Methylene blue (MB) is synthetic dyes that are very difficult degradable in nature. Brown rot fungus (BRF) *Fomitopsis pinicola* can be used for biodegradation and decolourization of MB. Decolorization was performed on an agar medium containing a mixture of PDA and MB with various concentrations of 50, 75 and 100 mg/L. The highest decolorization index (ID) was obtained in MB concentration 75 mg/L which equal to 0.915. The highest percent decolorization was shown on 14-day incubation period in liquid medium with the percentage of 92.56% decolourization. Azure B and Azure C were detected as metabolite products. Based on the detected metabolites, the MB biodegradation pathway was proposed in which it through demethylation and oxidation reactions. This study indicated that brown rot fungus *F. pinicola* can be used to degrade MB dye.

**Key Words:** Biodegradation, Decolourization, Methylene Blue, Brown Rot Fungus, *Fomitopsis pinicola*. 