

## Chapter 5

### Conclusions

- (1) DCPD was prepared from cattle bone by cleaning, calcining at 700°C; 3 hours, milling, dissolving in acid, precipitating at room temperature, and drying it at room temperature. DCPD was precipitated from bone ash solution the pH of which in the range of 3.5 to 6.0. An accurate adjustment of the Ca/P mole ratio to 1:1 had no positive effect on the product; the maximum amount of DCPD was obtained at pH 4.5.
- (2) TCP was prepared from the synthesized DCPD stoichiometrically mixed with calcium carbonate by solid state reaction. When heated at 1100°C for 3 hours,  $\beta$ -TCP was the only product. Treatment at 1200-1300°C for 3 hours, yielded  $\alpha$ -TCP. There was no difference between a slowly cooled and air quenched products.