

Cow milk adulteration: it's side effects and detection methods

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Abstract:-

Natural unadulterated milk has a high food value, because it comprises of a wide variety of essential nutrients that helps in growth and development of the human body. In recent decades the consumption of the milk has been increasing worldwide, mostly in the developing countries and it is now a major part of diet of the population around the globe. Due to its high demand in the market, some unscrupulous producers have been associated with adulteration of the milk, which is a very common issue in developing countries. The main aim behind the adulteration of the milk is to get some more financial surplus. Most commonly the water is used to adulterate the milk but it decreases quality and nutrients that the pure raw milk retains. If the water is contaminated with chemicals or with some other pathogens, this can possess a hazardous health risk to consumer. Some cheap adulterants like Urea, Sugar, Starch and harmful chemicals like formalin, melamine and detergents can be added to the diluted milk to make it toxic and can cause severe health related problems to the human beings. The main aim of this review is to study about cow milk adulteration and some common detection techniques to check the adulterants that present in the milk and the health related problems that associated with the consumption of adulterated milk.

Keywords: milk, adulteration, health, hazardous, starch, formalin, urea, Vanaspati.

Introduction:-

Food is the basic necessity of life. Food adulteration is an act of intentionally degrading the quality of the food offered for the sale either by admixture or by the substitution of the inferior substances or by the removal of some of the valuable ingredients. Milk and dairy product adulteration came into known by globally in 2008 after the breakthrough of the melamine contamination in the infant milk product which was made by China. However the history of milk adulteration is very old. Milk is the best source of proteins, carbohydrates, fats and different types of minerals and vitamins, which is considered as ideal food. Milk is very nutritious for which it is a major requirement for both infants and adults. The main possible reasons behind the milk adulteration are low purchasing capability of the customer higher demand of the consumer, supply gap and the lack of the suitable detection tests. The main motive behind the adulteration is economic but its impact on the consumer's health is the great concern. There are several ways to detect adulterant in the milk. The qualitative detection technique can be performed with chemical reactions, while the quantitative detection techniques depend on the nature of the