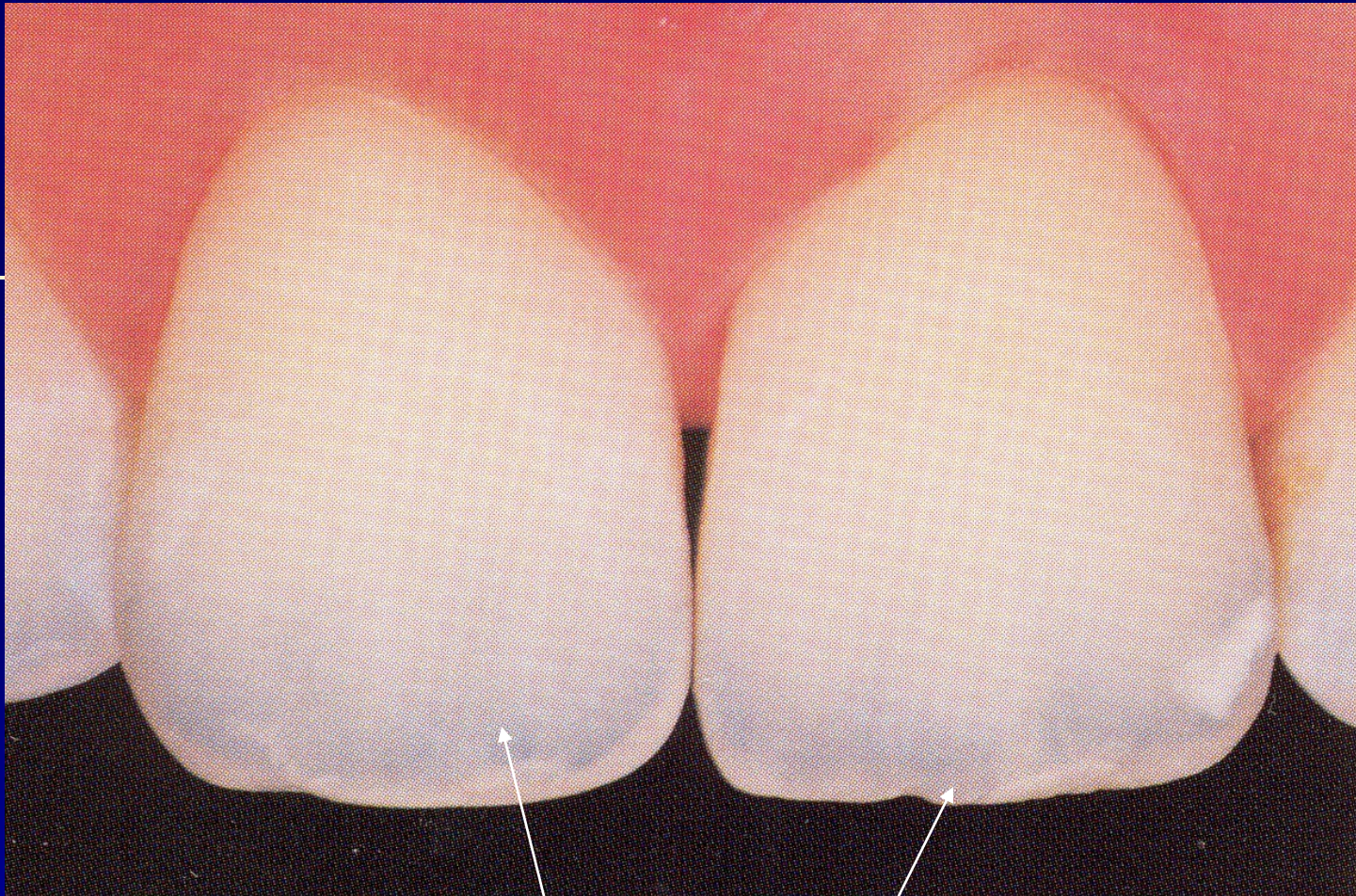
**Enamel is translucent**



# Fluorescence

The light is absorbed and irradiated back in very short time  
 $10^{-12}$  s.

