

## CHAPTER 4

### CONCLUSION

1. Mungoong was the excellent source of protein and essential amino acids. It also contained a high content of polyunsaturated fatty acid as well as minerals.
2. Water extract of Mungoong exhibited antioxidative activity with radical scavenging activity as well as reducing power. Antioxidative activity might be associated partially with Maillard reaction products formed during processing.
3. Antioxidants of water extract from Mungoong showed high stability over the wide pH ranges (2-11) and temperature up to 100°C. Antioxidative activity of Mungoong was quite stable during storage at room temperature (28-30°C) and 4°C for 8 weeks.
4. Water extract from Mungoong showed the antioxidative activity in  $\beta$ -carotene-linoleic acid, lecithin liposome and comminute fish model system in a concentration dependent manner.
5. The use of Flavourzyme could increase both yield and antioxidative activity of resulting Mungoong. The state of the substrate before hydrolysis using Flavourzyme affected the composition and properties of resulting Mungoong. Use of 0.15% (w/w) Flavourzyme to hydrolyze raw cephalothorax in combination with typical process could increase the yield and rendered the product with increased antioxidative activity.

### Future works

1. The purification and characterization should be performed of antioxidative peptide from water soluble fraction of Mungoong should be performed.
2. Mungoong produced from different shrimps should be thoroughly studied in terms of composition, nutritive value and antioxidative activity.
3. Neutraceutical property such as Angiotensin converting enzyme inhibitory activity of Mungoong should be further investigated.