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Reactive extrusion preparation and characterization of canola meal composites reinforced by a novel polymeric chain extender

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ABSTRACT

To increase the usage value of canola meal (CM), a by-product of canola oil extraction, poly (styrene-co-maleic anhydride-co-glycidyl methacrylate) (PSMG) was prepared and used as a novel chain extender to modify CM. FTIR tests showed that cross-linking took place in the CM matrix and PSMG was covalent bonded with canola proteins; furthermore, the surface of fibers present in the CM composite was covered by proteins, attributed to the reactivity of anhydride groups on PSMG. The modified CM composites showed more apparent amorphous characteristic with the addition of PSMG,

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