

ROSEUS

CATHARANTHUS

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CATHARANTHUSROSEUS

Catharanthusroseus.

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3,46±0,13 . 0,1 / 6,03±0,24 . , 0,2±0,007⁻¹

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ABSTRACT

Course work 59 sec., 9 fig., 1 tab., 62 of the sources

IMPACT ON CYTOKININ GROWTH CHARACTERISTICS AND ACCUMULATION OF PHENOLIC COMPOUNDS IN CALLUS CULTURES *CATHARANTHUS ROSEUS*.

The objects of study were fotomiksotrofnaya callus tissue *Catharanthusroseus*.

The aim of this study was to evaluate the effect of 6-benzylaminopurine and kinetin on growth performance and biosynthesis of phenolic compounds in fotomiksotrofnoy *Catharanthusroseus* callus cultures.

The main methods of the research is to determine the growth index, specific growth rate and doubling time of the biomass. Also, accumulation of phenolic compounds, flavonoids and anthocyanins.

As a result of the work it found that maximum cell growth activity of callus *Catharanthusroseus* observed using BAP 2 mg / l and is relative units $8,09 \pm 0,5$, $0,27 \pm 0,02$ day⁻¹, 2, $59 \pm 0,17$ days. index growth, the specific growth rate and doubling time of the biomass, respectively. When using kinetin maximal stimulation of growth processes observed at a concentration of 0.1 mg / l and is $6,03 \pm 0,24$ rel. units, $0,2 \pm 0,007$ d⁻¹ and $3,46 \pm 0,13$ days. index growth, the specific growth rate and doubling time of the biomass sootvetstvenno. Naibolshee total content of flavonoids and phenolic compounds in callus cells of *Catharanthusroseus* is observed when the incubation medium at a concentration of BAP 0.1 mg / l. Increasing the concentration of BAP and 2 mg / L leads to a reduction in the amount as the phenolic compounds and flavonoid. Kinetin in the culture medium composition stimulates the accumulation amount of flavonoids and phenolic compounds in concentrations of 0.1 and 2 mg / l. The correlation between the accumulation of phenolic compounds and flavonoids in the callus cells cultured *Catharanthusroseus* in media with different composition of cytokinins - BAP and kinetin. The maximum accumulation of anthocyanins observed in callus tissues *Catharanthusroseus*, cultured in media in the presence of BAP in concentrations of 0.1 and 1 mg / l. Among the investigated cytokinin most optimal for the growth and accumulation of phenolic compounds in the callus tissue is *Catharanthusroseus* BAP concentrations of 2 and 0.1 mg / l, respectively.