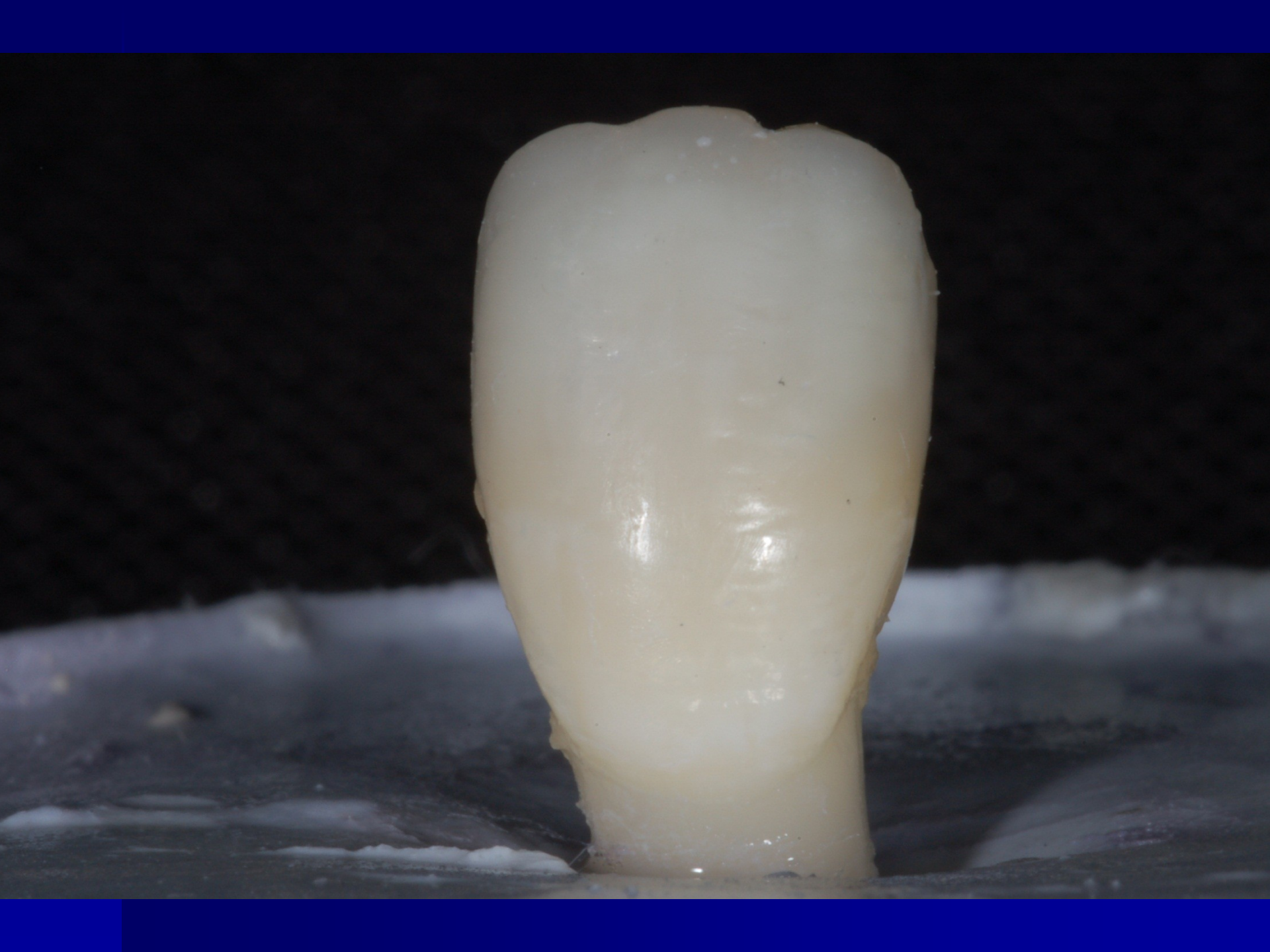
Special, „live“ appearance of dentin

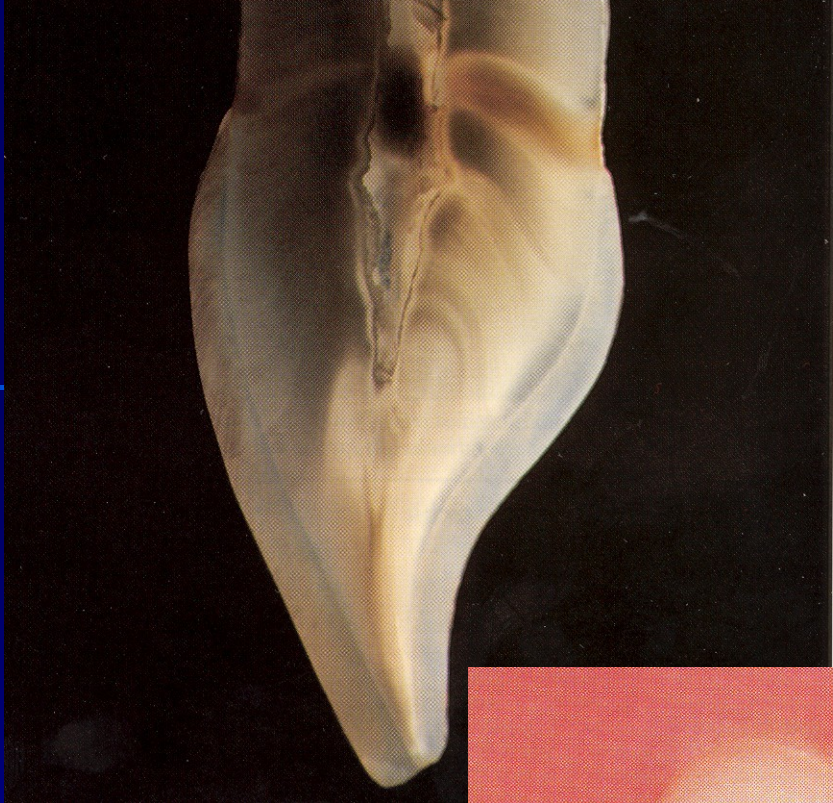


**Opalescence**  
**Special effect on