

INFLUENCE OF MODIFIED ATMOSPHERE PACKAGING ON CHEMICAL AND SENSORY CHANGES OF BEEF

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Abstract

Contemporary tendencies of meat distribution is that it is packed in the production place and so wrapped up, in cold chain, transport to the place for sale. This ensures that keeping the store showcases, be exposed to direct observations of the customer, and achieved its longer shelf life. As part of a comprehensive investigation of the project III 46009, according activities which refers to the extension of shelf life of meat, it was investigated influence of modified atmosphere packaging on chemical and sensory changes of beef.

In the experiment were used beef tenderloin (Simmental cattle slaughtered in abattoir), and after cooling a portion were packed in a modified atmosphere, while the other remained unwrapped, and then, in the cold chain, transported to the place of storage. Packaging conditions were: composition of the gas mixture - 70% O₂, 20% CO₂ and 10% N₂; gas evacuation - 8 mbar; pressure gas mix - 1175 mbar; container - polystyrene, top foil welded at 130 °C. Meat was stored at temperatures below 4 °C. Dynamic of sample testing was: day 1 (after packaging), 7, 14 and 21. Customize sensory properties were conducted using quantitative - descriptive test, on the scale 1 - 5, by 5 evaluators. Chemicaly were examined a_w, pH, peroxide number, acid number, TBA, TVB-N.

The results obtained indicate that the prolonged shelf life for beef tenderloin packed in a modified atmosphere were achieved. For unpackaged samples shelf life was 5 - 7days, while for samples packaged in modified atmosphere 12 - 15 days.

Key words: Beef, Modified atmosphere packaging, Shelf life.