

ABSTRACT

Rafii Satria Utama 24020119120023. **Effect Of Coconut Water In MS Media On Shoot Growth From Cormus Saffron (*Crocus sativus* L.) Explants In vitro.** Biology Laboratory of Plant Structure and Function, Department of Biology, Faculty of Science and Mathematics, Diponegoro University, Semarang, under the guidance of Nintya Setiari and Sri Haryanti.

Saffron (*Crocus sativus* L.) is a herbal plant that has been used as a medicine for 90 diseases including asthma, anti-cancer, expectorant, and anti-hyperlipidemia. Saffron is a sterile plant with triploid chromosomes, so the application of the tissue culture method is an alternative for cultivating saffron. The types of media used are Murashige and Skoog (MS) with the addition of natural hormones in the form of coconut water. The aim of this research is to determine the effect of adding coconut water to various concentrations of MS media on the growth of saffron (*C. sativus*) shoots and to determine the optimum concentration of coconut water in increasing the growth of saffron (*C. sativus*) shoots. The method used was planting Saffron cormus (*C. sativus*) explants in vitro into MS media supplemented with coconut water at different concentrations (0%, 5%, 10%, 15%, 20%). The research design used a completely randomized design with a single factor, namely coconut water concentration with 4 replications. Data were analyzed using ANOVA followed by the DMRT test (Duncan's Multiple Range Test). Explant growth was observed for 8 weeks. The parameters observed were the time when shoots, roots and leaves appeared; number of shoots, roots and leaves. The results of this study show that the addition of coconut water does not increase the growth of roots, shoots and leaves in Saffron. Coconut water with a concentration of 0% - 20% does not stimulate the growth of saffron roots, shoots and leaves. Coconut water has not been able to break dormancy in Saffron cormus.

Key words: Crocus sativus, triploid, in vitro, natural hormone, cormus

