Respone to Callus Formation of Arabica Coffee (Coffea arabica L.) in Several Types of Modified Tissue Culture Media

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ABSTRACT

Coffee plants are plantation crops that can improve the country's economy. In Indonesia, there are 3 types of coffee plants that are cultivated, one of which is Arabica coffee. Tissue culture is one of the alternatives to multiply coffee plants in large quantities. The use of tissue culture media modification affects the growth time of callus, the percentage of callus appearing, callus color, callus type, callus area, and callus wet weight. The purpose of this study was to determine which type of media is good to use in inducing coffee primary callus. The research was conducted at the Plant Tissue Culture Laboratory of Jember State Polytechnic from January 2023 to May 2023. The planting material used in this study was young Arabica coffee leaves. This study used a completely randomized design with 4 treatments and 5 replicates. The results showed that MS 0 media could not form callus. IKP media and ½ MS Modified Vit. B5 media are media that can form callus quickly at the age of 19 HST. Media ½ MS Modified Vitamin B5 and MS ½ NH4NO3 media are the best media in forming callus based on callus color variables, callus type, callus area, and callus wet weight.

Keyword : *Arabica coffee, callus, modified culture media, tissue culture, ZPT*