Quality evaluation of kilishi, an intermediate moisture meat product sold in Zaria metropolis, Nigeria

O.O. Olusola, R.N. Abunwune, A.T Adeshola

Abstract

This study was carried out to evaluate the chemical and microbial qualities of Kilishi sold in Zaria metropolis, Nigeria. A total of thirty (30) samples from three different locations (Sabon-gari-(Site I), Zaria city (Site II) and Samaru area (Site III) were randomly collected. Control samples of Kilishi were prepared in the Meat Laboratory of the Department of Animal Science, Ahmadu Bello University. All Kilishi samples were subjected to chemical analysis and microbiological examination-aerobic plate counts (APC), staphylococcal counts (SC), fungal counts (FC) and coliform counts (CC). Kilishi from Site II had significantly (p < 0.05) higher moisture values (7.52%) than Kilishi from the control (5.65%), Site I (5.19%) and Site III (5.44%), fat and ash contents were significantly (p < 0.05) higher in control (22.53% and 7.80% respectively) than Kilishi from other sites. Microbial counts were high in commercial Kilishi samples with mean APC of 4.1×10⁵, Coliform counts of 3.0×10⁴and FC of 5.9×10⁶ in Site I while Staphylococcal counts was 7.0×10⁴ in Site III. The general evaluation of microbial species showed the presence of Staphylococcus aureus, Bacillus subtilis, Escherichia coli and Klebsiella sp in commercial Kilishi which could pose high health risk to consumers. It is therefore advised that processors of Kilishi should imbibe good hygienic practices in order to improve the quality and reduce the risk of food borne illnesses while consuming this product.

Keywords: Quality, Kilishi, chemical evaluation, microbiological analysis