

***Effect of Several Kinds of Sterile Materials for Leaf Explants on In Vitro Culture of Arabica Coffee (Coffea arabica L.)***

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***ABSTRACT***

*This study aims to determine the effective sterilant in the sterilization of Arabica coffee (Coffea Arabica L.) explants. This research was carried out at the Jember State Polytechnic Network Culture Laboratory in July – August 2021. This study used a non-factorial completely randomized design (CRD) with 4 treatments and 5 replications. The treatments used were treatment A using dithane fungicide and bactericide agrimycin, 1% (1 hour), 50% alcohol (3 seconds), NaOCl (5.25%) 0.25% (15 minutes), NaOCl (5, 25%) 0.35% (15 minutes). Treatment B used liquid detergent, dithane 2 g/L (15 minutes), 70% alcohol (3 seconds), 10% commercial bleach (7 minutes). Treatment C using detergent 20 gr/L (15 minutes), agrimycin 20 gr/L (15 minutes), erythromycin 4 gr/L (20 minutes), 70% alcohol (2 minutes), HgCL<sub>2</sub> 0.2 grams (1 minute) , HgCL<sub>2</sub> 0.2 grams (2 minutes) and treatment D used detergent, detergent 2 g/L, commercial bleach 10% (10 minutes), commercial bleach 20% (10 minutes), HgCL<sub>2</sub> 0.1% (5 minutes). Parameters observed were browning explants, fungal contamination, bacterial contamination, when fungi appeared, when bacteria appeared and live explants. Data were analyzed using variance (ANNOVA). If there are results that have a significant effect, further DMRT testing is carried out at the 5% level. The results showed that the sterilization of Arabica coffee explants in treatment D had a browning explant percentage rate of 4%, contamination percentage 4%, live explant percentage 92%, and had an average fungal appearance of 20.6 days after planting.*

***Keywords: Sterilization Technique, Arabica Coffee, In Vitro Culture***