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Effects of Hot-boning on Tenderness and Color of Press Ham

H. S. Yang*, S. H. Moon, J. Y. Jeong, S. M. Chun, S. T. Joo and G. B. Park
*Meat Science Laboratory, Animal Science Division, Gyeongsang National University

To investigate the effects of deboning time and muscle type of ham on color, tenderness and texture of cooked press ham, a total of twelve pigs (barrow, 100±5kg) were slaughtered and split in half. The left side ham of carcasses was deboned immediately after slaughter whereas the right side ham was deboned after chilling for 24 hours at 4℃. Each of two muscles (SM; *Semimembranosus*, BF; *Biceps femoris*) was used to make a press ham. Muscle pH, sarcomere length, surface meat color (CIE L*a*b*) and myoglobin (Mb) percentage were measured at the fresh meat, and surface color of press ham, pH, shear force, hardness and panel test scores were made at the press ham. The pH of hot-boning muscles was significantly ($p<0.05$) higher than that of cold-boning muscles, and the pH of SM samples was significantly ($p<0.05$) higher than BF samples. Hot-boning muscles showed significantly ($p<0.05$) longer sarcomere length compared with cold-boning muscles. There was no significant difference in Mb % between SM and BF muscles, but SM samples of hot-boning showed significantly ($p<0.05$) lower L* value compared to hot-boning BF samples. The lightness (L*) of hot-boning muscles was significantly ($p<0.05$) lower than that of cold-boning muscles. These results suggested that the dark color of hot-boning samples might be due to not only the high muscle pH but also the long sarcomere length without difference in Mb percentage. However, there were no significant differences in color measurements (CIE L*a*b*), pH and panel test scores between press hams that were made with hot- and cold-boning muscles. Shear force and hardness of hot-boning press ham were significantly ($p<0.05$) lower than those of cold-boning samples. These results implied that color and pH of press ham did not affected by deboning time or muscle type of ham. However data suggested that texture and tenderness of press ham might be improved by using hot-boned muscle due to long sarcomere length of raw meat.