

The Iron Boost: A Nutritional Snack with *Lepidium Sativum* and *Oryza Sativa*

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ABSTRACT

Introduction: Anaemia occurs when tissues cannot maintain a normal haemoglobin concentration, often due to deficiencies in iron, folic acid, vitamin B12, or folate. *Lepidium sativum* is rich in proteins, fatty acids, vitamins, minerals, and various bioactive compounds. Combined with rice flour, jaggery, almonds, and raisins, they serve as an excellent source of iron. Studies have shown that consuming these ingredients significantly improves haemoglobin levels in patients with iron deficiency anaemia.

Aim: This study aims to develop and standardise sticks using rice flakes flour, garden cress seeds, and nuts and also to assess the sensory characteristics of the developed sticks.

Materials and Methods: The study was conducted to develop a product from garden cress seeds and rice flake flour, jaggery and dry fruits. Garden cress seeds were soaked and rice flakes were dry roasted and ground into a fine powder and then combined into a dough using jaggery, raisins, almonds and water. Then, rolls were prepared using a sev-making machine and baked in the oven. This

was followed by the formulation of sticks and the optimisation of the product based on sensory properties. For sensory evaluation, the product was used in different variations. In T1- garden cress seeds (20 g), rice flour (60 g), jaggery (20 g), almonds (2.5 g), and raisins (2.5 g). In T2, garden cress seeds (25 g), rice flour (60 g), jaggery (20 g), almonds (2.5 g), and raisins (2.5 g), respectively, to develop sticks. The sensory evaluation was done by using a 9 point hedonic scale.

Result: The study revealed that T2 was found to be the most acceptable product in terms of taste, texture, colour, appearance and overall acceptability. The nutritional composition of sample of 100 g was (energy-423 kcal, carbohydrates-31.12 g, protein-31.64 g, fat-7.677, fibre- 4.36 g, moisture-10.44 g, iron-7.4 mg and ash content-2.6 g).

Conclusion: This study concluded that sample T2 can be used for the anaemic population, as it has high iron content.

Keywords: Anaemia, Garden cress seeds, Rice flaked flour

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