

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

The study could be sum up as follows:

1. The chemical compositions of ostrich-meat trimmings for moisture, fat, ash and protein were analoged to those of red ostrich meat with no avian influenza detected. DSC thermogram showed two discernible peaks of myosin and actin at 62.34 °C and 78.75 °C, respectively, which are transition temperatures of protein denaturation.
2. The viscoelastic characterisation indicated greater cross-link formation in ostrich-meat yors treated at 600 MPa (50 °C, 60 min) than those treated at 200 MPa (40 °C, 40 min). This is probably due to the combination effect of high pressure and temperature causing myofibrillar proteins unfold and form three-dimensional network.
3. The addition of hydrocolloids influenced the viscoelastic and textural properties of pressurised samples which moderately correlated with sensory attributes, water holding capacity and of cross-sectioned area size of fat droplets. The highest score of acceptability was sample with 1% locust bean gum added which also supported by strongest gel strength and elasticity, and highest water holding capacity although the sample had large of cross-sectioned area size of fat droplets.
4. The hydrocolloid addition probably did not contribute to network formation in the pressure treated samples, however they seemed to function as surfactants involved in the distribution of fat during the mixing process which improved the yor quality to some extent.

5. The main microorganisms presented in raw ostrich-meat yors were *Escherichia coli* and total bacteria. When raw meat batter undergone pressure treatment 600 MPa at 50 °C for 40 min, a significant inactivation of those microflora were obtained with a satisfactory level conformed to Thai Industrial Standards for mu yor sausage.

## 5.2 Recommendation for further investigation

1. Other animal meat proteins and hydrocolloids may be used to replace ostrich meat using the same pressurised condition as those used in this investigation.
2. Further investigation on the inactivation of bacterial spores and other pathogenic microorganisms such as *Bacillus* spp., *Clostridium perfringens* etc. under the same condition (600 MPa, 50°C, 40 min) should be conducted.
3. Some further investigation of the interactions between ostrich meat protein and other meat proteins with hydrocolloids should give useful results.