

Evaluation of the Quality Attributes of Imported Frozen Chicken, and Domestic Frozen and Refrigerated Chicken

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This study was carried out to evaluate the quality attributes of imported frozen chicken and domestic frozen and refrigerated chicken. Frozen chicken breast and leg samples were imported from U.S.A.(AL), China(CB, CL), Japan(JB, JL) and Thailand(TB, TL). Domestic chicken samples(KFB, KFL, KRB, KRL) were bought at a market. Frozen samples were put in polyethylene bag and were thawed at $4\pm 2^{\circ}\text{C}$ for a day. Total plate counts(TPC) and coliform bacterial counts were measured to evaluate the microbial quality. All samples showed about 10^4 CFU/cm² of TPC. VBN, pH, WHC, color(CIE L^{*}, a^{*} and b^{*}), and nucleotides such as hypoxanthine, IMP, inosine, AMP, ADP and ATP were examined to evaluate the physicochemical quality. The VBN value of KRB was significantly higher among chicken breasts($P<0.01$). As for the VBN values, KFL and KRL showed significantly higher value among chicken legs($P<0.05$). TB had the highest pH value(6.30) among breast samples($P<0.05$). KRL, CL, JL showed the higher pH level among leg samples($P<0.001$). There was no significant difference in WHC. In the result of nucleotide analysis, The IMP content of KFB and JB was significantly higher among breast samples($P<0.001$) with the values of 140.41 and 138.03mg/100g, respectively. The IMP content of JL was the highest among leg samples (97.08mg/100g)($P<0.001$). The external appearance test, triangle test and descriptive analysis with scaling were carried out for sensory evaluation. The result of the external appearance test of breast and leg samples showed that KFB had a higher value in the degree of the purchasing intention. In the descriptive analysis with scaling, the acceptability of KFB, KFL and KRL was higher than the other.

Key words : chicken leg, chicken breast, quality, frozen, refrigerated