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Bioactive Compounds Characterization of Cereal-based Porridge Enriched with Cirina Forda

Authors : Kunle Oni

Abstract : This study investigated the bioactivity potentials of porridge from yellow maize and malted sorghum enriched with Cirinaforda.All the samples were analyzed using standard methods.Results showed that the highest value 217.03µmolTEAC/100g, 43.3 mmol Fe2+ /100g, and 35.56% for DPPH, FRAP and TBARS respectively were reported in sample 50FYM+20MS+30CF, while the lowest value 146.10µmolTEAC/100, 20.18±0.11 mmol Fe2+/100g and 13.25% for DPPH, FRAP and TBARS were reported in the control sample.The oxalate and tannin contents were lowest in sample 50FYM+20MS+30CFbutOxalate was highest in the control sample while tannin was highest in sample 60FYM+20MS+20CF.The phytate content was highest in the 60FYM+20MS+20CF mixture (2.32 mg/100g) and lowest in the control (100% FYM) porridge (2.20 mg/100g).The result also showed that the total phenolic content was highest in the 60FYM+20MS+20CF mixture (318.28 mg GAE/100g) and lowest in the50FYM+30MS+20CF mixture (264.18mg GAE/100g).The total flavonoid content had the50FYM+20MS+30CFmixture having the highest content (189.31mg RE/100g) and the 60FYM+20MS+20CF mixture having the lowest (90.10mg RE/100g). The enrichment of the porridge with C. fordaincreased the concentration of various bioactive compounds compared to the control sample. The identified compounds cinnamic acid, methyl ester, 10-Methyl-E-11-tridecen-1-ol propionate, methaqualone,3-(2-Hydroxy-6-methylphenyl)-4(3H)-quinazolinone, and oleic acid

Keywords : bioactive compounds, characterization, cereal-based porridge, Cirina forda
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