## Abstract:

The objective of this research was to establish relations between instrumental measurements and the consumer's acceptability of tomatoes. A trained sensory panel, a consumer panel and instrumental analysis were used to evaluate and compare eight different tomato cultivars. One of the instruments examined during this research was near infrared spectroscopy. The latter is a non-destructive technique based on the molecular dependent absorption and reflection of near infrared light and has already proved its potential for other horticultural products (Kays, 1999) like apple fruit (Peirs et al., 2001; Lammertyn et al., 2000).