

Influence of Elicitors on Callus Growth and Active Ingredient in Echinacea purpurea

Authors : Mohamed Abdelfattah Meawad Hamza, H. A. Bosila, M. A. Zewil

Abstract : This research aims to study the effect of different sources of elicitors for increase growth and active ingredients in callus of Echinacea purpurea plant. Callus that have been obtained from leaf explant, was used to conduct the following studies. A study of the impact of both the phenylalanine and tyrosine (50, 100,150 and 200 mg/l.) individually and casein hydrolysate (100, 200 and 300 mg/l.) supplemented to MS medium. Results show that Casein hydrolysate 100 mg/l. has achieved the better results in both callus fresh weight 1.881 g/explant after 8 weeks of the incubation period and callus growth rate 0.398 g/explant after 6 weeks of the incubation period, while gave add 200 mg/l. The best results in total carbohydrate 2.444 mg/ 100 mg dry weight. Phenylalanine 150 mg/l. has achieved the best results in callus dry weight 0.156 g/explant after 8 weeks of incubation period. Tyrosine 200 mg/l. recorded the best result for positive production of caffeic acid 0.460 mg/ 100 mg dry weight after 4 weeks incubation period.

Keywords : tissue culture, echinacea, tyrosine, casein

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