



Study of microbiological quality of *Khoa* based *Kalajam*

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ABSTRACT : The present investigation carried out by obtaining *Khoa* based *Kalajam* samples from different markets of Kanpur city and laboratory prepared. It was observed that the maximum standard plate count per gm. was found in the *Khoa* based *Kalajam* samples obtained from Birhana Road market (13.99×10^4) and lowest in the laboratory prepared *Khoa* based *Kalajam* samples (2.0×10^4). While maximum yeasts and moulds count per g of *Khoa* based *Kalajam* samples was found in Govind Nagar market (13.66×10^5) and lowest in the laboratory prepared *Khoa* based *Kalajam* samples (4.0×10^5).

KEY WORDS : Microbiological quality, *Khoa*, *Kalajam*

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INTRODUCTION

Khoa based *Kalajam* is an indigenous sweet milk product of considerable economic and nutritional importance to the people of this county. It is prepared by using techniques that are suitable for small scale operations.

Both pathogenic and non-pathogenic micro-organisms may be found in *Khoa* as well as in *Kalajam*. It serves as suitable medium for the growth and transmission of pathogenic micro organisms, there by it is a potential source of danger to public health, if not properly handled. Bacteria enter in the *Kalajam* from two sources *i.e.* from raw milk and from external contamination during manufacturing handling and storage. Since milk is treated to high temperature during *Khoa* making, most of the bacteria present in raw milk are destroyed except few spore formers or heat resistant. Therefore, chief source of microorganisms, in *Khoa* based *Kalajam* is the post – preparation contamination, which may be manufacturing utensils, sugar, person, storage room and keeping practices.

The microbiological quality of *Kalajam* is of utmost important to prolong the life of *Kalajam* as well as to save the lives of, consumer against pathogens. The micro-biological

quality of all Indian milk products are deplorably poor and the same situation exists with *Khoa* and *Kalajam*.

MATERIALS AND METHODS

Standard plat count (SPC) :

The total viable count was done on plate count agar medium. Appropriate dilution of *Kalajam* suspension was plated in duplicate plates using the above medium and the plates were incubated at 37° C for 48 hours and colonies were counted to the standard procedure (American Public Health Association, 1960).

Yeasts and moulds count :

Yeasts and moulds count was done by plating dilution of *Khoa* based *Kalajam* in sterile petriplates using Potato dextrose agar medium. The plates were incubated at $22^{\circ} \pm 1^{\circ}$ C for 3-5 days and yeasts and moulds colonies were counted with the help of colony counter.

RESULTS AND DISCUSSION

The results of the present investigation as well as relevant discussion have been presented in the following sub heads:

Standard plate count :

As is evident from Table 1 a, the overall average of standard plate count / g of *Khoa* based *Kalajam* samples collected from different markets of Kanpur city were recorded as 9.27×10^4 /g with the range of 6.66×10^4 /g. to 11.88×10^4 /g.

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