

Determination of Iodine and Heavy Metals in Two Brands of Iodised Salt

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Abstract : A study was conducted to investigate the storage stability of Mr Chef and Annapurna salts. The salts were bought from Mile 12 market in Lagos State and were stored for a period of six months. The stability of the iodine content was then investigated by storing some at ambient temperature (24-30°C) and some at atmospheric temperature (21-35 °C), and from each storage condition, a sample each was taken every month to analyze for the iodine and moisture contents. The result shows that there was a significant difference between Mr Chef and the standard and Annapurna and the standard. The iodine content of Mr Chef stored at ambient and atmospheric temperature decreases progressively from 48.70 ± 0.00 - 37.00 ± 0.00 and 47.60 ± 0.00 - 11.60 ± 0.00 respectively. And that of Annapurna at both ambient and atmospheric temperature also decreases progressively from 47.60 ± 0.00 - 36.60 ± 0.00 and 47.60 ± 0.00 - 10.60 ± 0.00 respectively. Also, the moisture content of both salts at the zero month to the sixth month both at room temperature and atmospheric temperature increases from 1.11 ± 0.00 - 1.70 ± 0.00 and 1.11 ± 0.00 - 2.40 ± 0.00 respectively. The results of the heavy metals shows that only Copper, Zinc and Cobalt were detected at the first and the sixth month in both Mr Chef and Annapurna which ranges from 0.15 ± 0.00 - 0.38 ± 0.00 and 0.18 ± 0.00 - 3.50 ± 0.00 respectively. Hence, the stability of iodine in salt is influenced by the storage conditions it is subjected to and the length of time it is been stored.

Keywords : salt, iodine, stability, ambient, atmospheric temperature

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