

## Chapter 4

### Conclusion

1. Washing bigeye snapper, threadfin bream and starry triggerfish mince with NaOCl solution at a concentration of 20 ppm for 5 min could increase breaking force and deformation of resulting surimi effectively.
2. Oxidizing agent in washing medium caused the physicochemical changes in muscle protein.  $Mg^{2+}$ -EGTA-ATPase activities of mince washed with 20 ppm NaOCl produced from bigeye snapper and threadfin bream increased, whereas no marked changes in  $Ca^{2+}$ -ATPase,  $Mg^{2+}$ -ATPase and  $Mg^{2+}$ - $Ca^{2+}$ -ATPase activity were observed with all washing processes used. Disulfide bond content increased with the concomitant decreased sulfhydryl groups for bigeye snapper, and surface hydrophobicity increased both three fish species, when washed with 20 ppm NaOCl.
3. Addition of MTGase, *L*-ascorbic acid or  $CaCl_2$  in combination with 20 ppm NaOCl washing showed the gel strengthening effect on surimi prepared from three fish species stored in ice for 14 days differently. Surimi gel produced from bigeye snapper had the increase in breaking force and deformation as 0.2 % MTGase or 50 mmole  $CaCl_2$ /kg or 0.1 % *L*-ascorbic acid were added. For the surimi from threadfin bream and starry triggerfish, addition of MTGase at levels of 0.3 and 0.2 % resulted in the increased breaking force and deformation. Surimi gel from NaOCl washing process had more fibrillar structure than surimi with water washing.
4. Washing mince with oxidizing agent generally had no negative influence on setting phenomenon of bigeye snapper and starry triggerfish surimi but not for surimi produced from threadfin bream.