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IODINE LEVEL OF FIVE BRANDS OF SALT AVAILABLE IN THE KURUNEGALA TOWN AREA

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Iodine is essential to produce thyroxine hormone. Though Iodine deficiency disorders such as endemic goiter was prevalent in Sri Lanka before 1995, with the introduction of iodinated salt program they reduced in number. Sri Lanka has more than 250 factories which produce iodated salt but only a few of them have the facilities to assess the quality of the product. Assessment of the iodine content of commercially available iodinated salt products is important for proper program monitoring. According to the SLS guidelines, the recommended iodine content of edible salt in Sri Lanka should be 15-30 ppm. The aim of this study was to asses the quantity of iodine in edible salt available in the Kurunegala town area.

This study using biochemical methods was carried out during the period of November 2011 to March 2012. Details on salt brands and retail shops in the setting were collected through a surveillance and 5 brands of salt which included both powder and crystal forms were selected. Simple random method was used to select the shops for each brand. A total of 80 samples, 16 from each brand (4 from each shop) were selected for the study. Samples were analyzed in duplicate for iodine content using iodometric titration method. Details on each pack of salt were also recorded.

Only 61% samples had iodine content in the legal range whereas, 10% had lower and 29% had higher values. Variation of iodine was found within as well as between brands. Brand B had the highest samples (13.75%) within legal level and the average iodine amount was 25.84ppm. In brand A it was 11.25%. The other 3 brands possessed samples which had higher level of iodine than the legal level. Compared to the crystal form, the powder form had more samples within the legal range. They were 18.75% and 28.75% respectively. All the brands had mentioned necessary details such as iodine level, source, and instructions to the consumer. All the packs were stored inside the shops

Findings highlight that variation of iodine level between and within the brands are possible. Standardization of iodine in the salt is needed to improve the quality of salt to achieve the goal of elimination of Iodine deficiency disorders.