

# BIOCOMPATIBILITY OF IMPLANTS TITAN-HIDROXYAPATHITE

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**Abstract:** Using the Rapid Prototyping technics and the tomographe images, on obtain the 3D virtual models and by sinterisation on produces the real models.

For an implants it's important that only the parts who is în contact with the bone must have hidroxyapatite, like bioactive phase with osteoconductive importance.

The presence of bioactive phase permets realizations of new calcium phosphates. The surface analysis present the calcium phosphates growth, if the implants stay în SBF. The implants of Ti-HA have a better biocompatibility that anothers metallic implants.

## 1. Caracterisation of Ti-HA implants

The powders Ti-HA are used in implantology, for fingers and for mandibular implants. (fig.1,2)

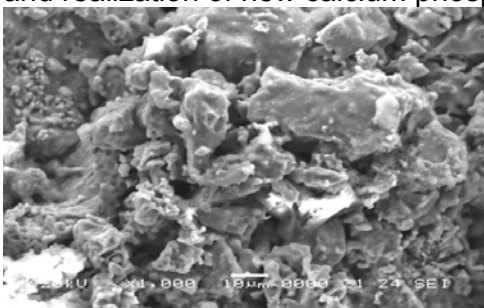


*Fig.1. Model 3D mandibular prothesis*

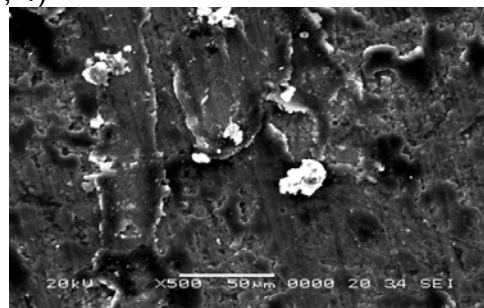


*Fig.2. Models 3D phalangeal prothesis*

On makes probes with constant concentration (5, 10, 15, 20% HA) to study the bioactivity în simulated organic fluid (SBF). On remark the presence of bioactive phase and realization of new calcium phosphates. (fig.3, 4)



*Fig.3. Probe with 5%HA after 7 days in SBF*



*Fig.4. Probe with 10%HA after 7 days in SBF*

The rapport Ca/P is greater for the probes with 10%HA that for the probes with 5%HA.

## Bibliography

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