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.