

27. The effects of modified atmosphere packaging rich in oxygen on goat kid meat quality

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40 goat kid ribcages were held for 7 days in storage conditions (4°C) and used to determine the effects of three different packaging methods (atmospheric air, vacuum and modified atmosphere package -MAP- 10:70:20 mixture of N₂:O₂:CO₂) on meat quality. Instrumental colour (L*a*b*), final pH, water holding capacity (WHC), and water loss were recorded at 1, 3, 5 and 7 days. L* was affected by the packaging method, as the chops packaged by the MAP were lighter than those stored by the other methods of vacuum and atmospheric air packaging at day 7 of storage. The coordinate a* statistically increased during storage time, being higher on day 7 than on day 1 for vacuum and MAP. For MAP packed chops and those kept in atmospheric air, b* increased markedly during storage time whereas it remained unaffected throughout storage when in vacuum packages. Final pH values ranged from 5.6 to 5.8 and no effects were found for either storage time or packaging method. WHC means were lowest for the three packaging methods on day 7 of storage and highest on day 1. Storage time increased water loss in vacuum treatments, being highest on day 7 and lowest on day 3.