

Study of Milk Adulteration in Hyderabad, Telangana State

Research Article

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Abstract

Food adulteration is age old practice and is an issue of concern throughout world. The threat of adulteration in food is seen more in developing countries due to lack of proper monitoring facilities. However, this can be one foremost common phenomenon that has been overlooked in many countries. Unfortunately, milk adulterants can pose serious health hazards resulting in fatal diseases. This paper showed the results for presence of milk adulterants in 20 milk samples collected from various places from Hyderabad. We have checked for adulterants like urea, formalin, detergent, salt, maltodextrin etc. and we observed that majority of the samples are positive for formalin, maltodextrin and salt. These adulterants can result in health problems like liver damage, allergic reactions, weight gain etc. Other adulterants are found in less number of samples.

Keywords: Milk adulteration; Food adulteration; Viable count; Antibiotic sensitivity

Introduction

Milk is a very important source of nutrients required for growth in infants and kids and for maintenance of health in adults. Milk is the lacteal secretion produced from the mammary glands of the mammals. Milk in its natural form has very high nutrient value. It gives nutrients like carbohydrates, vitamins, fat, protein and minerals in moderate amount which can be easily digestible [1].

Normally, the adulteration in food is done either to gain benefits in monetary form or due lack of proper hygienic conditions of processing, storing, transportation and marketing. This ultimately ends in cheating of consumers or become victim of diseases. Such adulteration is quite common in developing countries. Milk is produced throughout the year. However, milk production is decreased to great extent due to the stress of heat and fodder shortage in summer. Milk is transported from point of production to cities mainly through middlemen. Such milk is added with adulterants to make more profits by adding materials like starch, flour, urea, cane sugar and edible fat as adulterants. Milk dealers may either dilute the milk or extract valuable components and there after add cheap substances to maintain its compositional parameters.

These cheap substances include starch, urea, and preservatives like formalin, hydrogen peroxide, boric acid and various antibiotics [1]. An editorial of esteemed e-paper "Economic Times", in September 2018 stated that around 68.7% of milk and milk products sold within the country is not as per the standards laid down by the Food Safety and Standards Authority of India (FSSAI) [2].

Many types of adulterants are added into milk to gain financial benefit but the effects they cause may be dangerous [3]. The external addition of water in milk though contains no health hazards associated with it but the water used is contamination free but dilutes the quality of nutrients in milk. One of the important parameters in estimating the quality of milk is total SNF (Solid-Not-Fat) content. Some adulterants added to milk can enhance the SNF content of the milk however alters the sanctity and purity of milk [4]. Sometimes in order to increase the natural protein content in the milk, melamine is added [5]. Some amount of Melamine can be present in milk samples acquired during milk packaging and use of nitrogen rich fertilizers. According to The US Food and Drug Administration (FDA), maximum permissible limit of melamine in milk is 50 ppb, whereas The Food Safety and Standards Authority of India (FSSAI) have set melamine limits from 0.5 ppm to 2.5 ppm [6]. Urea is also

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Sub: GDC(W), BGPT-Sanction of seed money for the academic year 2020-2021

In pursuance of the orders issued, the research proposals submitted by Dr. A. Madhuri, Asst. Professor of Micro Biology, GDCW, Begumpet, entitled "Alkaline Prostate Production in Solid State Fermentation Using Groundnut Husk as a substrate" the Research Committee has approved a grant of Rs. 1,00,000 (Rs. One Lakh Only) to the Principal Investigator for undertaking the above project for a period of One year from the date of sanction.

Item	Amount Allocated	Amount Sanctioned
Books & Journals	20,000	20,000
Equipment	25,000	25,000
Field work & Travel	40,000	40,000
Contingency	15,000	15,000
Total	1,00,000	1,00,000


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