incisal edge**  
**Result of translucency of enamel**

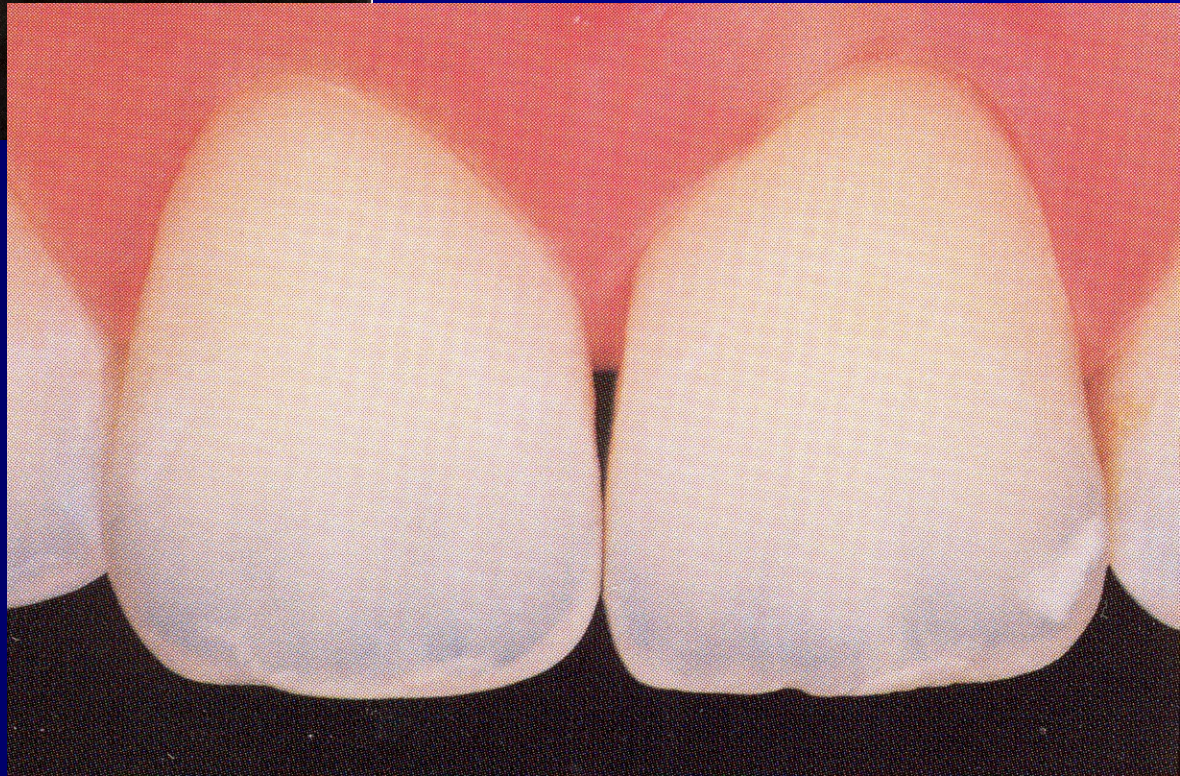


Mamelony  
Opalescence  
Halo efekt

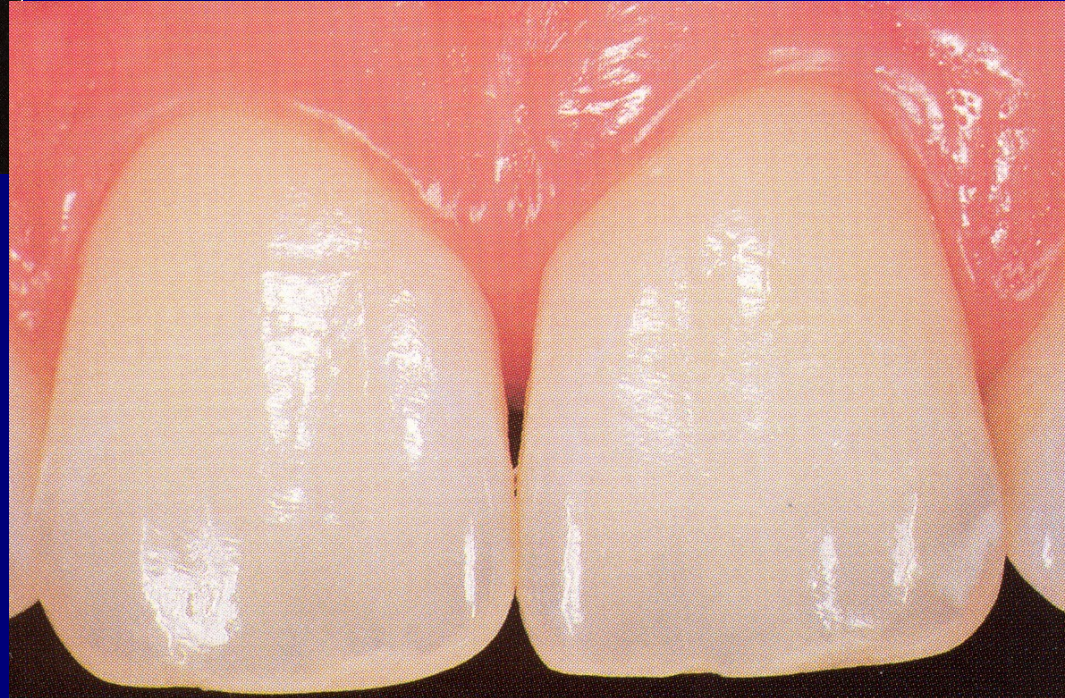


