

Abstract

The purpose of the research was to study the behaviour of several *Acer* cultivars: *Acer palmatum* 'Dissectum Atropurpureum' and *Acer platanoides* 'Crimson King', 'Drummondii' and 'Globosum', during the first subculture of the in vitro multiplication phase. There were used explants from the initiation phase and passed on the multiplication nutrient media. The tested nutrient media were MS, DKW and WPM and had a different content of growth hormones. In order to determine the multiplication rate, the influence of zeatin and thidiazuron was tested in concentration of 1.5 mg/l, on a constant level of indole-butyric acid (0.5 mg/l). In the growing chamber there was a constant temperature and a photoperiod of 14 hours, at a luminosity of 2500 lucs. The multiplication rate (microshoots/explant) for the four genotypes was determined from the observations and registered data.

Key words: *Acer palmatum* 'Dissectum Atropurpureum', *Acer platanoides* 'Crimson King', *Acer platanoides* 'Drummondii', *Acer platanoides* 'Globosum', multiplication rate