
IN VITRO PROPAGATION OF *Aquilaria* IN VIETNAM

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SUMMARY

Aquilaria genus is a group of plant that has capability to form agarwood. Agarwood consists of essential oil which is ranked the best oil for flavouring, high-grade cosmetic, traditional medicine and making incense. Application of advanced method (*in vitro*) to propagate 3 *Aquilaria* species obtained several results. Fresh fruits of *Aquilaria* cleaned by 70% alcohol and sterilized in 5 minutes with 0.1% HgCl₂, 5% NaClO in 10 minutes have resulted in the highest rate for germinating (84.6% for *A. crassna*; 72.7% for *A. rugosa* and *Aquilaria sp.*). For multi-shoot stage, the highest number of shoots (6.27±1.07 - 6.8±0.87 shoots per explant) was obtained in WPM* medium supplemented with 0.1 mg/l BAP, 0.1 mg/l kinetin, 0.3 - 0.5 mg/l NAA, 2% sucrose and 0.7% agar for all of 3 *Aquilaria* species. The WPM* medium supplemented with 1,0 mg/l NAA, 2% sucrose, 0.7% agar was the most effective for the rooting in *A. rugosa*, producing 86,7% of rooted shoots, an average of 3.40±0.4 roots per culture and 2.93±0.42 cm a root. The highest results of root formation for *A. crassna* and *Aquilaria sp.* were found in WPM* containing 0.5 mg/l NAA, 0.25 mg/l IBA. The result of this research indicated that the method of *in vitro* can be used to develop the suitable protocol for propagation of *Aquilaria* and to propagate the number of seedlings with high quality for development of *Aquilaria* in Vietnam.

Keywords: *Aquilaria*, *in vitro* propagation, tissue culture.

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