

Physico-chemical Properties of Flour, Dough and Bread from Wheat and
Hydrothermally-treated Finger Millet

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Abstract

Hydrothermally-treated (HTT) finger millet was prepared by tempering the grains twice with water (10:1) followed by incubation at about 25–30°C in a woven polypropylene sack for 10 days. Hydrothermally-treated finger millet was darker and had higher α -amylase activity and lower starch digestibility than native (NAT) grains. The HTT finger millet was composited with wheat flour and used to prepare bread. Composite dough had higher dough stability, dough development time and degree of softening but lower dough energy, extensibility and resistance to extension than WHE dough. The higher specific volume and lower crumb firmness and chewiness of WHE-HTT compared to WHE-NAT bread was attributed to the high α -amylase activity and water absorption capacity of HTT finger millet. Wheat-HTT bread had higher dietary fibre, phytate and phenolic acid content but the same starch and protein digestibility as WHE bread.