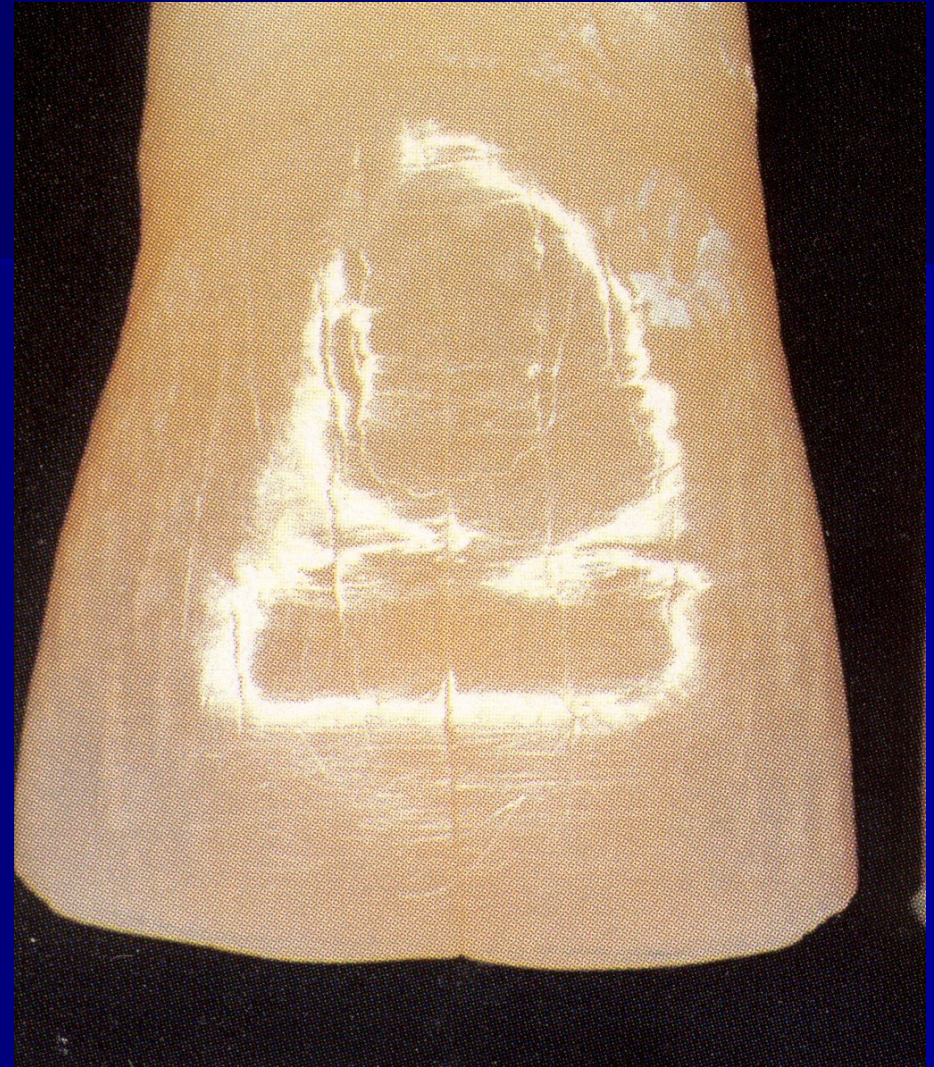


**young**



**Middle age**

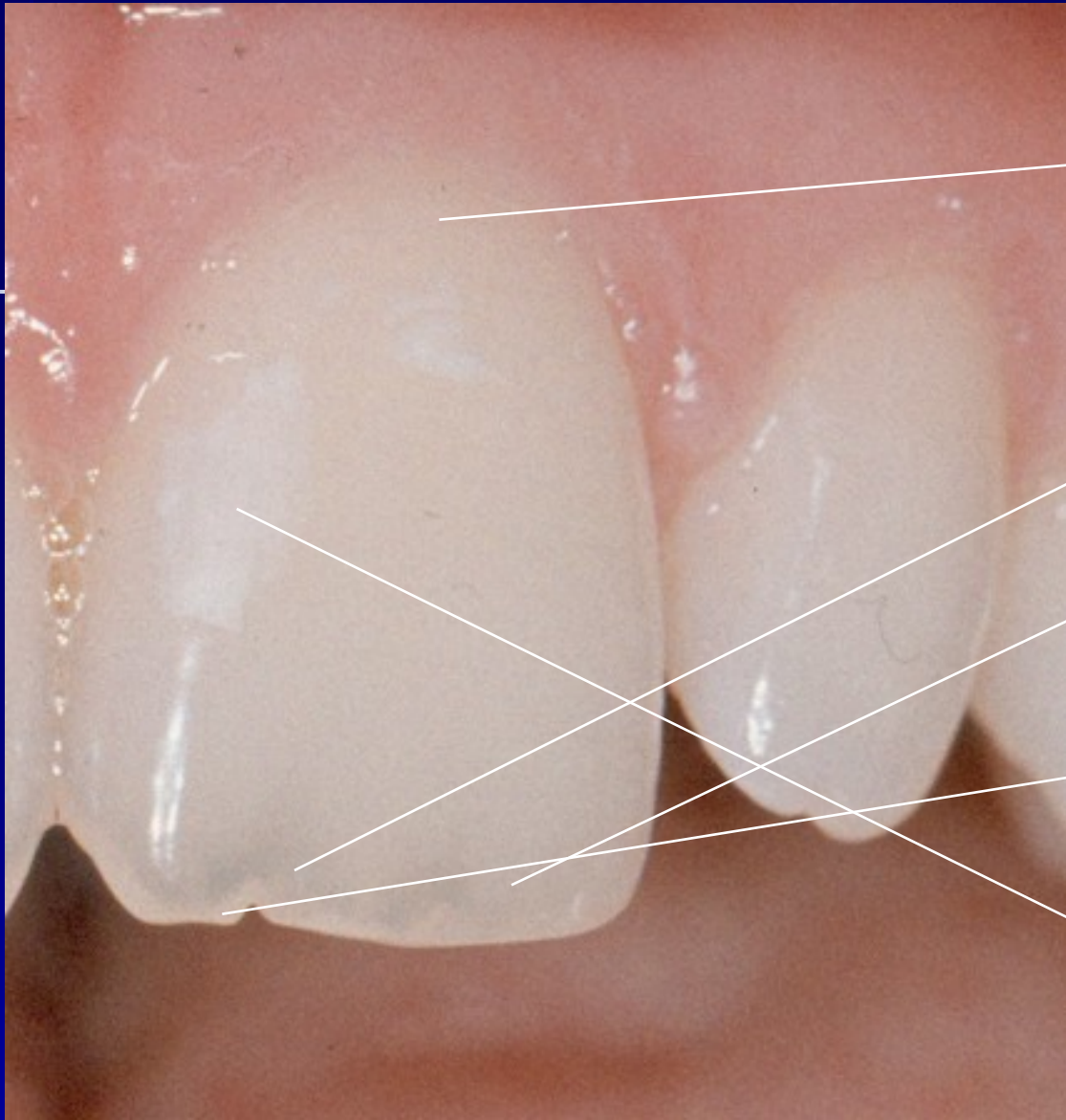




**Old age**



# **Optical reading