

Abstract

Deep-frying of meats has been done by indigenous pastoral communities from time immemorial for the unique taste, flavor, and exceptional shelf- stability. Traditional pastoral deep-fried meats have great potential as snacks in the global food basket due to their unique nutritional qualities and high satiety. Lost and weakening cultural ties have led to disparities in the deep-frying processing hurdles within and between different communities. The goal of this research was to study the peculiarities and uncover processing variations of ethnic deep-fried meats from indigenous people of the pastoral semi-arid lands and to explore how this translates to nutritional and sensory attributes of selected products from Kenya. A cross-sectional survey was conducted in Turkana, Kajiado, and Marsabit counties with data collected using Focus Group Discussions (FGDs). From each focus group, samples of the deep-fried meats were analyzed for nutritional and sensory characteristics using standard methods. Notable variations in the deep-frying process observed were the size of chunks, pre-drying techniques prior to deep-frying, and choice of deep-frying media. Shelf stability was achieved by oil-encapsulating the chunks in solidified deep-frying media, fumigation of traditional packaging containers with smoke, and the use of spices. Variations on proximate contents were observed with moisture ranging between 8.1% and 28.5%, protein between 42.6% and 46.9%, lipids between 15.4% and 37.9%, ash between 3.1% and 4.3%, and energy between 424 Kcal/100g and 542 Kcal/100g. Differences in processing hurdles and storage contributed to variations in sensory attributes with pre-drying, smoking, and choice of deep-frying media contributing to the greatest variabilities. This notwithstanding, the study revealed a limitation on use of semi-trained panelists to bring out deep-cultural rooted ties that play a big role in the sensory acceptability of these indigenous products calling for caution before the interpretation of sensory data. In conclusion, variations in size of chunks, pre-drying technique, choice of deep-frying media, oil-encapsulation, and smoking among ethnic communities during the deep-frying process significantly contribute to differences in nutritional and sensory characteristics of deep-fried products.