

***In vitro* cultures of medicinal plants – IV.**

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Elicitation is one of the methods which can effect the production or accumulation of secondary metabolites in plant cultures. The effect of 6, 12, 24, 48, 72 and 168 hours influence by three concentrations of the abiotic elicitor methylviologen (paraquat) on the rutin production by *Fagopyrum esculentum* Moench. callus and suspension culture was monitored in this study. The *in vitro* culture was cultivated on Murashige-Skoog medium with the addition of 10 mg/l of dichlorophenoxyacetic acid (2,4-D) as a growth regulator. The content of rutin was determined by HPLC. The maximal content of rutin in callus culture (0,25 %) was demonstrated after 72 hours of methylviologen elicitation ($c_1 = 2,1929 \cdot 10^{-3}$ mol/l). The maximal content of rutin in suspension culture (0,02 %) was demonstrated after 24 hours of methylviologen elicitation ($c_3 = 2,1929 \cdot 10^{-5}$ mol/l).