of the crown**



colour

Desaturation

Opalescence

Tvar mamelons

Halo efekt

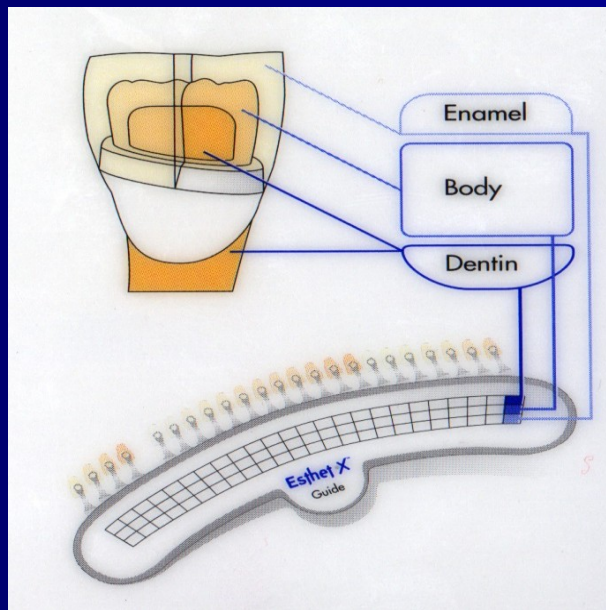
Spots, special  
chracterizations

