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PATCHAREE SATRA: FORMULATION OF DIETARY FIBER-ENRICHED  
BAKERY PRODUCTS CONTAINING GUAVA POMACE AND GUAVA SEEDS.  
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The development of fiber rich food has increased recently because low intake of dietary fiber has been found to cause many diseases (cardiovascular diseases, colon cancer, diabetes, and gastrointestinal disorders). Guava pomace and guava seeds, by-products from the guava juice industry in Thailand, should be considered as a source of fiber because of the high dietary fiber content. Hence, the present study aims to use these by-products as functional ingredients for addition into bakery products which are common food items. Dried guava pomace (DGP) and dried guava seeds (DGS) were prepared by washing, drying, and milling. Then, the properties and composition including total dietary fiber (TDF), insoluble dietary fiber (IDF), and soluble dietary fiber (SDF) were determined. The water holding capacity was 4.61 and 3.61 g/g dry sample for DGP and DGS, respectively. TDF content of DGP and DGS was 65.8% and 64.4% wet basis, respectively. The major TDF component of DGP and DGS was insoluble dietary fiber. When the DGP was used to substitute for wheat flour in preparing cookies, cake and bread, it was found that DGP could be substituted for wheat flour at a level of 40%, 40%, and 15%, respectively whereas DGS could be substituted at a level of 60%, 55%, and 20%, respectively. The major reasons for quality differences between dietary fiber-enriched products and control were the crumb characteristics i.e. grittier and coarser texture, darker color and slightly off flavor. Additionally, dietary fiber-enriched products yielded lower volume and higher moisture content. Nevertheless, these dietary fiber-enriched products were acceptable to the panelists with scores being close to 6.00 (like slightly) on a nine-point hedonic scale. The dietary fiber content of the products was increased by 6-10 times for dietary fiber-enriched cookies, 4-6 times for dietary fiber-enriched cake, and 2-3 times for dietary fiber-enriched bread when compared with control formulas.