

#### **Ceramics**

The ceramic term is derived from the Greek "keramon", who means ceramic.

It was used for the shaping of clays. Currently this term is more widespread and gathers many materials.

It can thus apply to the shaping of a mineral matter mass generally plastic and made up.

Fire is the common element which gives the final properties to the ceramic products.

Ceramics with porous paste is the bricks, the terra cotta and earthenware.

According to the degrees of vitrification of the semipermeable or impermeable pastes, one obtains sandstones or porcelains.

The porcelains are impermeable ceramic products whose texture, strongly vitrified, generally white, is translucent under low thickness. The dental porcelains are used for the clothes industry of C.C.M, C.I.V as well as Inlay.

For the amateurs of chemistry here principal chemical components of a ceramics.

Silica	Alumina	Carbonate	Potassium	Sodium	Others
62,2%	13,40%	0,98%	11,30%	5,35%	6,77%

#### Resins

They are synthetic plastics. It will be said that a body is plastic when it is deformed by a force and that it preserves its deformation when this force disappears.

This change in form can come from a force accompanied by a rise in temperature. The matter will be known as thermoplastic if, for each new thermal rise, a force applied suffices to change the form it

If, as of the first change in form, the result is irreversible, the matter will be known as thermohardening (if the result is obtained by heat) or autodurcissable (if this chemical reaction makes it possible to obtain this result).

## **Alloys**

One generally defines an alloy as being a combination of two or several metals, obtained in a solid state.

Noble metals and semi invaluable

They during very a long time were used in dentistry, they are composed, inter alia, of:

- however, money and copper to obtain a yellow alloy.
- money, copper, palladium to obtain a white alloy.
- of money, palladium and platinum to obtain a white alloy.
- "The white gold ", or rather money, is obtained by addition of platinum, palladium or money in general.

## Noninvaluable metals

They are alloys containing iron (30 to 50 %), of nickel and chromium, in variable proportions.

They are used to replace gold for economic reasons.

Chromium - cobalt is very employed out of assistant prosthesis (mobile) for the realization of metal plates.

But their very significant hardness often does not allow their use out of joint prosthesis (fixed).

Nickel chromium as for him, is primarily used for the joint prosthesis (fixed).

# The composite

It is a charged resin, it is has to say that it there A 22 % of resin, 53 % of inorganic elements (ceramic), 25 % of organic elements, plus a tiny quantity of photo-initiator (hardener).

The composites can be used in several cases:

Inlays, Onlays. Crown In Vestibular Incrustation (C.I.V). Jackets. Work on implants



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