



## **Effect of storage temperature on quality of commercially prepared beef, chicken and pork ham**

A study was carried out to determine the effect of storage temperature on eating and keeping quality of beef, chicken and pork ham. The samples were stored at  $-15 \pm 2^\circ\text{C}$  and examined at 2 week intervals up to 10 weeks. The pH, moisture content (MC) water holding capacity (WHC), thiobabaturic acid value (TBA), crude fat (CF), crude protein (CP) water holding capacity (WHC), thiobabaturic acid value (TBA), crude fat (CF), crude protein (CP), acid insoluble ashes (AIA) and shear force tendemess) were analyzed.

The pH of samples stored in each temperature were significantly ( $p < 0.05$ ) decreased during storage period. TBA value increased significantly ( $p < 0.05$ ) with storage time at all the storage temperatures. TBA value of beef (1.51) was significantly lower than those of chicken (2.60) and pork ham (2.77). WHC of chicken (48.18) was significantly higher ( $p < 0.05$ ) than beef (46.33) and pork ham (45.45).

A significantly ( $p < 0.05$ ) lower MC was observed with samples stored at  $-15 \pm 2^\circ\text{C}$ . MC was highest in beef and lowest in pork ham at 5% probability level. Chicken, beef and pork ham shows slightly higher MC and pork ham shows slightly higher CF than the Sri Lanka Standards (SLS) requirements. However CP and AIA were within the SLS.

The highest scores for all the sensory attributes were recorded by beef samples, while the lowest values were by chicken ham. The colour, texture juiciness did not significantly change with the time of storage.

Storage life of chicken ham at  $-15 \pm 2^\circ\text{C}$  was about 8 weeks while for beef and pork ham it was more than 10 weeks. At  $4 \pm 2^\circ\text{C}$  beef and pork ham can be stored 4 weeks and chicken is only 2 weeks. Deterioration rate of taste was faster in chicken ham than beef and pork ham throughout the storage period and rate of taste deterioration was less at low storage temperatures.