

A-46: Changes in the iodide content of leafy vegetables during food preparation

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In Sri Lanka, souring agents and heating are used in food preparations. The use of acidic souring agents and heat could cause the displacement of I⁻ as hydroiodic acid, which subsequently could be lost as iodine.

The main objective of this study was to investigate the probable losses in iodide in leafy vegetables, when in the form of salad or mallun and to recommend methods that could be used to minimise such losses. The leafy vegetables that were selected were Gotukola (*Centella asiatica*), Mukunuwenna (*Alternanthera sessilis*) and Radish (*Raphanus sativus*).

Salads were prepared by the addition of salt, scraped coconut and lime into vegetable (0.1 : 1 : 0.8 : 5) whilst malluns were prepared by addition of salt and scraped coconut into vegetables (0.1 : 1 : 5). The mallun preparations were heated in a covered vessel for 5 min. All these preparations, in triplicate, were used to estimate the iodide content using the iodide-selective ion electrode method. The total iodide, inclusive of the ingredients used to prepare foods and % I⁻ lost during preparation of foods were calculated.

Radish had the highest iodide with $7.03 \pm 0.08 \mu\text{g/g}$ of the edible portion, whilst Gotukola had the lowest with $0.63 \pm 0.01 \mu\text{g/g}$. Iodide lost during food preparation ranged from 60.5 ± 0.7 to $89.8 \pm 0.2\%$. The lowest percentage of iodide lost was in the Mukunuwenna mallun and the highest percentage lost was in the Radish salad preparation. The heat treated preparation showed lower percentage of iodide loss compared to the salad preparations.

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