

## **Effect of aging time, aging technique (dry- vs. wet-aging) and packaging on tenderness, pigment and lipid stability of Belgian blue beef**

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The aim of this study was to compare the effect of aging technique (dry-aging and wet-aging), aging time (0, 21, 42 and 63 days) and packaging during display (vacuum and shrinkable film wrapping) on pH, tenderness, pigment and lipid stability of beef. Three *longissimus dorsi* muscles from two Belgian Blue cows were dry- or wet-aged for up to 63 days at 2 °C. At different times, part of these samples was cut into steaks and repackaged in vacuum bags or shrinkable film, and stored during 4 days at 4 °C + 8 days at 8 °C (simulated retail display). The following parameters were evaluated at different intervals: pH, tenderness (Warner–Bratzler shear force), color (CIE L\*a\*b\*), myoglobin oxidation (K/S 572/525 ratio) and lipid oxidation (TBARS). The aging technique and the packaging during simulated retail display had an effect on pH (dry-aging > wet-aging,  $P < 0.05$ ; shrinkable film > vacuum,  $P < 0.05$ ). An increase of tenderness was observed during the first 21 days of aging ( $P < 0.05$ ). The sensitivity of samples to pigment oxidation was influenced by the packaging during display (shrinkable film > vacuum,  $P < 0.05$ ). Aging time and packaging during display increased lipid oxidation (42 and 63 > 0 and 21 days,  $P < 0.05$ ; plastic wrap > vacuum,  $P < 0.05$ ). This study contributes new knowledge about Belgian Blue beef behavior whether it is wet- or dry-aged. Further research will be conducted to study the antioxidant capacity of these meats in order to better understand the oxidation process.