

ABSTRACT

Samples of vacuum-packed frankfurters and packaged, sliced salami were taken off a commercial production line at two different periods. These were then subjected to three different storage temperatures - ambient (28-32°C), refrigerated (4°C) and freezing (-18°C).

Microbial and organoleptic analyses were performed on the sausages during their storage, until they were deemed unfit for human consumption by a panel of six semi-trained individuals.

Results of the frankfurters samples revealed a general decrease in aerobic populations while anaerobic bacteria progressed, with accompanying lowering of the pH during ambient and refrigerated storage. The growth of the predominant Pseudomonas, Micrococcus and Lactobacillus spp.- identified was accompanied by the gradual development of slime, off-odours, sour taste, swollen sausages and gassiness within the package. Changes in colour and texture also occurred as storage progressed.

Under freezing conditions, microbial populations decreased and no spoilage was evident during the six-month storage period.

Results of the salami samples were of a similar nature. The main differences were the inclusion of Bacillus as a predominant species and the absence of swollen sausages and gassiness within the package.

Some yeasts and molds were found initially in both sausage samples.

The storage periods during which the sausages were considered edible varied for the different storage temperatures and the types of sausages.

Under ambient temperatures (28-32°C), the mean storage period for frankfurters and salami was 3 and 4 days respectively.

Under refrigerated temperatures (4°C), the mean storage period for

frankfurters was 8 weeks and for salami, this was 10 weeks. Under freezing temperatures ( $-18^{\circ}\text{C}$ ), both the frankfurters and the salami were acceptable at 6 months.

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