

# Fabrication of a device to measure stickiness of rice for cracker production

Nadeesha M. Gunaratne, Thejani M. Gunaratne, S. B. Navaratne

**Abstract** - This study includes fabrication of a device named 'stickiness meter' to determine the stickiness of rice which is a major requirement in developing good quality rice crackers. This parameter should be measured in incoming rice prior to production of rice crackers in industrial level to avoid wastage. The device was developed using stainless steel. It consists of two discs to place cooked rice, a compressing wheel to compress the discs, and a horizontal scale to get the reading of the force required to separate the discs. The optimum cooking time of rice was measured by cooking rice and pressing in between two glass slides until the opaque core disappears. The diameter of the discs was determined by placing 5g of cooked rice on a paper and drawing the outline. The clearance between the discs and the length of horizontal scale were determined through trial and error. Local rice samples AT 306, AT 405 and Samba were tested using the 'stickiness meter'. The results revealed that the optimum cooking time was 15 minutes. The discs needed a diameter of 8cm and a clearance of 0.2mm. The stickiness values of AT 306, AT 405 and Samba were 9kg, 10.5kg and 0.5kg respectively.

**Index terms** – Amylose, Cooking time, Gelatinization, Rice varieties, Rice crackers, Stickiness, Stickiness meter

