

IS42. DETERMINATION OF Cu (COPPER) AND Fe (IRON) CONTENT IN SELECTED GREEN LEAFY VEGETABLES

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Green leafy vegetables are predominantly known for their high nutritional content, fibers, minerals, vitamins and antioxidants. They are mostly consumed for their health and nutritional benefits. However, both vital and lethal elements are present in vegetables, they can absorb and accumulate more essential metals from soil.

Copper and Iron are essential micronutrient obtained from vegetables, it acting as a ligand to many proteins and enzymes. The synergetic interaction of Cu and Fe is crucial in human health.

The aim of this study was to analyze the level of Cu and Fe by ICP-OES in seven type of green leafy vegetables collected from agricultural sites of Arak city in Iran.

Results (mean \pm SD) showed that Mint and Parsley are hyper accumulator of Cu and Fe with, 471 ± 73.38 for Cu and 2240.13 ± 4823.6 For Fe. The order of Cu concentrate in plant was Mint> Parsley> Tarragon> Coriander> Cress> Radish> Fenugreek varied 471.51 ± 73.38 to 391.68 ± 75.39 . The order for Iron was Parsley> Radish> Coriander> Cress> Fenugreek> Tarragon> Mint varied 2240.13 ± 4823.6 to 688.21 ± 182.21 ($\mu\text{g}/\text{kg}$). Our finding shows that vegetables are an important source of Fe and Cu in diet and Parsley have a high concentration of essential metals in green leaves. The concentrations of metals in all vegetable samples were found to be lower than FAO/WHO guidelines and it's to be safe for consumers.

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