Title	Chemical composition and physical characteristics of dietary fibers from Asian pears of 3 cultivars during growth period
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Abstract

After Asian pears were processed, peel of the pears remained as a by-product that may be used as a source for functional ingredients or nutraceuticals. Therefore, in this study, peels from some cultivars of the pears during growth periods were analyzed for investigating composition and physical characteristics of dietary fibers (DF). The cultivars of Asian pears (*Pyrus pyrifolia*) were Pungsoo, Shingo, and Chuhwang. The content of neutral detergent and acid detergent fibers (NDF and ADF) was analyzed by the method of Van Soest and lignin content was determined by the method of Tappi. The content of Uronic acid was determined by the method of McCready and color was measured by a Colorimeter. Density of dietary fibers was measured by Parrott method and water holding capacity (EHC) and oil absorption was done by the method of Chen *et al*. The content of NDF was 71.49-90.29% and ADF 51.50-66.50% and they were decreased during growth. Lignin content was 21.29-26.21% and changed a little during growth. Uronic acid content was 29.82-94.61% and increased much during growth. The direct density of the extracted DF is 322-412 mg/ml and bulk density was 357-493 mg/cc. WHC of the extracted DF was 3.11 – 6.03 g water / g solid and oil absorption 1.98-2.57 g oil/g sample. WHC of DF extracted from Asian pear peel of 3 cultivars was much lower at DF from the young than at ones from the unripe and the ripe, while oil absorption was reversed. WHC of DF from the peel was higher than oil absorption. Major DF of Asian pear peels was cellulose, hemicellulose and lignin, insoluble DF. In the peel of the pears, a by-product when processed, could be a good source to produce dietary fibers a food ingredient.