# **Chromatic scala of composite materials**

**Dentin shades**

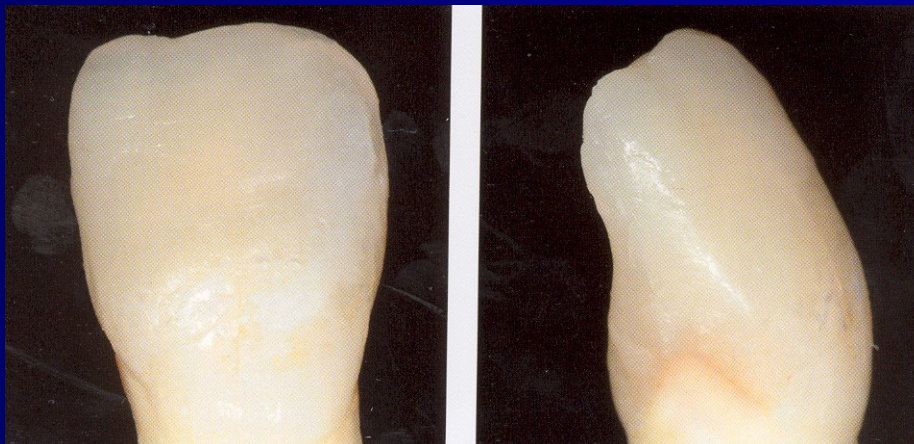
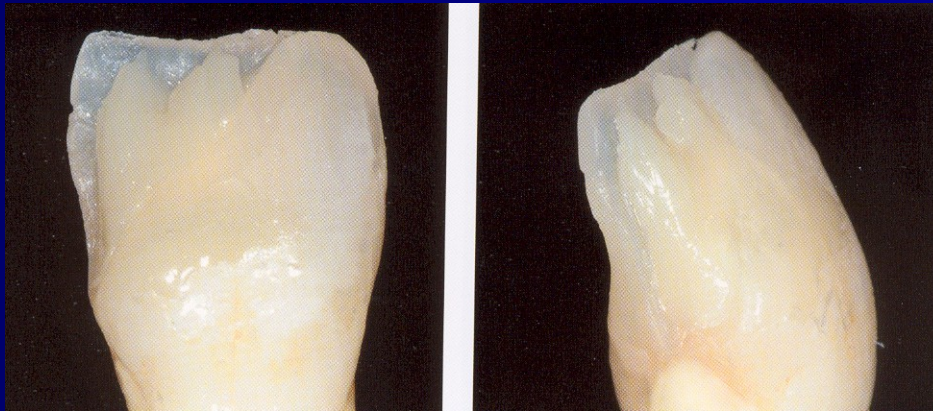
**Enamel shades**

