

Physicochemical properties of *Cucumis melo* var. *inodorus* (honeydew melon) seed and seed oil

ABSTRACT

Cucumis melo var. *inodorus* seeds were found to contain 4.5% moisture, 25.0% crude fat, 25.0% crude protein, 23.3% crude fiber, 2.4% ash and 19.8% carbohydrate. The iodine and saponification values, and unsaponifiable matter and free fatty acid contents of freshly extracted honeydew melon seed oil were 153.4 g I₂/100 g oil, 210.2 mg KOH/g oil, 0.9 and 2.5%, respectively. The oil had a color index of 1.6Y + 0.4R, and had 10 fatty acids, of which 86.1% were unsaturated. Linoleic acid predominated with 69.0% followed by oleic acid (16.8%) and palmitic acid (8.4%). LLL (24.9%), OLL (21.5%), PLL (15.9%) and POL (12.4%) (where L, O, P and S denote linoleic, oleic, palmitic and stearic acids, respectively) were the major triacylglycerols present. The melting and crystallization temperatures were -5.12 and -59.01°C, respectively. Electronic nose analysis showed the presence of more volatile compounds compared to refined sunflower oil, an oil rich also in linoleic acid.