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Comparison of Quality of Edible Iodated Salt Produced by Small and Medium Industries (SMEs)

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Abstract

Prevention of detrimental effects of inadequate intake of three micronutrients iodine, vitamin A and iron is of immense important to global development. It could be the most important achievable international health goal of the decade for the economic development. Of the three micro-nutrients, correction of iodine deficiency is believed to be the most immediately achievable goal. Without addressing this problem, investment in economic development and education will not achieve the desired outcomes.

The simple and inexpensive way to prevent iodine deficiency and eradicate it, is the use of iodated or iodized salt on the table and in cooking. Therefore, iodization of salt, a common food used by the vast majority of the population, is a proven intervention. The goal set by the World Summit for Children 1990 and reemphasized at the International Conference on Nutrition 1992 is the virtual elimination of iodine deficiency by 2000. National governments have recognized that is an achievable goal with important benefits for the population.

Therefore, in the selling of raw salt in the market has banned in 1993 in the country and only iodated salt could be sold for consumers. Potassium iodate is much more chemically stable than potassium iodide for tropical countries. Large, small and medium scale manufacturers use potassium iodate for iodization of salt in Sri Lanka. In 1993, the recommended dose of iodine was 25 -50 ppm and it was amended to 15 - 30 ppm in 1994. This amount of iodine in the salt is expressed as that the 30ppm of iodine should be in manufacturing level, whereas 15ppm of iodine should be in consumer level.

In this research project, mainly the quality of iodated salt produced by small and medium scale industries were compared to see whether this universal salt iodination program, which is successfully implemented in Sri Lanka, achieves economic goals.

Samples were taken from three levels namely, manufacturing, retail and consumer. Other parameters of magnesium, calcium, sulphates, sulphites, sulphides, phosphates, arsenate and arsenites were analyzed to prove that they are within the permissible levels for edible purposes.

This study shows that the iodine content which is higher in manufacturing level than expected recommended levels and also retail and consumer levels which are still comply with the recommended levels. However, Sulphates, calcium and magnesium are present in trace amounts. Therefore, moisture percentages are higher than expected levels.