**MICROBIAL PROFILE OF SUYA IN LAGOS**

**ABSTRACT**

Suya is a popular spicy meat product in Nigeria. Ready-to-eat suya samples were collected from four popular ‘suya spots’ serving at least 250 consumers within ikeja, lagos State, Nigeria. Microbial analysis of the samples was carried out and the isolates were identified as *Staphylococcus aureus, Escherichia coli, Streptococcus spp*., and Pseudomonas spp. The totalviable counts for the samples ranged from 1.4 x 105 to 3.9 x 103 and 1.1 x 105 to 3.2 x 103 on nutrient agar and chocolate agar respectively. *Staphylococcus* and *Pseudomonas* recorded maximum percentage of occurrence. The result revealed that suya sold in the area were microbiologically unsafe and below acceptable standard for human consumption

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**CHAPTER ONE**

**INTRODUCTION**

**1.1 BACKGRONUD OF THE STUDY**

Meat is the flesh of animals which serves as food; it is obtained from sheep, cattle, goat and swine (Hamman, 1997). Meat is a major source of protein and have valuable qualities of vitamins for most people in many parts of the world, thus they are essential for the growth, repair and maintenance of body cells which is necessary for our everyday activities.

Meat could be traced back to human history, then when primitive men use raw flesh of dead animals, but as man developed, he domesticated as well as wild animals. Beef have been the major supply of meat in Nigeria as a result of extensive and semi-intensive cattle production system in Nigeria by Fulani and Hausa people of the northern Nigeria. (Umoh, 2004).

Suya meat is a boneless lean meat of mutton, beef, goat or chicken meat staked on sticks, coated with its sauces, oiled and then roasted over wood using a fire from charcoal. It is a popular, traditionally processed meat product that is served hot and sold along streets, at clubs, picnics centers, and restaurants and within institutions. Suya meat is one of the intermediate moisture products that are easy to prepare and highly relish which is a mass consuming fast food and its preparation and sales are usually not done with strict hygiene condition because they are still done locally.

Due to the chemical composition and characteristic, meat are highly perishable food which provides excellent source of growth of many hazardous microorganisms that can cause infection in human and also lead to meat spoilage and economic loss. The most important bacteria meat spoilage is caused by lactic acid bacteria which is physiologically related group of fastidious and ubiquitous gram-positive organisms, these includes many species such as Lactobacillus, Leuconostoc, Pediococcus and Streptococcus.

Since meat has a high nutritive value, microorganisms could easily grow on it. The possible sources of contamination are through slaughtering of sick animals, washing the meat with dirty water, handling by butchers, contamination by flies, processing close to sewage or refuse dumps environment, spices, transportation and use of contaminated equipment such as knife and other utensils. (Igyor and Uma, 2005).

The slaughtering process affords extensive contamination of sterile tissue with gram-negative enteric bacteria from animal intestine including Salmonella specieand Escherichia coli as well as contaminant such as gram-positive Lactic cocciassociated with humans, animals and the environment. Enterococci and Clostridiahave been isolated from lymph node of red meat animals (Lawries, 2000, Alexanderet. al. 1998).

Microorganisms grow on meat causing visual, textural and organoleptic changes when they release metabolite (Jackson et. al. 2001). The smoke produced as a number of effects including preservative effect resulting from the deposition of organic compounds all presents in the smoked product (Suya meat). (Dineenet.al.1999). A preservative effect is also induced by the surface drying that occurs to the extent of 30% total weight loss in hot smoked product. Antioxidant effect is produced by the phenolic deposite unto the product.

The microbial load in meat and meat product increases as long as growth conditions are favorable. The factor influencing microbial growth includes acidity pH, temperature, water activity, gaseous requirement, nutrient and competition of microbes for the nutrient. Controlling these factors implies maintaining long shelf life of meat and meat product but proper preservation of meat could be achieved by the combination of two or more preservation method which includes drying, salting and high temperature (Nester e, al 2001).

**1.2 AIMS AND OBJECTIVES**

 This work is aimed at determining the microbial quality of suya meat sold in Enugu and has the following objectives:

1. To isolate, characterize and identify microbial species associated with Suya meat.

2. To establish the public health implication of consumption of Suya meat.

3. To offer useful information where necessary to the consuming public.