

Basidiospore and protoplast regeneration from raised fruiting bodies of pathogenic *Ganoderma boninense*

ABSTRACT

Ganoderma boninense, a phytopathogenic white rot fungus had sought minimal genetic characterizations despite huge biotechnological potentials. Thus, efficient collection of fruiting body, basidiospore and protoplast of *G. boninense* is described. Matured basidiocarp raised under the glasshouse conditions yielded a total of 8.3×10^4 basidiospores/ml using the low speed centrifugation technique. Mycelium aged 3-day-old treated under an incubation period of 3 h in lysing enzyme from *Trichoderma harzianum* (10 mg/ml) suspended in osmotic stabilizer (0.6 M potassium chloride and 20 mM dipotassium phosphate buffer) yielded the highest number of viable protoplasts (8.9×10^6 single colonies) among all possible combinations tested (regeneration media, age of mycelium, osmotic stabilizer, digestive enzyme and incubation period).

Keyword: Basidiocarp; Basidiospore; Incubation; Lytic enzyme