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RESEARCH PAPER

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Occupation of synthetic milk in Western U.P.

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ABSTRACT

The milk samples were collected from four districts in western region *viz.*, Ghaziabad, Bulandshahr, Meerut and Baghpat, as these districts are the major milk suppliers for NCR. A total of 240 milk samples, 10 from each district each source like producers, traditional traders and organized traders and at each season, mid flush and mid lean. All milk samples were analyzed in laboratory. The milk samples of all the districts were found adulterated with synthetic milk. It is therefore suggested that consumers should collect or purchase milk directly from milk producers.

KEY WORDS : Synthetic milk, Quality milk, Producers, Traders, Adulterants

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INTRODUCTION

The simplicity and rapidity with which milk can be adulterated always has tempted the unscrupulous milk vendors to indulge in fraudulent practices and adulterate the milk. The ever-rising greed has given way to the development of a new type of adulterated milk known as synthetic milk. Similar to genuine milk production, the practice of preparing the "synthetic milk" too starts at the village level. The places notorious for the production of synthetic milk include parts of Rajasthan, Haryana and Uttar Pradesh in India. Slowly but steadily the practice is spreading to other parts of India also. By synthetic milk, one would normally understand a product analogous to natural milk in its physical, chemical and nutritional properties. But there is no similarity between the two. Synthetic milk is a gross misuse of knowledge of chemistry *i.e.* process of saponification. The basic ingredients used in the manufacture of synthetic milk are caustic soda, water, refined vegetable oils/animals body fats, urea, detergents, sugar, salt and skim milk powder. It is a yellowish white emulsion, which is made by mixing cheap quality cooking oil and detergents in water. The detergent increases the viscosity of the solution and vegetable oil prevents frothing in the solution. The soap also saponifies the oil into an emulsion, which liberates free fatty acid into the fluid. Adjustments of non-fatty solids in milk are acidic and so using caustic soda neutralizes it. Lactometer is used to adjust the specific gravity of synthetic milk equal to that of natural milk.

The synthetic milk has the following harmful effects on consumers :

- Swelling of hands and feet (consumption for long time)
- Adverse effect on eye sight may lead to blindness
- Cardiovascular diseases
- Neurological disorders
- Kidney and liver ailments can even lead to cancer.
- Acute toxicity of urea (ammonium compounds), which can show variety of symptoms such as muscle tremours, abdominal pain, poly urea, cyanosis dyspoea and hyperthemia in advanced toxicities.

Chakraborti *et al.* (1986) estimated that the volume at borderline souring of milk in India was about 10% of milk received from dairies during summer months. The problem of milk adulteration has become extensive in the states of Haryana, Punjab, Uttar Pradesh and Rajasthan (Bector, 1998).

Synthetic milk has become a threat to the country's dairy industry in Rajasthan, Delhi, U.P., Haryana, Punjab and Gujarat (Dairy News,1996). This toxic concoction was reported to include urea, sugar, common salt, chalk powder, white paint, oil refinery, wastes, detergents, caustic soda,

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