ANALYSIS OF GLUCOSE AND ZINC LEVEL IN SERUM AND BLOOD ON CONSUMPTION OF ZINC FORTIFIED DAHI

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ABSTRACT

Food fortification is one of the approaches to prevent, and also correct a demonstrated deficiency of nutrient in the target populations. Milk and dairy products are frequently consumed by large population and are considered as, the ideal carriers in food fortification programs, which are taken major initiatives by Indian government in the recent trends of food industries. However, these products are found to be low in zinc level. Therefore, it is estimated that, fortification of these foods with a proper and appropriate zinc salt, it is an effective and economic strategy to prevent zinc deficiencies, which are found in new born and especially pregnant women. Many studies reveal the significance of Zinc in day-to-day life, to name a few, Zinc has active role in overcoming insulin resistance. It also, helps in the synthesis, storage and secretion of insulin. At this back drop, the present study attempted to find the infusion of zinc in milk and associated products, such as fortify with zinc by using @ 40 mg/kg. The results conveys that, the standard levels used in the study was 40 mg/kg of milk, zinc sulphate showed satisfactory level of organoleptic, physico-chemical viz., acidity, total solids, fat and protein. Apart from human beings, it has positive impact also on animals, thus experimentation by feeding rats with micro-mineral fortified dahi revealed increased gain in body weight, Feed and Protein Efficiency Ratio values (FER & PER). Blood serum zinc concentrations showed tremendous increase in rats, fed with fortified dahi than in animals fed with unfortified dahi, which was used as control for the study. Further, conversely, the study found that, lower blood glucose levels were observed in experimental animals, fed with fortified dahi than animals fed with control dahi. From the present study, it can be concluded that, the zinc fortified dahi doesn’t cause, sharp fluctuations in blood glucose levels, rather stabilized the blood glucose levels and hence, the zinc fortified fermented milk products can safely be consumed by early diabetic people, to control blood glucose levels.

KEYWORDS: Dahi, Fortification, Insulin, Zinc, Blood Serum & Protein Efficiency Ratio

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