

Chapter 4

Conclusions

1. *P. macracanthus* generally contained a higher proteolytic activity of sarcoplasmic and myofibril-associated proteinase, compared to *P. tayenus*.
2. Major alkaline heat-activated sarcoplasmic proteinase in *P. macracanthus* was serine proteinase, while *P. tayenus* contained different types of proteinases.
3. Major myofibril-associated proteinase in both species was classified as a serine proteinase.
4. Sarcoplasmic proteinase from *P. macracanthus* muscle was purified to 5,180 fold with a yield of 0.8%.
5. The molecular weight of purified proteinase was 72 kDa by Superose 12 HR gel filtration. According to SDS-substrate gel, purified proteinase was heterodimer with the molecular weights of 66 and 13.7 kDa.
6. Optimal pH and temperature of purified proteinase for the hydrolysis of casein were 8.0-8.5 and 60°C, respectively.
7. The purified proteinase could hydrolyze Boc-Phe-Ser-Arg-MCA, but hydrolyzed Z-Phe-Arg-MCA and Z-Arg-Arg-MCA to small extent.
8. The activity of purified proteinase was strongly inhibited by soybean trypsin inhibitor and partially inhibited by EDTA.
9. The purified enzyme mainly hydrolyzed myosin heavy chain, but could not hydrolyze actin.