

ABSTRAKT

***Silybum Marianum in Vitro* – the Influencing of the Production of Secondary Metabolites**

Elicitation is one of the methods that can be used to increase production or accumulation of secondary metabolites. The present study investigates the effect of 6, 12, 24, 48, 72 and 168 hours lasting impact of three concentrations of the abiotic elicitor methylviologen on the production of flavonolignans by the callus and suspension culture of *Silybum marianum*. The culture was cultivated on a Mursashige-Skoog medium with the addition of 10 mg/l of α -naphthylacetic acid. The content of flavonolignans was determined by HPLC. The maximal content of flavonolignans (0,01%), was proved when using the concentration of methylviologen $c_2 = 2,1929 \cdot 10^{-4}$ mol/l in callus cultures during 6 hours. In contrast to the callus culture, the production of flavonolignans in suspension culture was influenced by elicitation only in a minimal extent. It was interesting to detect a rising content of the flavonoid taxifolin for various concentrations of methylviologen by callus and suspension cultures of *Silybum marianum*.