

عنوان مقاله:

(Phytochemical compounds of in vivo and in vitro organs of peanut (*Arachis hypogaea* L

محل انتشار:

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نویسندگان:

Babak Delnavaz Hashemloian - Department of Plant Biology, Agriculture Faculty, Saveh Branch, Islamic Azad University, Saveh, Iran

Azra Ataei Azimi - Department of Biology, Science Faculty, Tehran Markazi Branch, Islamic Azad University, Tehran, Iran

Reza Rezakhanlu - Department of Agriculture, Agriculture Faculty, Saveh Branch, Islamic Azad University, Saveh, Iran

خلاصه مقاله:

In this study, peanut explants of (*Arachis hypogaea* L.) were cultured with hormones to obtain regenerated organs. Oil and protein from organs were extracted with organic solution and buffer. Polyphenol oxidase and peroxidase activities were measured at $\Delta 10$ and $\Delta 20$ nm respectively. Fatty acids (FAs) were analyzed by GC-MS. Regenerated organs contained $10.5-41\%$ of oil and $0.96-16.9\%$ of protein. The shoots and seeds contained 15 and 57% of oil and 18.1 and 26.1% of protein. Peroxidase activity of the seeds and shoots was 11 and 27.4 mg (gp.min) $^{-1}$. Peroxidase activity of regenerated organs was $73.6-397.5$ mg (gp.min) $^{-1}$. Polyphenol oxidase activity of seeds and shoots was between 3.4 and 8.7 mg (gp.min) $^{-1}$. Polyphenol oxidase activity of regenerated organs were $9.6-72.6$ mg (gp.min) $^{-1}$. In the all samples were found $2-13$ FAs. Oleic was main FA of seeds and some regenerated organs. In the shoots, roots and regenerated shoots, main FA was linoleic acid. The hormones have shown positive effects on enhancing the production of certain fatty acids. The results showed that hormones including cytokinin (BAP) along with some auxins (IAA, NAA and $2, 4-D$) at concentrations of $0.25-0.5$ mg/L affect the organogenesis and the phytochemical composition of peanut.

کلمات کلیدی:

Oil, Organogenesis, Peroxidase, Polyphenol oxidase, Hormone, Oil, Organogenesis, Peroxidase, Polyphenol oxidase, Hormone

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