A Comparison of Cell Wall Disruption Techniques for the Isolation of Intracellular Metabolites from *Pleurotus* and *Lepista* sp.

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Different techniques were compared for their effectiveness in the disruption of the rigid cell walls of Basidiomycetes. Grinding under liquid nitrogen, stirred glass bead milling and enzymatic cell lysis were applied to the mycelia of *Pleurotus sapidus* and *Lepista irina* grown submerged. Each of the disruption procedures was evaluated by testing the quantity and quality of released intracellular metabolites: DNA, RNA, enzymes, and secondary metabolites. The most suitable method for nucleic acid isolation was grinding under liquid nitrogen, while bead mill homogenization was the superior technique for isolation of active enzymes. A new effective method is proposed for isolation of secondary metabolites with the aid of bead milling of fungal mycelia.

Key words: Basidiomycetes, Cell Disruption