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Purification, characterization and antioxidant properties of a novel polysaccharide extracted from *Sorghum bicolor* (L.) seeds in sausage

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Abstract

A novel polysaccharide named *Sorghum* Water-Soluble Polysaccharide (SWSP) was purified from *Sorghum bicolor* (L.) seeds. It was structurally characterized by high performance liquid chromatography (HPLC), thin layer chromatography (TLC), Fourier transform-infrared spectroscopy analysis (FT-IR), X-ray diffraction (XRD) and mass spectroscopy (MS). HPLC and TLC showed that SWSP is a glucose polymer. The FT-IR spectrum proved the polysaccharide characteristic band of SWSP. XRD and microscopy analyses revealed that SWSP is a semi-crystalline polymer. Functional properties of SWSP were determined based on Water Holding Capacity (WHC), Oil Holding Capacity (OHC) and

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