antioxidant properties of millet products. Germination can have diverse effects on the polyphenol content of seeds or grains, such as activation of enzymes, changes in polyphenol composition, release of bound forms, and environmental influences. The highest total polyphenols content (6.03 mg GAE/g) was found in the sample of A1, in which the proportion was 70:30 of Ragi: Wheat flour, respectively. The total polyphenols content in the sample of B1 was 3.9 mg GAE/g, where the proportion was 50:50 of Ragi: Wheat flour, respectively. The total polyphenols content of all the breads was significantly higher than that of the control sample (2.2 mg GAE/g).

Phytate is the salt of phytic acid, myo-inositol-1,2,3,4,5,6 hexakisphosphate, which is widely distributed in the plant kingdom and serves as the major form of stored phosphorus and minerals. The phytate content (0.13mmol/100g) was found in the sample of A1, in which the proportion was 70:30 of Ragi: Wheat flour, respectively. The total phytate content in the sample of B1 was 0.2 mmol/100g, where the proportion was 50:50 of Ragi: Wheat flour, respectively. The phytate content of all the bread was significantly lower than that of the control sample (0.7 mmol/100g).

Tannins are astringent, bitter plant polyphenols that reduce the ability of humans and animals to digest protein. Processing methods like germination, soaking, roasting, fermentation, and dehulling can eliminate these antinutrients. The total tannins content of 0.59 mg GAE/g was found in the sample of A1 in which proportion was 70:30 of ragi: wheat flour respectively. The total tannins content in the sample of B1 was 0.54 mg GAE/g, where the proportion was 50:50 of Ragi: Wheat flour, respectively. The total tannins content of all the breads was significantly lower than that of the control sample (0.79 mg GAE/g).

Demand for consistently high food quality is rising, and consumers expect it to remain high between purchase and consumption. Labeling requirements reflect this need, with "use by" and "best before" dates depending on shelf life. Chemical and sensory changes are more significant for products with a medium to long shelf life, while microbiological changes are more significant for those with a short shelf life. The shelf life of the control sample was eight days, while the other 2 proportions of breads, i.e., 70:30 and 50:50 breads, had a shelf life of up to 6 days. Sample A1 had the maximum amount of microbial population at the end of day 8, while Sample B1 had a comparatively less microbial population.

Overall, the result indicated that germination plays a crucial role in enhancing nutritional quality, reducing anti-nutrients, and improving the functional properties of finger millet. Incorporating germinated finger millet into the diet can provide a more nutrient-rich and easily digestible food option, promoting better health and nutritional outcomes.

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Abbreviations: GAE: Gallic Acid Equivalents, AOAC: Association of Official Agricultural Chemists, DTL: Drift Tube Linac, DPHH: 2,2-Diphenyl-1-picrylhydrazyl, AAE: Ascorbic Acid Equivalent, FAE: Ferulic Acid Equivalent

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