CHAPTER 1

INTRODUCTION

Hydroxyapatite (HAp) has attracted much attention as a substitute material for damage teeth or bone over the past several decades because of the crystallographical similarity to various calcified tissue of vetebrates and it compatibility with surrounding tissue which has been experimentally proven to be superior to other materials

The fabrication process of HAp has also developed with the growing importance of the biological application of HAp as bone and teeth substitute. Various techniques producing dense or porous HAp has been established. Sintered porous HAp has a good aspect due to its excellent osteoconductive ability through the appropriate pore size, direct contact with bone tissue without any intervening connective tissue and nontoxic. (Ito and Ooi, 1990) When pore size of porous HAp exceeds 100 μm. (Klawritter, 1970 and Hulbert et al., 1978) bone will grow within the interconnecting pore channels near the surface and maintain its vascularity and long-term viability. In this manner, the implant serves as a structural bridge and model for bone formation (Hench, 1991)

Owing to good characteristic of porous HAp. In this research, fabrication of porous HAp was my interest.