Quality of Smoked Chicken—Guinea-Fowl Sausage as Affected by Processing Conditions and Cold Storage

Awonorin S.O.

Abstract:

The effects of smokehouse temperature and humidity, and cold storage on organoleptic characteristics and certain quality parameters of smoked sausage manufactured using a mixture of 60% guinea-fowl meat and 40% broiler chicken were studied. The mechanical properties of samples (shear force, hardness, cohesiveness, springiness and chewiness), water-holding capacity and homogenate stability were significantly affected by the processing conditions used and period of cold storage. High tenderness, juiciness and acceptability were associated with samples processed using low smokehouse temperature (80°C) or high relative humidity (85%). Shear values were linearly related to tenderness scores with high regression coefficient, thus, making it possible to predict a range of shear values required for satisfactory tenderness for sausage production. The peroxide value and thiobarbituric acid values increased during cold storage, however, sensory evaluation results showed that the refrigerated samples were still acceptable at the end of 8 weeks, but with reduced scores.