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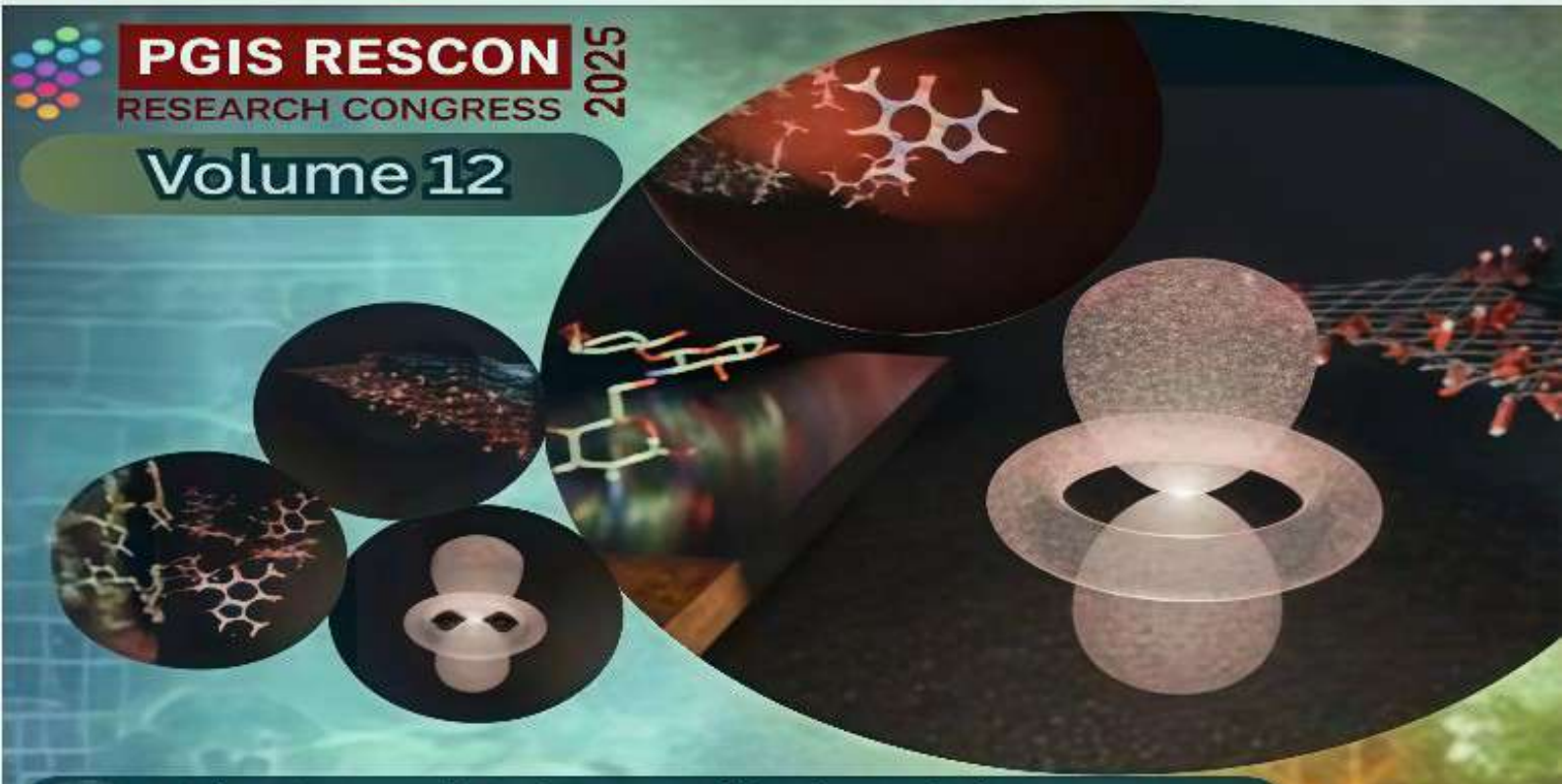

- AI in Natural Sciences / Industrial Aspects
- Earth & Environmental Sciences
- ICT, Mathematics & Statistics
- Life Sciences
- Physical Sciences
- Science Education

PROCEEDINGS

7th and 8th November 2025

RESCON 2025 PS 46

TWO NOVEL BREAD SPREAD FORMULATIONS PREPARED WITH *Terminalia catappa* L. KERNEL AND JUMBO PEANUT: PROXIMATE COMPOSITION AND FATTY ACID PROFILE

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The increasing demand for plant-based food products has motivated exploration of underutilized crops for innovative formulations. This study evaluated the proximate compositions and fatty acid (FA) profiles of two novel plant-based bread spreads (BS) developed using seed kernels of tropical almond (*Terminalia catappa* L.) yellow cultivar and jumbo peanut (*Arachis hypogaea*) (JP). In this study, tropical almond kernels with seed coat and without seed coat were separately blended with JP in varying proportions (w/w, 100, 80, 60, 40) to prepare two series of blends. These two blends were then used to prepare two types of BS. The BS developed were applied on the surface of sliced-bread to assess their sensory attributes by employing a 30-member panel of volunteers. The best BS formulations selected based on sensory assessment from each type of BS were subsequently analysed for proximate composition (according to AOAC methods) and FA profile. Based on the appearance, colour, aroma, flavour, texture, and overall acceptability, BS formulation of 60% yellow tropical almond with seed coat and 40% JP and BS formulation of 80% yellow tropical almond without seed coat and 20% JP were selected as the best. The best BS formulations were found to contain moisture (5.40 – 5.59)%, fat (47.5 – 58.57)%, and protein (26.44 – 27.34)% contents within the appreciable range, indicating the nutritional richness of the formulations. Out of the twelve FA detected in the samples, palmitic acid (30.96 – 33.53)% was the major saturated FA while oleic (34.40 – 36.02)% and linoleic (25.33 – 26.21)% acids were dominant unsaturated FAs. These results suggest that the formulated spreads are not only rich in energy and essential nutrients but also exhibit a favorable FA profile.

Keywords: Fatty acid profile, Jumbo peanut, Plant-based bread spread, Proximate analysis, Sensory evaluation