

CHAPTER V

CONCLUSSIONS AND SUGGESTIONS

5.1 Conclussions

1. The surface of the Hap coating on titanium implants using sol gel has a finer structure than using suspension because the sol gel has nano particle size while the suspension is still micro.
2. The thickness of the coating layer on the metal surface is 60 μm to 80 μm thicker than the reference due to the use of sol gel which has a denser viscosity than suspension.
3. The surface roughness obtained is according to the reference for increasing osseointegration in the bone, namely grade number 47 to N9.
4. The adhesive bonding of the Hap synthesis which is coated onto the surfaces of both Ti6Al4V ELI and TNTZ metals is not good because the 90% TCP content reduces the adhesive bonding.

5.2 Suggestions

1. More precise stoichiometry control is needed to prevent TCP structures from forming during Hap synthesis.
2. Special treatment is required for the synthesized Hap ceramics during the drying process.
3. It is necessary to control the thickness of the coating layer in order to produce the appropriate osseointegration.

