

Surface Sterilization of Aquatic Plant, *Cryptocoryne affinis* by Using Clorox and Mercury Chloride

Authors : Sridevi Devadas

Abstract : This study was aimed to examine the combination efficiency of Clorox (5.25% Sodium Hypochlorite) and mercury chloride (HgCl₂) as reagent for surface sterilization process of aquatic plant, *Cryptocoryne affinis* (C. affinis). The treatment applied 10% of the Clorox and 0.1 ppm of mercury chloride. The maximum exposure time for Clorox and mercury chloride was 10 min and 60 sec respectively. After exposed to the treatments protocols (T1-T15) the explants were transferred to culture room under control temperature at 25°C ± 2°C and subjected to 16 hours fluorescence light (2000 lumens) for 30 days. The both sterilizing agents were not applied on control specimens. Upon analysis, the result indicates all of the treatments protocols produced sterile explants at range of minimum 1.5 ± 0.7 (30%) to maximum 5.0 ± 0.0 (100%). Meanwhile, maximum 1.0 ± 0.7 numbers of leaves and 1.4 ± 0.6 numbers of roots have been produced. The optimized exposure time was 0 to 15 min for Clorox and 30 sec for HgCl₂ whereby 90% to 100% sterilization was archived at this condition.

Keywords : *Cryptocoryne affinis*, surface sterilization, tissue culture, clorox, mercury chloride

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