

Abstract

Blind family with the scientific name *Capparis spinosa* belong to the *Cobria* family with ingredients flavonoid, saponins, essence, pectin, resins, glycoside. One of flavonoids in *spinosa*, is quercetin. Quercetin during a biosynthetic pathway (phenyl propanoid) quercetin hydroxy freedom can be obtained from flavonol synthase enzymes (FLS). In this study the expression of flavonol synthase under the influence of manganese and acid jasmonic in *spinosa* as a factorial experiment in a complete block design with 3 replication are studied. In order for the germination of seeds of blind patients using chilling and heating, seeds blind and plastic pots after the emergence of the seedling section consists of 2 stage air plant in seedling before flowering by manganese concentration of 80ppm and jasmonic acid was reduced to 50micro from 48 and 72 hours was harvest. After harvesting the leaves to extract RNA extraction kit according to the instructions RNA (Dena EPA) was used proposed the manufacturer. Corbett Rotor Gene 3000 were using for real time PCR techniques. The results are based on melting curve analysis and charts represent different stage of amplification using $\Delta\Delta Ct$ and results showed that the presence of manganese and jasmonic acid in the production of reactive oxygen species so that plants with increased expression of other genes in the biosynthesis of flavonoids and increasing flavonoid content is to reduce the resulting tensions according to *spinosa* treatments on the treatment applied jasmonic and says that the treatment of manganese in the 48 hours after applying better respond to the increased expression has been shown and treatment in interaction effect of jasmonic+manganese appropriate increase compared to control has shown, on the other hand 72 hours of the treatment period had a significant reduction.

Key words: *Capparis spinosa*, Gene Expression, Flavonol Synthase, Quercetin.



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**Flavonol synthase (FLS) gene expression using manganez and
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