

Abstract

Caper (*Capparis spinosa* L.) pride of perennial shrub and perennial herbs in the summer is hot and dry climates growing. Despite of demand for mass propagation of this plant, there is little information on propagation techniques. A factorial experiment was conducted in a completely randomized design to provide the best medium for callus, the cell suspension, shoots and roots of plants caper be detected in vitro. According to the tests, the best medium for callus each explant was determined. The percentage callus explants, explants flag in all areas callus highest percentage (100%), respectively. callus best medium for the average wet weight of callus was MS medium containing 1 mg/l of Kin with 0.02 mg/l of NAA and average dry weight of callus, this medium with MS medium containing 3 mg/l of NAA with 0.5 mg/l of BAP were found. All medias for callus mean total percentage were optimal. The best medium for shoots was MS medium containing 2 mg/l BAP and best rooting medium was MS medium containing 1 mg/l of NAA and the best cell suspension medium was MS medium containing 3 mg/l of NAA and 0.5 mg/l of BAP. The rutin of the sample cell suspension was measured.

Keywords: *Capparis spinosa*, Callus, suspension cell, regeneration, in vitro culture.



University of Zabol
Graduate school
Faculty of Science

Department of Agriculture

Supervisor:

Dr. Leila Fahmideh

Dr. Fatemeh Benakashani

Advisers:

Dr. Mahmoud Solouki

M.Sc. Reza Bagheri

By:

Mozhdeh Sheikhi Hamouleh

January 2015