

## Acceptability, nutritional and non-nutritional components of rice [*Oryza sativa* (L.)] and pigmented corn [ZEA MAYS (L.)] grits mix

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Three rice varieties namely, Lian (NSIC Rc98), Tubigan 18 (NSIC Rc222), and Mabango 3 (NSIC Rc218) were combined with Camotes (CGUARD-N68) corn grits. The gel consistency of the samples ranged from 28 to 59 mm (hard to medium). On the other hand, the gelatinization temperature for Mabango 3 was low (<70°C) and intermediate (70°- 74°C) for Tubigan 18, Lian, and Camotes. Cooking water, cooking time, and height increase were directly proportional to the amount of corn. The water absorption index (WAI) and water solubility index (WSI) increased with greater amounts of corn. Sensory evaluation results revealed that Lian-Camotes (90:10, 80:20, 70:30), Tubigan 18-Camotes (90:10, 80:20, 70:30), and Mabango 3-Camotes (90:10, 80:20,70:30) were the top nine most acceptable mixtures. Proximate

compositions between raw and cooked samples were not significantly different from each other. Minerals, essential amino acids, phytochemicals, and antioxidant capacity significantly decreased after cooking. Starch and amylose significantly increased after cooking. On the other hand, amylopectin decreased after cooking. Correlation analysis also found that amylopectin has a strong positive correlation with Estimated Glycaemic Index (EGI). Based on CODEX Alimentarius, EAR (Estimated Average Requirements), and RENI (Recommended Energy and Nutrient Intakes), rice and pigmented corn grits mix is a good source of protein, zinc, phosphorus, and energy and thus, can contribute to food and nutrition security.

### Biography

Theresa Krista B Jolejole has completed her Master of Science in the Field of Applied Nutrition from University of the Philippines, Philippines and Bachelor of Science in the field of Nutrition from University of the Philippines, Philippines. She worked as Science Research Analyst at National Institute of Molecular Biology and Biotechnology – UPLB, Philippines during the year of September 2014-February 2016.

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