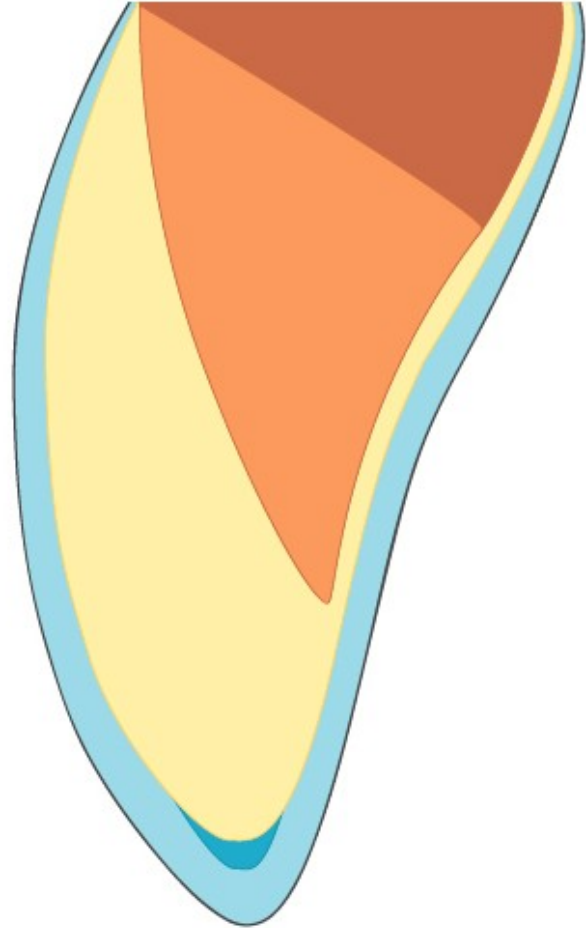
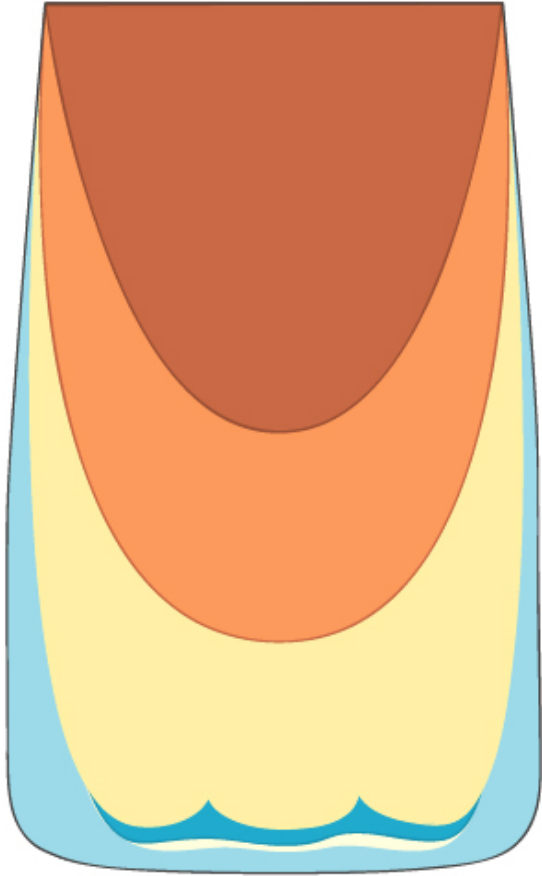
**Special effects**



**E  
N  
A  
M  
E  
L  
  
D  
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T  
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N**













- Shape
- Stratification
- Surface texture
- Polishing