

The effects of residual blood of carcasses on poultry quality

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This work studies the effect of residual blood in carcasses on poultry quality. The working hypothesis is based on the fact that the residual blood of carcasses is often associated with the deterioration of the meat quality and shortens its life.

To prove the residual blood factors that is responsible for deterioration of the meat quality,

- This study compares the pHu level in poultry both perfectly and imperfectly bled.
- Also compares the total aerobic mesophilic flora level in poultry both perfectly and imperfectly bled.
- Also compares the parameters of color in poultry both perfectly and imperfectly bled.

At first, we measured the amount of blood cleared of carcasses after slaughter, which was about 4.5% of total carcass weight.

At 3°C storage temperature, the average pHu of perfectly bled poultry was (5, 7) which was significantly ($P < 0.01$) lower than the average pHu of imperfectly bled poultry (6, 08).

At 7°C storage temperature, the average pHu of perfectly bled poultry was (6, 07) which was significantly ($P < 0.05$) lower than the average pHu of imperfectly bled one (6, 27). The samples ($n=320$ for measure of pHu, $n=80$; 40 were used in the winter and 40 in the summer for compare the total aerobic mesophilic flora level) were taken from the breast and thigh to reflect the heterogeneity of the results.

At 3°C storage temperature, the average number of bacteria of perfectly bled poultry was 7.05×10^2 ufc/g which was significantly ($P \leq 0.05$) lower than the average number of bacteria of imperfectly bled poultry (1.78×10^4 ufc/g). At 7°C storage temperature, the average number of bacteria of perfectly bled poultry was 6.18×10^3 ufc/g which was significantly ($P \leq 0.05$) lower than the average number of bacteria of imperfectly bled poultry (3.60×10^4 ufc/g).

The meat samples were taken from the chest and thigh to reflect the heterogeneity of the pHu and contamination.

Samples from imperfectly bled carcasses show a high value average number of [A.sup.*] = 12.68 and [B.sup.*] = 16.85; and [L.sup.*] = 54.09 vs. the average number of [A.sup.*] = 8.50 and [B.sup.*] = 14.43 and [L.sup.*] = 50.27.

The rise in storage temperature increases pHu in the two types of poultry, but the level of pHu in poultry perfectly bled is still lower. The residues of blood increase the level pHu of carcasses. We found out the effect of season on the results, so we conducted experiments in summer and winter.

The rise in the storage temperature increased the bacteria in the two types of poultry; but the number of bacteria of perfectly bled poultry was still minimal. The residues of blood increased the degree of contamination of carcasses. It was found out that there were effects of season on the results of 80 samples from chicken carcasses ($n=80$; 40 were used in the winter and 40 in the summer).

Key words: Residual blood, pHu, Total aerobic mesophilic flora (TAMF), Parameters A, B and L of color, Perfectly bled poultry, Imperfectly bled poultry

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