Quality and sensory evaluation of different aromatic rice varieties for rice milkshake production

L. P. R. V. Piyumali[1], M. H. U. Siriwardana[2], J. A. N. Gimhani[1]

[1]*Department of Food Technology, University of Colombo, Institute for Agro-Technology and Rural Sciences, Hambanthota, Sri Lanka*

[2]*Rice Research Station, Ambalanthota, Sri Lanka*

This study focuses on the production of a gluten-free, non-dairy milkshake using three aromatic white rice varieties AT 306, AT 309, and BG 300. In this study, carried out at Rice Research Station, Ambalanthota, the products were evaluated based on sensory attributes, nutritional content, and shelf life. The milkshake was made using 85.2 g rice powder, 203.4 g sugar, 0.5 g salt, and 2 ml vanilla in one liter of water. Sensory analysis identified AT 306 as the most acceptable variety from appearance, aroma, and overall acceptability points of view. This suggests that the unique characteristics of this rice variety contributed to an enhanced sensory profile compared to the other varieties, AT 309 and BG 300, both of which were moderately accepted. The experiment was conducted using a Randomized Complete Block design. The protein content in the formulated milkshake was negligible, and thus, fortification can be necessary to improve its nutritional status. AT 306 showed antioxidant activity of 2.361%, amylose content of 0.49%, and minimal iron (0.000387%) and ash (0.000289%). Shelf-life studies revealed that the milkshake was stable for a period of up to 12 days under refrigerated (10°C) conditions but only 2 days at ambient room temperature. The findings show that AT 306 is the most suitable variety for rice milkshake production and holds promising sensory and shelf-life characteristics when stored refrigerated.

Keywords: *Nutrition, Rice milkshake, Sensory evaluation*