

COMPARATIVE EFFECT OF DIFFERENT CONCENTRATIONS OF STERILANT (JIK) AND THEIR EXPOSURE TIME DURING IN VITRO PROPAGATION OF ZINGIBER OFFICINALE ROSC.

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ABSTRACT

The need for alternative sterilant to Hcl in the in vitro propagation of ginger (*Zingiber officinale*) is of importance, hence the comparative effect of different concentrations of sterilant (JIK) and exposure time during in vitro propagation of *Zingiber officinale* (Ginger) was conducted, bearing in mind that the improvement and cultivation of ginger shown to be declining. The study showed that higher concentrations of sterilant and exposure time produced pure and healthy cultures. There was a significant difference in the effects of different levels of sterilants at different exposure time. The number of uncontaminated cultures increased as the concentration of the sterilant and exposure time increase. The growth of ginger was more effective at 30% concentration and 30mins exposure time, but not significantly different ($P>0.05$) from that of 25% concentration at 30mins exposure time. This method of propagation offers an avenue to rapid multiplication and production of disease-free ginger thereby increasing the quantity and quality of ginger to the rapidly growing population. This study also revealed that JIK has a great potential in rapid multiplication of ginger, hence can be used in the place of Sodium chloride that has been commonly used in in vitro propagation.