



IRON ANALYSIS IN SELECTED IRON FORTIFIED FOOD PRODUCTS

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Iron deficiency is a major public health problem throughout the world. According to early studies, children, adolescent girls and pregnant women are the vulnerable groups with iron deficiencies. Iron fortification is an effective solution for this problem. As a result, iron fortified foods are widely available in the Sri Lankan market. However the quantification of iron in iron fortified foods available in local market is not under the regulation of the food authorities in Sri Lanka. Therefore, this study intends to quantify the concentration of iron in selected iron fortified foods available in the local market. In this study, five brands of powdered milk (n=15) and three brands of breakfast cereals (n=9) were randomly selected from the local retail shops and supermarkets in Sri Lanka. The concentration levels of iron in these brands of iron fortified powdered milk and breakfast cereals were determined using Atomic Absorption Spectroscopy. According to the results, the mean concentration of iron in the five brands of powdered milk studied was 18.1 ± 9.5 mg/100g and it contributes approximately 52, 27.8 and 23.1 percent for 11-13, 14- 18 and 19 years old adolescent girls respectively to the recommended daily allowance (RDA) per serving (23g of powdered milk). The mean concentration of iron in the three brands of breakfast cereals studied was 18.5 ± 8.0 mg/100g and it contributes approximately 80.9, 43.2 and 36 percent for 11-13, 14-18 and 19 years old adolescent girls respectively to the RDA per serving (35g of breakfast cereals). Three brands of powdered milk and one brand of breakfast cereal studied have the compatible concentrations of iron with the labeled value. In conclusion, vulnerable populations such as adolescent girls obtain one fourth to half the requirement of iron from the iron fortified food in the local market.

Keywords: *Iron fortified food, recommended daily allowance, Adolescent girls, Iron deficiency*