

Functional properties and characterization of dietary fiber from mangifera pajang kort. Fruit pulp

ABSTRACT

A dried high fiber product from bambangan (*Mangifera pajang* Kort.) fruit pulp was prepared and evaluated for proximate composition, functional properties, and soluble and insoluble dietary fiber composition. *Mangifera pajang* fibrous (MPF) consisted of 4.7% moisture, 0.8% fat, 4% protein, and 30 mg total polyphenol per g of dry sample, and 9, 79 and 88% soluble, insoluble and total dietary fiber, respectively. Water holding capacity, oil holding capacity, swelling, and solubility were found to be 9 g/g dry sample, 4 g/g dry sample, 16 mL/g dry sample, and 11%, respectively. The glucose dialysis retardation index of MPF was approximately double that of cellulose fiber. Soluble dietary fiber contained mannose, arabinose, glucose, rhamnose, erythrose, galactose, xylose, and fucose at 1.51, 0.72, 0.39, 0.16, 0.14, 0.05, 0.04, and 0.01%, respectively, with 5.8% uronic acid, while insoluble dietary fiber was composed of arabinose (18.47%), glucose (4.46%), mannose (3.15%), rhamnose (1.65%), galactose (1.20%), xylose (0.99%), and fucose (0.26%) with 15.5% uronic acid and 33.1% klason lignin. These characteristics indicate that MPF is a rich source of dietary fiber and has physicochemical properties which make it suitable as an added ingredient in various food products and/or dietetic, low-calorie high-fiber foods to enhance their nutraceutical properties

Keyword: *Mangifera pajang*; Physicochemical properties; Composition; Characterization.