

CHAPTER VI

CONCLUSION AND RECOMMENDATIONS

6.1 CONCLUSION

The present study focused on the effect of methods of slaughter on meat quality of broiler chicken from the slaughtering process to storage at 4°C. All the meat quality indicators evaluated (pH, colour, shear force and drip loss) showed that method of slaughter affected the quality of the meat. Chemical changes in meat during storage were also observed to be affected by slaughter method. A relationship was observed between the haem iron content, iron content and the residual blood in the meat samples. Higher haem iron content values recorded for NHM meat samples during refrigerated storage showed the presence of residual blood in the meat. In addition, softening of tissue was noticed in NHM meat samples during storage. This was confirmed by the discovery of protein band with molecular weight of 7.7 KDa during the 9 days of refrigerated storage which signified that NHM meat samples were degraded faster during storage. Finally, spoilage of meat samples during storage was evaluated by the extent of lipid oxidation and by microbiological quality. HM samples were observed to have lower total aerobic count, lactic acid bacteria count and TBARS value. Genotypic identification of some of the lactic acid bacteria isolated from the meat samples showed *Enterococcus* spp. as the most predominant LAB in the meat. This study was able to confirm that method of slaughter significantly affected meat quality. Slaughtering chickens by halal method gave better meat keeping quality during storage at 4°C.

6.2 RECOMMENDATIONS

The results of this study showed that method of slaughter noticeably affected meat keeping quality of broiler chicken. However, further studies are needed to understand the relationship between slaughtering methods and meat quality as listed below:

- To determine the bleeding time and percentage blood loss in order to see if there is a relationship between the two parameters.
- To determine the extent of stress in the animals before slaughter. This can be done by evaluating the level of stress hormones in the animals particularly the cortisol levels
- To further identify the protein fractions generated from different slaughtering methods as an index of halal and non halal meat.