20th Global Summit on

Food Processing, Safety & Technology

November 06-08, 2017 | Las Vegas, USA

Comparative study on the quality and descriptive sensory attributes of chicken thigh meat from different breeds

Ki-Chang Nam[1], **Cheorun Jo**[2] and **Kyung-Haeng Lee**[3]
Sunchon National University, South Korea
[2]Seoul National University, South Korea
[3]Korean National University of Transportation, South Korea

Compared with commercial broilers, native chickens have a characteristic meat texture and flavor, which is due to the different genetic traits and growth patterns. In a niche market, thigh meat of native chickens is preferred to chicken breast as it has chewy and flavorful meat quality. It is important to define sensory attributes of a poultry thigh meat and determine related analytical parameters. However, basic information about the descriptive sensory quality attributes of chickens, and the relationship between human- and instrument-based methods is poorly documented. Thus this study was performed to compare descriptive sensory attributes of thigh meat between broilers (BR) and Korean native chickens (KNC) and to determine the physicochemical analytical parameters correlating with the characteristic sensory attributes. The thigh meat was deboned from forty BR (Ross strain) and KNC (*Gallus domesticus*) with carcass weight of approximately 1.0 kg. Proximate composition, collagen, pH, cooking loss, fatty acids, shear force, and texture profiles were analyzed. Descriptive sensory attributes of thigh meat were evaluated by 8 trained sensory panelists. The data were statistically analyzed by t-test and Pearson correlation. The crude fat and collagen contents of KNC thigh meat were higher than BR ($p < 0.05$). KNC thigh meat had greater shear force than the BR. In fatty acid composition, the content of oleic acid was higher in BR than in KNC. However, the content of linoleic and arachidonic acids was higher in KNC than in BR. For descriptive sensory evaluation, KNC thigh presented higher toughness, chewiness, and oiliness than BR, and KNC thigh had higher chewing number. Additionally, the chewing number of breast meat are highly correlated to shear force and linoleic acid (r=0.66, 0.87). High negative correlation (r=-0.74) was also observed between chewing number and moisture content. The results will provide objective standards to differentiate the sensory meat attribute of chicken breeds.

Biography

Ki-Chang Nam is a professor in Sunchon National University, Suncheon, Korea. His major is meat science and technology. His previous research includes irradiation effects on meat quality and safety. He elucidated the mechanisms of color changes of meat and meat products by irradiation. A modified packaging system of "double packaging" was devised to minimize quality changes such as lipid oxidation and off-odor production by irradiation and to secure meat safety. He also developed egg protein studies for value-added process using ex¬tracted egg proteins. His current research is involved with the development of pro¬duction technologies for high quality and nutritional values of meat using process technologies such as irradiation, hot boning, and hot temperature aging. One of his main research fields is to analyze and compare the meat quality characteristics of the versatile animal breeds.

kichang@scnu.kr

Notes:

J Food Process Technol, an open access journal
ISSN: 2157-7110

Food Processing and Safety 2017
November 06-08, 2017

Volume 8, Issue 10 (Suppl)

Page 51