Textile Wastewater Decolorization by Pleurotus ostreatus in Organic Material Board Media

Title	Textile Wastewater Decolorization by Pleurotus ostreatus in Organic Material Board Media
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Abstract	The textile industry in one of the fastest industries that grow today. However, the increased activity makes the production of liquid wastewater also increased because the use of water reaches 80% in production. The wastewater can endanger the aquatic ecosystems because it contains toxic dyes. Pleurotus ostreatus has ligninolytic enzymes that are capable of degrading synthetic dyes into non-toxic forms to the environment. This study aims to determine the optimum contact time of P. ostreatus in organic material board media for the best result in textile wastewater decolorization. This research used an experimental method. The research consisted preparation of P. ostreatus isolate, making of seed media, inoculation into seed media, making of log media, inoculation into log media, making of board media, and decolorization process. The parameters tested were different contact time (24, 48, 72, 96, 120, 144, and 168 hours), Total Dissolved Solid (TDS), pH, and temperature. The result of this research was that the treatment of P. ostreatus in organic material board media can decolorize textile wastewater. The value of highest decolorization percentage was 35,69% at 24 hours contact time. There are change of TDS, pH, and temperature on before and after namely 835 to 566, 8.7 to 7.62, 28.3 to 31. This board system is promising for wastewater treatment.Keywords:decolorization, textile wastewater, P. ostreatus, board media
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