

# Development of Plantain *Bhujia* for the Diabetic Population and Assessment of its Sensory Acceptability

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## ABSTRACT

**Introduction:** Plantain is an unripe banana a famous fruit from the southern region of India. They are a rich source of fibre, vitamins (A, B6, C, and K), potassium, magnesium, and antioxidants, as well as a good source of Resistant Starch (RS). RS is a type of starch that remains undigested in our small intestine and gets digested in the large intestine through the gut microbiome. There are four types of RS: RS type I, RS type II, RS type III, and RS type IV. The plantain contains RS type II, a granular starch, and is present in raw starchy foods.

**Aim:** This study aims to develop plantain bhujia as a nutritious snack for the diabetic population, and assess its sensory acceptability.

**Materials and Methods:** Plantain, Gram flour, and spices were sourced locally. Four samples (T0: 100%-gram flour, T1: 70% plantain

& 30%-gram flour, T2: 65% plantain & 35%-gram flour, T3: 60% 15 plantain & 40%-gram flours) were prepared by grating plantain, mixing it with gram flour, salt, red chili powder, and turmeric. The mixture was kneaded into a dough and extruded to make bhujia by frying. Sensory evaluation was done by a 9-point hedonic scale for all four samples.

**Results:** Sensory evaluation of samples T0, T1, T2, and T3 by 10 trained panelists using a 9-point hedonic scale showed that T2 had the highest acceptability, with a mean score of  $7.7 \pm 0.7$ .

**Conclusion:** This study concludes that sample T2 (65% plantain and 35%-gram flour) had the best sensory acceptability and the processing was much easier than the other preparation samples.

**Keywords:** Cooking methods, Diabetic patients, Plantain, Resistant starch

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