Internat. J. agric. Sci. Vol.3 No.1 January 2007 : 165-167

Studies on quality evaluation of market paneer

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ABSTRACT
An attempt was made to evaluate the physical, chemical and microbial quality of paneer marketed in Agra city and a comparison was made with a control sample. The quality of paneer was assessed in terms of physical, chemical and microbial attributes. Paneer was also prepared in laboratory as control one to make a comparative interpretation of the result. The samples collected from the various locations were rated from very much to dislike slightly, while the control samples were liked extremely. The acidity was lowest in control samples, ranged from 0.30% to 0.45% with a mean value of 0.38%, while it was recorded highest in paneer procured from Bijalighar and Bhagwan Talkies, ranges form 0.54 to 0.70% and 0.40 to 0.72% with the mean values of 0.64% and 0.59%, respectively. The yeast and mould count per gram of paneer samples obtained from Shahganj, Sadar, Bijalighar and Bhagwan Talkies markets and control was recorded as 13.00, 96.75, 102.50, 154.50 and 58.75 counts per gram, respectively. The average number of coliform per gram of paneer samples collected from Shahganj, Sadar, Bijalighar, Bhagwan Talkies markets and control were analyzed to the tune of 94.25, 119.25, 104.50, 80.50 and 40.75 counts per gram, respectively. The total viable count of Shahganj, Sadar, Bijalighar and Bhagwan Talkies markets and control ranged from 985.00 to 223.42, 992.50 to 272.69, 1170.00to 234.81, 1042.50 to 255 and 87.50 to 11.90, respectively.

Key words : Paneer, Quality analysis, Yeast and mould count, Chemical analysis.

INTRODUCTION

Paneer is an important acid coagulated indigenous milk product and is used as base material for preparation of culinary. It is prepared by the combined action of acid and heat treatment. Paneer is similar to unriped cheese because both products contain same milk solids mainly fat and casein. Good quality paneer is characterized by its acidic flavour with slight sweet taste, firm and compact body and texture.

Paneer contains entire milk casein, some part of denaturated whey proteins, all fat, colloidal salts and lactose. In preparation the moisture is retained in the product. About 90% of fat and protein, 50% of ash and 10% of lactose milk are retained into paneer citric acid. It should not contain more than 70% moisture and milk fat content should not less than 50% of dry matter but in skimmed milk paneer, milk fat content should not exceed 13% of dry matter.

Indian Standard Institution (1983) have laid down that paneer is prepared by acid coagulation and heating treatment of buffalo or cow milk with subsequent drainage of whey. It should have less than 60% moisture, more than 50% fat on dry basis matter, less than 0.05% titrable acidity (as lactic acid), less than 50,000 bacteria, less than 90 coliform and less than 250 yeast and mould per gram.

An attempt was made to evaluate the physical, chemical and microbial quality of paneer marketed in Agra city and a comparison was made with a control sample.

MATERIALS AND METHODS

Paneer samples were collected from different places of Agra city, viz. markets of Shahganj, Sadar, Bijalighar and Bhagwan Talkies. Samples of the paneer prepared in the laboratory was transferred to a pastle mortar was grinded continuously with the help of a mortar to prepare a homogeneous mixture. When the clots of paneer make up completely, the samples were analyzed for the chemical profiles and microbial counts.

Analysis of samples:

The paneer samples were analyzed for Physical, chemical and microbial analysis. Recorded parameters for chemical analysis were acidity, moisture content, fat content, protein content, lactose content and ash content and for total viable count, calceiform count as recommended by Ranganna (2001).

Preparation of samples:

The control sample was prepared using standard method as recommended by De (2001) and used for comparison with the market samples. For the preparation of paneer in the laboratory one-liter buffalo milk was used for each lot of paneer.

RESULTS AND DISCUSSIONS

Physical quality:

To evaluate the sensory attributes viz. colour, texture, taste and flavour the paneer samples were examined by sensory panel. The samples collected for the various locations were rated from very much to dislike slightly, while the control samples were liked extremely.

Chemical quality:

The acidity was lowest in control samples. It ranged from 0.30% to 0.45% with a mean value of 0.38%, while it was recorded highest for paneer procured from Bijalighar and Bhagwan Talkies, ranged form 0.54 to 0.70% and 0.40 to 0.72% with the mean values of 0.64% and 0.59%, respectively. The slightly higher acidity in market sample could be because of the use of acetic acid coagulant or old

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