

PDF - MICROOBIAL EVALUATION OF RAM MILK FROM A DIARY FARM - researchcub.info **ABSTRACT**

Microbial evaluation of twenty samples of raw milk from a diary farm (Emene fulani cattle rearers) was carried out using five method: viz direct microcopies count nutrient agar count, Blood agar count, Mac conkey agar count (celiforms only) and Acid fast bacilli starring was done to assay for the presence of the Tubercle bacillus. The bacterial was were as follows: direct microscopic counts ranged from  $9.0 \times 10^5$  to  $9.5 \times 10^7$  counts on Nutrient agar ranged from  $9.0 \times 10^4$  to  $8.0 \times 10^5$  counts on blood agar ranged from  $7.0 \times 10^4$  to  $9.8 \times 10^4$  while counts on Mac country agar ranged between  $5.0 \times 10^2$  to  $5.0 \times 10^3$ . The Acid fast bacilli starring did not show a single bacillus, an indication of tubercle free. The gram starring result indicate single chains clusters gram positive bacilli and gram negative bacilli which are characteristics of staphylococcus spp streptococcus spp lactobacillus spp and coliform. it is suggested that milk maids and milk processors should endeavor to wash the udder of the con, sterols their equipment and containers as well as improving their personal hygiene during milk collection . these will contribute to the quality of products in our milk industries as well as the good health of man especially the fulani cattle rearers that drink without pasteurization.

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### **CHAPTER ONE**

#### **INTRODUCTION**

##### 1.1 BACKGROUND INFORMATION

Milk is defined as a secretion of mammary gland of female animals. It is an exceptionally good source of protein which is of a high biological value in promoting the growth of children (Ihekorany and Ngoddy, 1985).

Milk is described as a good of outstanding interest, which is designed by nature to be complete good for very young mammals (Fox and Cameron, 1980).

Milk contains a wide variety of constituents and contains most of the food factors associated with bacterial

nutrition. Milk as a single food is of high nutritional value and is associated with spoilage microorganisms. At the time milk leaves the udder of the healthy cow, it contains few bacteria these stem from milk ducts and cistern. During the milking process, bacteria are usually added from various sources. In hand milking the sources are air the hair of the animal manure, the milkers equipment such as pails, feed and machine, most of these environmental factors are less important. However, the milking equipment may serve as an important source of contamination if it is not carefully cleaned and sanitized (Ihekoronye and Ngoddy, 1985).

After milk has been drawn it is rapidly cooled to 45°C to prevent contaminants from multiplying. To eliminate pathogens from milk the process of pasteurization is applied. This involves application of heat below the boiling point (Fraizer and Westhoff, 1978).

## 1.2 STATEMENT OF PROBLEM

Milk as a food of high nutritional value is highly associated with microorganisms. As a result of this contamination of raw milk, if not sterilized and taken directly or used for production of milk products, causes disease to man and also contribute to the spoilage of milk and milk products.

## 1.3 AIM AND OBJECTIVES OF THE STUDY.

**AIM:** The aim of the study is to evaluate the micro-flora of raw milk

**Objectives:** The objectives of the study are

- i) To isolate and identify micro organisms that contaminate raw milk.
- ii) To determine if the milk is tubercle bacilli free
- iii) To assay for the presence of coliform as an index of pathogens.

## 1.4 HYPOTHESIS

**H<sub>0</sub>:** All fresh raw milk from healthy cows are free from microbial contamination both pathogenic and non-pathogenic

**H<sub>1</sub>:** All fresh raw milk from healthy cows are not free from microbial contamination both pathogenic and non-pathogenic.

## 1.5 JUSTIFICATION OF THE STUDY

Milk is known to be heavily contaminated by microorganisms if not properly handled. Therefore, there is a need to evaluate consumption or processing it for milk products

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