Effect of superheated-steam roasting on physicochemical properties of peanut (Arachis hypogea) oil

ABSTRACT

Peanut (Arachis hypogaea) is an important source of protein and lipid globally. The effect of superheated-steam roasting on quality of peanut oil was evaluated based on physicochemical quality parameters. Three roasting temperatures (150, 200, and 250°C) were used for different periods of roasting time and the obtained results were compared with those of conventional roasting. At 250°C, superheated-steam roasted peanuts yielded more oil (26.84%) than conventionally roasted peanuts (24.85%). Compared with conventional roasting, superheated-steam roasting resulted in lower oil color, peroxide, p-anisidine, free fatty acid, conjugated diene and triene, and acid values and higher viscosity and iodine values in the roasted peanut oil. These values were significantly different from each other ($p<0.05$). The fatty acids in roasted peanut oils were affected by roasting temperature and time for both the roasting modes. The superheated-steam technique can be used to roast peanuts while maintaining their favorable characteristics.