

# Development and Physicochemical Analysis of Value-Added Product (Savoury Biscuit) Using Iron-Rich Garden Cress Seeds

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## ABSTRACT

**Introduction:** This study focuses on the development and physicochemical analysis of a value added savory biscuit incorporating iron-rich garden cress seeds (*Lepidium sativum*) as a functional ingredient. Garden cress seeds, known for their high iron content, are explored as a potential natural fortification source to combat iron deficiency anaemia.

**Aim:** The primary objective was to develop a nutritious biscuit with enhanced iron bioavailability while maintaining desirable sensory attributes such as taste, texture, and appearance.

**Materials and Methods:** Garden cress seeds, are underutilised in food processing despite their nutritional benefits. By incorporating garden cress seed powder into biscuit formulations, this study seeks to develop a nutritious product that can be easily integrated into daily diets. The physico-chemical analysis of the biscuits included

measurements of moisture content, protein, fat, fibre, carbohydrate, and iron content. The moisture content was analysed to assess shelf-life stability, while the protein, fat, fibre, and carbohydrate levels were determined to ensure that the biscuits remained balanced in terms of macronutrients.

**Results:** The study demonstrates that the inclusion of garden cress seeds in biscuits can provide a novel and effective method for improving the nutritional profile of bakery products. This study also highlights the potential of using garden cress seeds as a sustainable, cost-effective fortification agent. Garden cress is relatively inexpensive and making it an ideal ingredient for fortifying in commonly consumed foods like biscuits, which are popular and widely consumed across different age groups.

**Keywords:** Fortification, Garden cress seeds, Physicochemical, Inexpensive, Savoury

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