

THE EFFECT OF VARIOUS STERILIAN MATERIALS COFFEE LEAF EXPLAN ON CULTURE IN VITRO COFFEE EXCELSA (*Coffea excelsa*)

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ABSTRACT

This study aims to determine the effective sterilization material in the sterilization of leaf explants against in vitro culture of excelsa coffee (*Coffea excelsa*). This research was conducted at the Jember State Polytechnic Tissue Culture Laboratory from July to August 2020. This study used a Non-factorial Completely Randomized Design (CRD) with four treatments and five replications. The treatments tested included sterilant A, namely by soaking a mixture of 0.1% fungicide and bactericide, 50% alcohol, 0.25% Bayclin, 0.35% Bayclin. Sterile material B washed the explants using liquid detergent, 2 g/l dithane, 70% alcohol, 10% Bayclin. Sterile material C soaked explants in a 20 g/l detergent solution, Agrymycin 20 g/l, Erythromycin 4 g/l, 70% alcohol, 2x HgCl 0.2 g solution and sterilant D washed explants with detergent, soaked in detergent solution 2 gr/l, Bayclin 10%, Bayclin 20%, HgCl₂ 0.1%. Parameters observed were browning explants, bacterial contamination, fungal contamination, early fungal contamination, bacterial contamination, and live explants. The above data were analyzed using quantitative descriptive analysis. The results showed that the sterilant D had a good or effective effect on the sterilization of in vitro cultured leaves of Excelsa coffee (*Coffea excelsa*). By having the lowest percentage of contamination and the highest percentage of live explants.

Keywords: In vitro culture, sterilization, excelsa coffee

