

P15

Effects of Plant Growth Regulators on Multishoot initiation from Garlic (*Allium*) Somatic Callus

Soontae Kwon and Eun Ah Jung

Department of Applied Life Science, Andong National University, Kyungpook
760-749, Korea

This experiment has been done to determine the effects of growth regulators(BAP, kinetin, IAA, 2,4-D and NAA) on the callus induction and micropropagation of *Allium sativum* L. using leaf explants. Optimal level of growth regulator for callus initiation from leaf explants was 1 mg/L 2,4-D single treatment in Murashige and Skoog(MS) basal medium supplemented with 30g/L sucrose and 10g/L agar. Callus initiation from leaf explants was significantly decreased by the addition of cytokinins(BAP or kinetin) to 2,4-D supplemented media. Effects of various concentrations of cytokinins and auxins on plant regeneration from calli, which were derived from leaf explants, were determined. Addition of IAA to regeneration-media markedly inhibited shoot formation from callus, whereas this hormone significantly stimulated root initiation from callus. Optimal combination of growth regulators for multishoot initiation from callus was NAA 3.0 mg/L + kinetin 3.0 mg/L in MS medium supplemented with sucrose 30 g/L. To obtain multishoots from callus, addition of kinetin was more effective than addition of BAP to NAA supplemented media. In this experimental condition, we were able to produce more than 250 individual healthful shoots from 9cm petridish culture of leaf derived callus.